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“Integrating ESG Principles into Strategic Business Development: Challenges and Opportunities for Nordic Companies”

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ABSTRACT:

Environmental, Social and Governance (ESG) principles have emerged from voluntary ethical norms to strategic drivers of corporate change and competitiveness. This thesis explores the incorporation of ESG in the strategic development of Nordic firms with a focus on the opportunities and challenges of integrating sustainability into business strategy. Through the lenses of Stakeholder Theory, Institutional Theory and the Resource-Based View, the research conceptualizes ESG as a resource that enables innovation and resilience, and drives sustainable value creation, rather than a regulatory burden. The research adopts a case study approach, focusing on four Nordic firms - Neste, Ørsted, Vestas and Ericsson - in the energy and telecommunications industries. Results show that while Nordic companies lead in global adoption of ESG, its integration remains patchy due to governance fragmentation, regulatory intricacies and barriers to data transparency, especially for indirect emissions (Scope 3) and social performance indicators. Evidence from the cases shows companies that integrate ESG into their governance, stakeholder relations and product development strategies, gain greater legitimacy, trust and competitive advantage. However, there are also difficulties in operationalizing sustainable development aspirations and ensuring boardroom expertise to support ESG. The research adds to the literature by proposing that ESG integration constitutes a dynamic capability, which alters historical models of strategic management, while also providing managerial insights for firms to integrate ESG within processes of governance, innovation and stakeholder engagement in order to build long-term sustainability. Through a discussion of Nordic experiences in relation to the wider discourse on sustainable business development, the thesis shows that ESG integration is a central characteristic of contemporary corporate strategy.

KEYWORDS: Environmental, Social, and Governance (ESG); Strategic Business Development; Nordic Firms; Stakeholder Theory; Corporate Sustainability Reporting Directive (CSRD); Dynamic Capabilities.

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Abbreviations

CO₂ – Carbon Dioxide

CSRD – Corporate Sustainability Reporting Directive

CSR – Corporate Social Responsibility

ESG – Environmental, Social, and Governance

ESRS – European Sustainability Reporting Standards

EU – European Union

EU Taxonomy – European Union Taxonomy for Sustainable Activities

GHG – Greenhouse Gas

GRI – Global Reporting Initiative

NGO – Non-Governmental Organization

OECD – Organisation for Economic Co-operation and Development

RBV – Resource-Based View

ROSI – Return on Sustainability Investment

SASB – Sustainability Accounting Standards Board

SBD – Strategic Business Development

SDG – Sustainable Development Goals

SFDR – Sustainable Finance Disclosure Regulation

SMEs – Small and Medium-sized Enterprises

TCFD – Task Force on Climate-related Financial Disclosures

UN – United Nations

1 Introduction

1.1 Background and Context

Environmental, Social, and Governance (ESG) principles have evolved over the past 20 years from being seen as ethical considerations to strategic considerations. This shift is driven by the awareness that sustainability is not only a moral but also a strategic consideration for competitiveness and resilience (Peña Bermúdez et al., 2025). Issues like climate change, social justice, and governance crises have established ESG as a lens through which to assess corporate behaviour, risk and value creation. Stakeholders increasingly expect companies to integrate ESG considerations into their strategic plans, thus shifting the focus of strategic business development (SBD) (Ashraf, 2026).

Historically, SBD focused on factors such as profitability, growth and market share. Yet, modern research and practice demonstrates that firms need to integrate sustainable development into their business strategies to adapt to change and remain legitimate (Wei, 2025). Companies that consider ESG in their strategic goals have an increased ability to manage risks, secure funding, and enhance stakeholder confidence. In this regard, ESG not only serves as a regulatory tool but also an innovation, adaptation and value creation tool (Yan, 2025).

The Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden) provide a unique setting to study ESG integration. The region is known for its strong regulatory environments, high trust and institutionalized sustainability practices. Nordic companies have been at the forefront of implementing global reporting frameworks like the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB) and the EU Corporate Sustainability Reporting Directive (CSRD) (Strand, 2024). Unfortunately, despite these positive factors, there are still obstacles in the integration of ESG into business strategy. These challenges include disjointed governance arrangements, data quality and variability in the adoption of regulatory frameworks (Huiping et al., 2024).

Case studies of companies show the potential and challenges of ESG integration. For example, Finnish energy firm Neste has aligned its sustainability goals with its business

strategy to shift from fossil fuels to renewable energy sources. Likewise, Denmark's Ørsted has transformed into a global offshore wind energy leader by tapping into ESG drivers to innovate and build investor trust (Dinu, 2025). These case studies highlight the potential for ESG to drive change and innovation when integrated into the business strategy. They also reveal the diversity and differences in companies and sectors that hinder integration.

Research also underscores the importance of ESG from a strategic perspective. Research indicates that companies with good ESG performance are more resilient during economic crises and outperform on risk-adjusted returns. Methods like the "Return on Sustainability Investment" (ROSI) developed by the NYU Stern Center for Sustainable Business rationalise ESG integration from a financial perspective, repositioning sustainability as an imperative rather than optional. But the continued issues (such as regulatory complexity, data availability and organisational resistance) suggest ESG integration is not easy (Minhas, 2026).

In the Nordic region, local initiatives (including the Nordic ESG Index and annual ratings by Nordea) show improvements in areas such as tying management compensation to ESG performance and gender balance in management. However, there are still deficits in environmental reporting and harmonisation of CSRD implementation across countries (Rostamicheri et al., 2026). Such developments show that though Nordic companies are leading the world in sustainability, they are still facing the challenges of integrating ESG into business strategies.

In this context, the current thesis explores how Nordic firms bring ESG to their strategy, and the challenges and opportunities this entails. Through placing ESG in the context of strategic management discourse, the research aims to contribute to both theory and practice, providing an understanding of the operationalisation of sustainability as an element of corporate strategy (Rostamicheri et al., 2026).

1.2 Research Problem

Although the Nordic region is known for its sustainability practices, many companies still face challenges in integrating Environmental, Social and Governance (ESG) considerations into their strategic business development. Rather than being embedded in the decision-making process, ESG initiatives are often relegated to corporate social responsibility (CSR) units, and do not have a substantial impact on long-term strategy, budgeting, and operational change. This siloing of ESG means it becomes a compliance rather than innovation and competitiveness driver (Frag, 2026).

Integration is also hindered by the regulatory framework. Emerging regulations like the EU Taxonomy, Sustainable Finance Disclosure Regulation (SFDR) and Corporate Sustainability Reporting Directive (CSRD) create intricate and costly reporting obligations. These frameworks are designed to harmonise sustainability reporting, but impose an undue burden on small and medium-sized enterprises (SMEs), and create inconsistencies across industries and nations (Cavaliere et al., 2026).

The lack of quality and comparable ESG data presents a key challenge. Especially, Scope 3 emissions, social impact and governance practices are hard to quantify and benchmark. The absence of reliable data hampers investor trust and the strategic justification for ESG finance. Inertia and resistance within organisations also play a role as managers remain reluctant to view ESG as a value-enhancing rather than cost-driver activity. Insufficient investments in ESG education, training and cross-departmental integration also hinder the strategic use of ESG (Costa et al., 2025).

Highlights include sectoral and national differences. Although progress has been made in energy and finance companies in the Nordic region, manufacturing and technology industries face extra complexities in supply chain management, digital ethics, and limited resources. Variations in the timing and focus of national policies and regulations result in different levels of CSRD and other policies adoption in Denmark, Finland, Sweden, Norway and Iceland (Claessen et al., 2026).

Overall, these issues point to a key research gap: while ESG is acknowledged as critical for sustainable business growth, there is uneven integration, variation and theorising of ESG in strategic business planning. The disconnect between compliance-focused ESG practices and strategic integration prompts questions regarding turning ESG into a source of innovation, resilience and advantage for Nordic firms.

1.3 Significance of Study

Environmental, Social and Governance (ESG) integration into the strategic development of business is increasingly seen as a crucial element in the future of corporate transformation. This research is valuable as it fills a theoretical and practical gap in knowledge about ESG integration into the strategy process of Nordic firms. By reframing ESG from a compliance tool or an offshoot of corporate social responsibility to a strategic imperative affecting innovation, competitiveness and sustainability, this thesis offers a new perspective on how ESG shapes business practices. Through its analysis of ESG integration processes using well-established management theories like Stakeholder Theory, Institutional Theory and the Resource-Based View, the study adds to the academic debate by considering how sustainability concerns challenge conventional theories of strategy and organisation.

The research also has implications for practice. The introduction of the EU's Corporate Sustainability Reporting Directive (CSRD) and other frameworks mean that firms must report ESG data in a structured manner, which prompts them to rethink their strategy and governance arrangements. The Nordic firms' experiences, which are often seen as sustainability pioneers, offer important lessons for firms in how they can integrate ESG into their strategic decision-making, rather than viewing it as a compliance cost. It offers insights into how companies can use ESG to enhance stakeholder confidence, secure sustainable finance, and drive innovation, as well as the remaining challenges of data integrity, regulatory burden and corporate lethargy.

The Nordic study also adds to the value of the research. The region boasts a strong institutional identity of sustainability, effective regulatory frameworks and a high level of social trust, making it a prime location to study the adoption of ESG practices. However, despite this leadership, Nordic companies continue to show differences in how they implement ESG within and between sectors and countries, suggesting the challenges of putting sustainability concepts into practice. As such, this study offers valuable insights into the potential and challenges of adopting ESG practices, which can be applied beyond the Nordic region to guide global discussions on the future of sustainable business.

Lastly, the study is timely. With growing investor, regulatory and customer interest in ESG considerations, businesses that don't keep up face legitimacy and competitiveness challenges. Through examining the integration of ESG into business strategies, this research adds to both the academic and practice-based discourse and shows that sustainability is not something that can be thought of as "additional" to business strategy, but as a key element of it.

1.4 Research Questions

How do Nordic firms integrate ESG principles into strategic business development, and in what ways are these practices shaped by institutional pressures, stakeholder expectations, regulatory frameworks such as CSRD and EU Taxonomy, and understood through the Resource-Based View and Dynamic Capabilities perspectives?

1.5 Research Objective

1.5.1 Main Objective

To examine how ESG integration in corporate strategy impacts on business development in Nordic firms from the Stakeholder Theory, Institutional Theory, and Strategic Management perspectives.

1.5.2 Sub Objectives

1. To assess ESG implementation across sectors/countries, analyzing institutional pressures and stakeholder expectations.

2. To examine issues and opportunities of ESG integration as strategic resources, using RBV and Dynamic Capabilities perspectives.
3. To evaluate how policies (CSRD, EU Taxonomy) act as institutional drivers of strategic transformation.

2 Literature Review

Existing research on Environmental, Social, and Governance (ESG) integration demonstrates its shift from voluntary corporate social responsibility programs to an integral part of the business strategy. Global standards like the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB) and Task Force on Climate-related Financial Disclosures (TCFD) and regional regulations such as the EU Taxonomy and CSRD have influenced corporate sustainability reporting and implementation. In this regard, Nordic firms present a unique example as their institutional support for sustainability and sophisticated regulatory landscape make them a forerunner in embracing ESG. Drawing on literature and business practices provides insights into both the theoretical and practical aspects of integrating ESG into strategic business development.

2.1 Theoretical Framework

This study's theoretical framework provides the groundwork for examining the adoption of Environmental, Social, and Governance (ESG) principles in strategic business development in Nordic companies. It offers a theoretical framework for understanding the empirical evidence, connecting sustainable practices with existing management and organisational theories. This allows the study to not only contribute to the body of academic knowledge but also to business practices.

2.1.1 Stakeholder Theory

Stakeholder Theory, developed by Freeman (1984), posits that firms must consider the interests of all stakeholders employees, customers, investors, regulators, and communities rather than focusing solely on shareholders. In the context of ESG integration, this theory explains how Nordic firms respond to diverse expectations by embedding sustainability into governance and strategy. Stakeholder Theory highlights that legitimacy and trust are achieved when companies balance financial objectives with social and environmental responsibilities, making ESG a driver of long-term value creation.

2.1.2 Institutional Theory

The focus of Institutional Theory is on the influence of regulatory frameworks, cultural norms and institutional pressures on the behaviour of the institution or firm. Nordic companies are doing business in societies that are well-regulated, trustful, and have a culture of sustainability. Strict regulation and active engagement of stakeholders, for instance, have proven to have a strong impact on the adoption of ESG in Nordic companies including Ericsson, Vestas, and Ørsted (Korkashvili, 2024).

Examples of coercive and normative pressures include the EU Taxonomy and the Corporate Sustainability Reporting Directive (CSRD). In addition to facilitating compliance, these institutional drivers also stimulate firms to integrate sustainability processes into their strategic development. These institutional drivers not only help firms to comply with sustainability standards but also encourage them to incorporate sustainability processes into their strategic development. Nordic markets also seem to have a stronger financial materiality effect on ESG practices than non Nordic markets, with lower financing costs and higher firm value (Rostamicheri et al., 2026).

In this way, Nordic companies are often at the forefront of sustainability reporting and governance, as this is best explained by Institutional Theory. ESG is integrated into their institutional environment, which is marked by the level of regulatory sophistication, and cultural focus on sustainability, significantly shaping strategic decisions and the role of sustainability in the company's transformation (Korkashvili, 2024; Rostamicheri et al., 2026).

2.1.3 Resource-Based View (RBV)

The Resource-Based View (RBV) approach to ESG defines it as a strategic resource that can provide a sustainable competitive advantage. Barney (1991) has identified the four criteria—that resources are valuable, rare, inimitable, and non-substitutable—as the basis of long-term firm success. If ESG practices are integrated into innovation, supply

chain management, and stakeholder relations, they become strategic tools that can help companies stand out in the competition (Hart, 1995).

Nordic companies are examples of this. Neste's shift from fossil fuels to renewable energy is an example of how innovation through ESG principles can improve market leadership and resilience (Chua & Hae-Young, 2025). Likewise, Ørsted's pioneering work in the field of offshore wind and green finance demonstrates the value of ESG integration for not only strong legitimacy, but also investor attraction (Hao & Dragomir, 2025). The case-studies demonstrate that ESG efforts are not only compliance tools—they're also areas that offer competitors some capabilities they can't easily duplicate (Ghanadighomi et al., 2023).

So, RBV treats ESG as a basis for differentiation and sustainable growth. Nordic companies are leveraging sustainability to create long-term competitive advantage by taking an ESG approach that is more strategic than regulatory (Barney 1991; Hart 1995; Ghanadighomi et al. 2023).

2.1.4 Dynamic Capabilities Theory

The Dynamic Capabilities Theory (Teece, Pisano, and Shuen 1997) is based on the Resource-Based View, but focuses on the firm's capacity to integrate, develop and reconfigure its resources to meet changing environments. Unlike the static resource advantage, the dynamic resource emphasizes flexibility, learning and innovation as key to maintain competitiveness.

In relation to ESG, dynamic capabilities are crucial since stakeholder expectations, regulatory requirements and technological innovations are constantly changing. Firms need to modify their governance mechanisms, develop more innovative sustainable products and reconfigure their supply chains, in response to new sustainability requirements (Teece, 2007). In the case of the Nordic companies, Ørsted and Vestas, for example, Nordic firms are expected to exhibit dynamic capabilities by adapting their business models in moving towards renewable energy and circular supply chains, in order to allow

them to preserve their legitimacy and competitive position in markets characterised by volatility (Haryanto et al., 2026).

Recent research highlights the importance of dynamic capabilities in sectors that are especially relevant to ESG, such as companies that need to manage compliance and innovation. According to Khurshid et al. (2026), firms need to have the capacity of sensing, seizing and reconfiguring to meet institutional pressures and stakeholder demands to integrate ESG. Reframing ESG as an opportunity rather than a regulatory burden means thinking about it as a way to rejuvenate, build resilience and renew strategically for the long-term (Teece, 2007; Khurshid et al., 2026).

2.2 ESG Principles and Frameworks

The adherence to the principles of Environmental, Social and Governance (ESG) is central to contemporary corporate strategy in the Nordics where the focus of sustainability is embedded in the policies, and in the culture of business. ESG framework can be used to explore the effectiveness of ethics and sustainability undertaken by a company. The ESG concept was originally proposed as a new voluntary report, but it has been further evolved into a business strategy to be set by the investors, regulators and societal expectations (Ashitha, 2026).

The earth (environment) side of the ESG asks questions such as how the operations of the company impact the environment, the carbon footprint, whether the operations are efficient in using resources (energy efficiency/waste management), and how the operations affect the businesses that have already been exposed to the conflicting water and air pollution (Afzali et al., 2025). One of the social parameters includes human resource, human rights violations, discrimination, diversity and community relations. Governance generates public policy, the best practices in administration and management, transparency, ethics and the law (letter of the law). All these turn sustainable development into a system (Alhazemi, 2025).

Global and regional reporting standards have influenced the adoption of Environmental, Social, and Governance (ESG) strategies in business. These standards offer consistent

methods for measuring, reporting and assessing sustainability performance, thus allowing companies to meet stakeholder and regulatory demands. One of the most prominent is the Global Reporting Initiative (GRI), which is founded on inclusiveness and materiality (Rusu et al., 2024). GRI mandates disclosures that are relevant to a wide set of stakeholders such as employees, communities, investors and regulators. By prioritising materiality, it ensures that the disclosures include issues of importance to the company and its stakeholders, thus improving transparency and accountability (Huq & Mohammadrezaei, 2025).

The Sustainability Accounting Standards Board (SASB) offers industry-specific metrics that emphasise financial materiality to supplement GRI. SASB's reporting is important for investors, as it connects ESG disclosures with financial metrics and risk management. SASB's industry-specific metrics allow comparisons across companies while accommodating variations in sustainability issues across industries (Gionfriddo & Piccaluga, 2024). The Task Force on Climate-related Financial Disclosures (TCFD) complements this by emphasising the financial risks of climate change. TCFD mandates disclosure of governance, strategy, risk management and metrics on climate change, making environmental risk an integral part of financial reporting (Hasan et al., 2025).

In the European Union, the evolution of ESG from voluntary to mandatory reporting has taken place. The EU Taxonomy is a classification system for sustainable economic activities that helps to determine what is environmentally sustainable investment. The Corporate Sustainability Reporting Directive (CSRD) reinforces this regulatory trend by requiring uniform ESG reporting from companies (Chrzan & Pott, 2024). One of CSRD's key features is the concept of double materiality, which mandates reporting on both how sustainability matters impact firms, and how firms impact society and the environment. This dual focus highlights the strategic value of ESG, which can be used as a risk management strategy and to drive companies to better practice and change (Cristofaro et al., 2025).

Nordic companies have been early adopters of ESG practices, exceeding global norms. This is due to the region's institutional sustainability culture, regulatory environment and

social trust. A number of case studies show how Nordic firms have adapted their business strategies to ESG. For instance, a Finnish energy company, Neste (Rostamicheri et al., 2026). Neste started off as an oil refiner but has now become a global renewable fuels producer. Through the adoption of GRI, SASB and other frameworks, Neste has integrated ESG considerations into its business and financial strategies. Research shows that Neste has achieved better financial outcomes compared to its counterparts as a result of its ESG integration, especially with renewable products and green bonds. Neste's example is a prime example of how ESG can be a source of innovation and profitability (Chua & Hae-Young, 2025).

Another example of a sustainable Nordic company is the Danish renewable energy producer, Ørsted. Ørsted is on a mission to transition from fossil fuels to green energy and is one of the world's most sustainable energy firms. Ørsted reports in its 2023 ESG report that it has decreased its Scope 1 and 2 emissions by 87 percent from 2018, and now uses 99 percent renewable energy (Hao & Dragomir, 2025). It adheres to GRI, SASB, TCFD and EU Taxonomy reporting standards, and aims to finance 100 percent of its activities with green bonds by 2025. It also has governance structures to support its ESG goals, with a board that oversees its ESG strategy and a majority of independent directors.

Another Nordic leader in ESG is Vestas, the world's largest wind turbine manufacturer. It has a sustainability report compliant with CSRD and European Sustainability Reporting Standards (ESRS). In 2025, Vestas was awarded the most sustainable energy solutions company by Corporate Knights. Vestas has made significant efforts to sustainably transform its supply chain, increase material efficiency and foster gender diversity in leadership (Dinu, 2025). But Vestas also highlights the difficulties of implementing ESG strategies, as structural issues have led to not meeting mid-term emissions reduction goals. This example highlights how even ESG pioneers struggle to achieve their ESG ambitions (Paluseri et al., 2025).

Swedish telecom Ericsson exemplifies ESG strategies in a non-energy sector. Driven by regulatory and stakeholder pressures, Ericsson has focused on sustainability in its supply chain, digital inclusion and governance (Işık et al., 2025). Its reporting is in line with

global standards and focuses on long-term value creation. Ericsson's strategy also demonstrates how ESG can be implemented in the technology industry, where there are emerging concerns around digital ethics and inclusivity (Chakraborty et al., 2026).

Overall, these examples show Nordic companies are embracing ESG standards not just for regulatory compliance but to drive innovation, manage risk and provide stakeholder assurance. Through compliance with standards like CSRD and the EU Taxonomy, they show that sustainability can be an integral part of business strategy rather than a compliance burden (Dinu, 2025). However, there are continuing challenges. Companies face challenges in obtaining relevant and accurate ESG information, especially for social and governance aspects. The need to comply with different frameworks can result in reporting fatigue and confusion, and ESG initiatives being confined to sustainability departments can hinder strategic integration. To address these challenges, it is important to integrate ESG into the governance, performance, and strategy processes (Wibowo et al., 2026).

Finally, ESG as principles and standards is a building block for sustainable business. Examples from Nordic companies like Neste, Ørsted, Vestas and Ericsson demonstrate the benefits and challenges of ESG integration. Their journeys demonstrate that ESG isn't just about compliance, but it's also about embracing a strategic approach to innovation, resilience and value creation. As regulations like CSRD take full effect, the integration of ESG will play an increasingly important role in global markets, with sustainability becoming a key component of competitive advantage.

2.3 Strategic Business Development

Strategic Business Development (SBD) is the process by which firms discover, develop and maintain opportunities for growth. It includes innovation, growth and change, harmonising the business' internal dynamics with the external environment, including technological advances, competition, stakeholder expectations and demands. In today's world, where "sustainability" is a vital element of competitiveness, SBD also requires a consideration of Environmental, Social, and Governance (ESG) factors. This makes sure

that growth opportunities are profitable, socially acceptable and environmentally friendly (Farag, 2026).

2.4 Strategic Business Development in the ESG Context

Incorporating ESG principles in SBD marks a transition from a profit-maximization to a value-based approach that embeds sustainability. ESG factors impact risk management, innovation, stakeholder relations, and performance metrics, reshaping the scope of growth strategies (Farag, 2026). In the Nordic region, where there is a robust regulatory framework and societal emphasis on sustainability, SBD must anticipate regulatory and societal changes at both national and international levels (including CSRD and EU Taxonomy) (Dsouza & Jain, 2026).

Traditional frameworks like the Ansoff Matrix and Dynamic Capabilities Theory help firms to spot ESG opportunities for growth, while Porter's Five Forces and Blue Ocean Strategy help them to understand competitive environments influenced by sustainability phenomena (Vracheva & Moussetis, 2025). These models show that ESG integration is not a one-off project but a strategic imperative within the broader process of long-term development. Recent research calls for more integrated and holistic approaches, especially in the Nordic region as companies strive to become global leaders in good and innovative business practices.

2.4.1 ESG and Strategic Integration

The strategic integration of Environmental, Social, and Governance (ESG) factors has come to be seen not just as a regulatory imperative but as a strategic imperative impacting long-term business performance and value creation. Academics suggest ESG is a paradigm change in the field of strategic business development, in which sustainability objectives are integrated into the heart of the business strategy rather than being a side issue (Farag, 2026). As Harrington points out, "strategic business development at the heart of the ESG paradigm places sustainability goals into partnership with fundamental business strategies". This view highlights that businesses integrating ESG into strategic

development are more likely to manage risks, drive innovation and address the needs of various stakeholders (Yan, 2025).

2.4.2 ESG as a Strategic Imperative

Recent studies show the integration of ESG is now a requirement for firms to remain competitive and relevant in a changing environment and identify four pathways (legality, ethics, monitoring and motivation) through which ESG affects corporate governance and performance. They conclude that integrating ESG improves risk and governance practices, and promotes ethical behaviour, leading to better performance (Ed-Dafali et al., 2026). Likewise, Minhas (2026), after reviewing 75 studies, find that ESG integration boosts stakeholder confidence, reputation and financial sustainability, especially in environmentally and regulatory sensitive sectors. The findings support the view that ESG is not a nice-to-have but an imperative.

ESG translates into a number of practices. Companies now set clear environmental and social goals, such as carbon neutrality, diversity goals and community engagement goals. ESG indicators have become more prevalent in executive remuneration, with 77% of S&P 500 firms including ESG metrics in remuneration, according to Sankara and Trimble (2025). ESG metrics are also used in performance assessments at the corporate and individual level, such as climate risk mitigation, governance effectiveness and talent management. Further, ESG is now a critical element of mergers and acquisitions (M&A) and investment due diligence, with the risks and opportunities of sustainability practices evaluated for fit with long-term strategic goals. Such approaches show ESG has been woven into the strategic DNA of companies.

2.4.3 ESG and Risk Management

An important aspect of ESG integration is risk management. By anticipating and resolving environmental and social issues, companies can mitigate regulatory fines, reputational risks and operational risks. Liu and Song (2025) stress that firms with robust ESG practices are more resilient to market and stakeholder pressures because ESG metrics help them to identify and manage risks associated with climate change, supply chain disruptions

and geopolitical risks. Through ESG integration, companies improve their ability to adapt to external challenges, and bolster their competitiveness.

Research shows that ESG integration leads to increased trust, innovation and resilience. ESG is no longer seen as a moral imperative but rather a business imperative. Organisations that cater to ethical, environmental and governance considerations in their planning not only ensure compliance but also growth and competitive advantage (Yan, 2025). ESG, therefore, is a new definition of business success, in which profitability meets societal and environmental responsibility.

2.5 Challenges in ESG Integration

A critical issue facing integration of Environmental, Social, and Governance (ESG) considerations and strategic development in the Nordic region is the dynamic and challenging regulatory landscape. While the Nordic region is known for its sustainability, companies in Finland, Sweden, Norway and Denmark are struggling to keep up with the fast-changing regulatory landscape. The introduction of new EU directives, national legislation and international standards has resulted in a rapidly changing regulatory environment, creating challenges for rapid and strategic adaptation (Oyetunji, 2024).

A key development is the Corporate Sustainability Reporting Directive (CSRD) that took effect in January 2024. CSRD, which supersedes the Non-Financial Reporting Directive (NFRD), requires companies to disclose a range of ESG information, such as double materiality and value chain impacts. Despite the directive's objective to harmonise sustainability reporting, Scandinavian companies face difficulties in applying and understanding the directive's requirements due to differing materiality conceptualisations and stakeholder engagement strategies among countries. The need to consider both financial-economic and societal impacts has required companies to realign governance and reporting practices, leading to confusion and increased costs (Lungu et al., 2025).

In Norway, companies face an even more intricate regulatory landscape because of the European Economic Area Agreement (EEA) and the incorporation of EU directives. Norwegian firms not only need to comply with EU regulations such as the Sustainable

Finance Disclosure Regulation (SFDR) and the EU Taxonomy, but also with national legislation such as the Transparency Act, Pollution Control Act and Human Rights Act. For instance, the Transparency Act mandates due diligence around human rights and working conditions within the value chain, adding to the complexities of ESG compliance (Dar-amola, 2026).

The PwC Nordic ESG Survey (2023) reveals regulatory uncertainty as the biggest challenge for Nordic companies, especially those that are "Nordic Champions" firms, which have integrated ESG as a central part of their strategies. They identify regulatory uncertainty as a significant barrier to planning and investment and erodes stakeholder trust. While many companies have established ambitious ESG targets, they are reluctant to put them into action because of changing compliance obligations and the lack of harmonisation (PWC, 2023).

The recent launch of the Omnibus Simplification Package (2025) has added to the regulatory complexity. Designed to simplify sustainability reporting for small and medium-sized firms and make adjustments to CSRD and Corporate Sustainability Due Diligence Directive (CSDDD) thresholds, the package has sparked debate. Some see the measures as a potential threat to transparency, but others regard them as corrective measures to counter regulatory burden. The dynamic nature of these regulations and their deadlines complicates compliance, especially for Nordic companies with operations in different countries (Höijer, 2025).

Differences between national and EU regulations add to the complexity. Although Denmark has made advances in meeting CSRD standards, compliance remains challenging due to differences in reporting approaches and data-gathering practices. This makes it difficult to compare ESG data across the region, making benchmarking and performance assessment more challenging (Münch et al., 2025).

With regard to business strategies, regulatory uncertainty distracts companies from innovation and planning to meet compliance obligations. Companies need to hire lawyers, adopt technological reporting platforms and provide staff training to stay compliant. Although this enhances accountability, it also adds costs and uncertainty and may

undermine investment and adoption. So while frameworks like CSRD and SFDR support transparency and accountability, the ever-evolving and inconsistent implementation of these frameworks hinders ESG integration (Dinu et al., 2025).

Overall, the Nordic paradox is that while there are robust regulatory regimes to promote sustainability, they also introduce complexity and uncertainty which impede strategic integration. To integrate ESG with their long-term strategies, companies need to manage this regulatory environment through effective governance, stakeholder engagement, and flexible compliance practices. Through this, companies can trade-off regulatory requirements and innovation and growth.

2.6 Inadequate Access to Reliable ESG Data

ESG data is a critical input to strategy integration, but Nordic companies struggle with data. Despite their status as leaders in transparency and sustainability, Nordic firms (Finland, Sweden, Norway, Denmark) face challenges in accessing and using data due to multiple data sources, lack of consistency and comparability. This hampers performance tracking, risk assessment and integration with long-term business objectives, and access to data is one of the biggest internal barriers to implementation.

In this survey, 43% of companies pointed to data access as a key barrier to implementing ESG strategies. This is especially evident in the value chain where companies must gather data from suppliers, partners and subsidiaries that may not be ESG mature or have reporting systems in place. This problem is exacerbated by the CSRD's double materiality and value chain disclosure requirements, as firms are in the early phases of building capacity to comply with the new regulations (PWC, 2023).

Scope 3 emissions reporting is a case in point. Nordea (2025) states that while companies in the Nordic region have ambitious targets for Scope 1 and 2 emissions, only 11% have Scope 3 targets in line with the Paris Agreement's 1.5°C target. Scope 3 emissions, indirect emissions from suppliers and the use of products, are harder to track due to lack of visibility and data gathering. This makes it challenging for companies to make informed procurement, product design and innovation choices (Nordea, 2025).

Additional studies show the lack of trust from companies and investors. Delmas et al. (2026) report that institutional investors may not use ESG data because they are concerned about materiality and reliability, questioning the legitimacy of self-reported data (such as carbon offsets). Likewise, the Nordic Trustee Capital Market ESG Report (2023) highlighted problems in emissions reporting, with some companies reporting figures up to 1,000 times greater than others, hence the need for thorough validation.

This is especially true in the area of Scope 3 reporting, where emissions in supply chains are estimated to be eleven times larger than direct emissions and represent more than 70% of emissions (Li et al., 2024). Although spend-based methods of estimating emissions enable quicker data collection, they are less accurate than activity-based methods, which require specific data from suppliers.

To address these challenges, Nordic companies are investing in digital ESG platforms, supplier training and audit quality data processes. But such efforts are not equally spread across the region, and lack of standardised frameworks across the region makes comparisons challenging. Lacking ESG data constrains the setting of targets and monitoring of progress, as well as ESG-driven innovation, communication and risk assessment (Münch et al., 2025). This issue is directly linked to the sub-objectives related to internal and stakeholder-based factors in the thesis, as well as the research question on how data constraints impact ESG strategy in Nordic companies.

2.7 Balancing Diverse Stakeholder Expectations

Stakeholder engagement is a traditional feature of Nordic corporate governance, reflecting stakeholder capitalism. However, in the era of ESG integration, meeting the demands of multiple and conflicting stakeholders is more challenging. Companies need to engage with shareholders, employees, customers, regulators, civil society, and global ESG standards, all with varying priorities for sustainability (Huq & Mohammadrezaei, 2025).

The CSRD has added another layer to this issue by requiring companies to conduct double materiality assessments, considering both the financial and social/environmental impacts of sustainability issues. Wulf et al. (2025) notes that although Nordic firms tend to

engage stakeholders important for business operations, they often overlook environmental groups or underrepresented stakeholders, restricting the diversity of stakeholder engagement. Structured engagement techniques like surveys are common, but lack the depth of more interactive techniques like interviews and workshops.

Huq and Mohammadrezaei (2025) note the fast-changing expectations of stakeholder pressures, including regulatory, investor and societal changes. They examined how 14 Nordic companies dealt with this issue during the first CSRD reporting period, and found firms struggled to align internal agendas with external expectations. For example, investors cared about climate risks, employees cared about diversity and inclusion, regulators cared about due diligence for human rights. Such a diversity of stakeholder expectations can result in fragmented and reactive strategies.

Furthermore, CSRD's stakeholder engagement is not just compliance but a means to identify risks and opportunities. However, as Nichita et al. (2025) point out, stakeholder feedback does not affect firm choices of material topics, suggesting "greenwashed" stakeholder engagement. Even sustainability leaders like Ørsted, Vestas and Ericsson are scrutinised for their approach to stakeholder feedback. Abraham et al. (2024) report that Nordic institutional investors participate in private, off-market ESG conversations with firms, where they focus on long-term risks, rather than short-term financial performance. This enhances trust, but also puts pressure on firms to meet vague expectations without concrete business strategy connections.

A solution to this problem is for firms in the Nordic region to transition from transactional to relational stakeholder engagement, where stakeholders are seen as value co-creators rather than information receivers. This means developing flexible governance models, enriching stakeholder understanding and creating clear feedback channels. These measures would help firms manage conflicting stakeholder perspectives, and integrate stakeholder insights into their strategies.

This challenge supports the thesis sub-objectives on stakeholder engagement and internal barriers, and informs the research question on stakeholder roles in shaping, creating or co-creating Nordic firms' ESG strategies. And it contributes to recommendations for

enhancing stakeholder consultation, dialogue and materiality assessments to better align stakeholder perceptions with corporate strategy.

2.8 Limited ESG Expertise at the Board Level

The effectiveness of Environmental, Social, and Governance (ESG) strategies for Nordic firms increasingly relies on the skills of company boards. But, there is a problem: boards often lack the competency to manage ESG risks, advise the company and integrate sustainability into the governance. This sustainability knowledge gap is a concern, particularly as regulatory and stakeholder requirements are increasing in Finland, Sweden, Norway and Denmark.

According to Claessen et al. (202), 61% of Norwegian boards only comply with minimum ESG standards, 65% have no professional sustainability business experience. Boards now need to oversee ESG risks as part of the financial management, align strategies with ESG goals and meet regulatory standards such as the Corporate Sustainability Reporting Directive (CSRD) and the Corporate Sustainability Due Diligence Directive (CSDDD). But readiness to meet these responsibilities is compromised. Worryingly, the average ESG literacy of Norwegian boards is only 12% (the global average is 16.4%) with a few exceptions such as Wilh. Wilhelmsen demonstrating much higher scores (Claessen et al., 2026).

It's not just a Norwegian problem. In a research involving 899 companies in the Nordic region, Bano et al. (2015) demonstrated that board characteristics have a significant effect on ESG performance and financial performance. Firms with diverse and ESG knowledgeable boards were able to manage stakeholder and regulatory pressures. But boards continue to be packed with traditional financial and legal skills, and lack sustainability expertise. This affects boards' understanding of ESG data, sustainability risks and integration of ESG into strategy (Bano et al., 2025).

Gender, age and professional diversity of boards has been proven to improve ESG governance. But traditional board structures remain, forming an ESG governance gap. Sustainability illiterate boards can turn ESG activities into a compliance exercise, with

reporting seen as a compliance rather than a value-creation activity. This can lead to a lack of genuine engagement, reputational risk and missed innovation and leadership opportunities. Further, these boards lack the capability to perform double materiality assessments, or manage sustainability across value chains (Collevecchio et al., 2025).

Nordic companies are now starting to offer board training, set up ESG committees and appoint sustainable board members to counter these deficiencies. The Nordic ESG Lab promotes interdisciplinary governance approaches to incorporate ESG in all board decision-making. These developments represent a step forward, but are not yet consistently adopted, nor are they always proactive.

In terms of strategic business development, a lack of ESG expertise on boards detracts from the legitimacy of sustainability strategies, impacts performance and hampers firms' ability to attract ESG investors. It also limits responsiveness and innovation to regulatory change. This issue links to the thesis sub-objectives on domestic organisational challenges and governance reform, and reinforces the question on governance approaches to facilitate ESG integration in Nordic corporations.

2.9 Opportunities of ESG Integration

2.9.1 Innovation and Sustainable Product Development

The incorporation of Environmental, Social, and Governance (ESG) considerations in Nordic corporations has shifted from compliance to innovation and sustainable product development. Companies in Finland, Sweden, Norway, and Denmark are increasingly tapping into ESG strategies to re-define products, business models and create sustainable value through circular economy, low-carbon technologies and socially inclusive innovation. This trend is driven by regulatory and stakeholder demands, making ESG a key driver for competitiveness and sustainability.

PwC's Nordic ESG Survey (2023) shows that sustainable value propositions are deemed the biggest opportunity for growth in ESG-mature companies. This is also backed by empirical evidence: (Dsouza & Jain, 2026) identified that there is a positive association between ESG scores and return on equity (ROE) in Nordic firms, moderated by

environmental innovation. While it may negatively affect short-term financial performance via the costs of investment, it leads to improved long-term value, credibility, trust and stakeholder fit, strengthening the link between ESG and competitiveness.

This opportunity is evident in initiatives. The Nordic Circular Economy Playbook highlights the importance of redefining linear value chains as circular economies, using data, technology and inter-sectoral collaboration (Githui & Njuru, 2026). Likewise, the Nordic Circular Design Programme (2024-2025) for more than 150 firms, equipped firms with strategies for EU's emerging regulations including Eco-design for Sustainable Products Regulation (ESPR), confirming the need for ESG-driven innovation (Waqar et al., 2026).

In terms of strategic business development, ESG-led innovation allows Nordic companies to stand out globally, enhance customer loyalty and establish sustainable supply chains. It also promotes organisational culture shift towards engaging in innovative practices of environmental and social issues within and with their employees. While not directly contributing to the bottom line in the short term, the long-term gains in terms of competitiveness, regulatory compliance, customer trust and sustainable growth are significant.

Innovation and sustainable product innovation, therefore, are a key opportunity of ESG integration of Nordic firms. This is in line with sub-objectives of the thesis to identify business opportunities that ESG adoption presents and how sustainability can be incorporated into business models as a sustainable source of value creation.

2.9.2 Enhanced Financial Performance and Investor Appeal

The consideration of Environmental, Social and Governance (ESG) principles in corporate business development is growing in importance in determining the financial performance and attractiveness of Nordic companies. Sustainability is increasingly a dominant theme in global capital markets and Nordic firms - Finland, Sweden, Norway, and Denmark - are showing that ESG is not just good for the planet, but also good business.

This claim is backed up by academic research. Chua and Hae-Young (2025) in a thesis at University of Turku studied the bidirectional relationship between financial performance and ESG of Nordic firms. They found that ESG factors both predict and are the result of

financial performance. In other words, companies with better integration of ESG issues were able to survive crises (such as the COVID-19 pandemic) and to create value for long-term investors. The channels through which this occurs include better risk management, increased stakeholder confidence and resilience. Yahya further stressed the role of ownership, as investors with a long-term outlook are more likely to invest in ESG, as this can lead to better financial performance in the long run (Liu & Song, 2025).

These insights are backed by market data. The NordicESG (2024) report confirmed that ESG transparency and performance is key to gaining competitive edge in Nordic markets. Listed firms on Nasdaq Stockholm and Euronext Oslo that have high ESG scores like Vattenfall AB and Stora Enso Oyj enjoy higher valuations, investor interest and access to green finance. Their actions to reduce Scope 1 emissions and their greater use of renewables demonstrate their leadership in this area, and have attracted ESG investors (González et al., 2025).

Further, Nordic companies incorporating ESG into business strategies enjoy favourable financial opportunities. Banks now provide ESG-friendly financial instruments, such as green bonds and performance-linked loans, for firms with sound ESG strategies. This financial support bolsters innovation, growth and transformation, further supporting the business case for ESG integration (Adowa, 2025).

In terms of investors, ESG is currently a key part of the investment process. Kharaghania and Madadkhania (2025) states that ESG factors are now used as implied measures of sustainability, especially in times of economic uncertainty. This is also related to institutional theories regarding ESG and signals of legitimacy and changing stakeholder relations.

In conclusion, ESG integration offers Nordic companies a strategic advantage to improve financial performance and attract investors. Sustainability integration not only enhances profitability, but it also reduces risks, attracts investors and creates sustainable business models.

2.9.3 Stakeholder Engagement and Trust Building

Stakeholder engagement and trust building is at the core of strategic implementation of Environmental, Social and Governance (ESG) considerations in the Nordic region. Companies in Finland, Sweden, Norway, and Denmark operate in a stakeholder-focused system where their legitimacy and future success is anchored in ethical, transparent, and inclusive stakeholder relations (employees, investors, regulators and civil society). Creating ESG value propositions for stakeholders enhances transparency, communication and mutual value creation, resulting in sustainability being integrated into business strategies.

Academic research supports the use of stakeholder theory in ESG strategies in Nordic companies. (Dinu A. , 2025) Lund University thesis, illustrates how firms like Ericsson, Vestas, and Ørsted, leverage ESG, not just as a compliance tool but to align with stakeholder interest and engender trust. The research highlights stakeholder engagement such as workshops, interviews and co-creation platforms as strategies to identify material issues, mitigate reputational risk and drive customer loyalty.

Cepêda et al. (2025), discuss the engagement of Nordic institutional investors in private ESG dialogues, putting pressure on the firms to deal with risks and wrongdoing. These dialogues reflect stewardship theory whereby responsiveness to stakeholders' concerns builds trust and legitimacy. Likewise, Hoai (2026) demonstrate how firms which invest in sustainability and obtain third-party assurance for their ESG reporting are seen as trustworthy. They explore three dimensions of trust (performance, reputation and appearance) and show that reporting and verification of ESG performance enhance stakeholders' trust, especially under CSRD regulations.

Stakeholder engagement, from a strategic business development point of view, provides employee, customer and investor loyalty, and facilitates compliance. Stakeholder engagement in ESG strategies helps companies to obtain a social license to operate, mitigate reputational risks, and create value. The Nordic experience indicates that stakeholder engagement is not something that can be separated from the business, but rather it is a driver of change, stability and sustainability.

2.9.4 Strategic Alignment with Global Sustainability Goals

Nordic firms are also aligning their Environmental, Social and Governance (ESG) strategies with global sustainability standards such as the United Nations Sustainable Development Goals (SDGs), the Paris Agreement and the Science-Based Targets initiative (SBTi). This approach improves corporate legitimacy and trust, as well as ensuring Nordic companies are global sustainability and innovation leaders. It supports the sub-objectives of the thesis on ESG strategy and stakeholder engagement, and the research question on how ESG integration supports global competitiveness (Yan, 2025).

The UN Global Compact's UNGC (2023) Nordic Corporate Sustainability: Nordic companies are leading the world in sustainability, but will not reach all of the SDGs by 2030. Businesses are setting ambitious climate goals and investing in sustainable products and services, but need to improve biodiversity reporting, long-term strategies and deal with regulatory uncertainty. However, Nordic companies find alignment with SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action) and SDG 14 (Life Below Water) strategically valuable, showing how their efforts towards ESG integration support their business and societal goals (Pokharel, 2025).

ESG alignment is said to be driven by leadership. Almost 90% of Nordic companies indicate that CEO and board prioritisation is the key driver for sustainability. Boards are increasingly incorporating ESG into strategies as a driver for change rather than compliance, and engaging cooperatively to drive improvements in ecosystems and accelerate the world's progress towards the SDGs (Collevecchio et al., 2025).

Nordea's ESG (2025) examined the climate progress of 300 companies listed in the Nordic region in line with the Paris Agreement limit of 1.5°C. The research revealed that although many companies have ambitious targets for their Scope 1 and 2 emissions, only 35% are on a 1.5°C pathway and only 11% have a Scope 3 that aligns with this limit. The results highlight the importance of engaging the value chain and improving reporting to align with global climate goals.

ESG leaders in their respective sectors, such as Ørsted (Denmark) and Ingka Group/IKEA (Sweden) showcase best-practice ESG alignment. Ørsted's renewable energy

transformation and IKEA's circular economy operations show how global harmonisation promotes innovation, stakeholder engagement and leadership. These businesses are not only regulatory compliant but also set global best practices and shape policies (Al-Shai-bani et al., 2025).

From a business development point of view, alignment of ESG with global sustainability initiatives helps Nordic companies to receive green finance, engage in global partnerships and build innovation networks. This also helps shield against regulatory and market uncertainties. This prospect enhances the thesis' purpose by providing firms and policy-makers with insight on how ESG alignment can be a stepping-stone to future sustainability and competitiveness.

2.10 Current State of Knowledge

Table 1. Summary of Literature Review Findings

Theme	What We Know	What We Don't Know / Gaps	Research Needs
Innovation & Products	ESG drives eco-design, circular economy, and sustainable product development.	Long-term financial trade-offs of ESG-led innovation remain unclear.	Study innovation pathways and their impact on competitiveness and resilience.
Financial Performance	ESG correlates with higher ROA, ROE, investor appeal, and access to green finance.	Limited longitudinal evidence on ESG's resilience in crises.	Examine ESG's role in financial stability during market turbulence.
Stakeholder Engagement	Engagement builds trust, legitimacy, and loyalty.	Stakeholder voices often underrepresented; engagement remains compliance-driven.	Develop frameworks for inclusive, co-creative stakeholder engagement.

Governance & Board Expertise	Board diversity enhances ESG oversight.	ESG literacy at board level is weak; governance capacity limited.	Research governance reforms and board training models for ESG integration.
Global Alignment	Nordic firms align with SDGs, Paris Agreement, and SBTi.	Biodiversity reporting and Scope 3 alignment remain inconsistent.	Explore holistic ESG alignment across all global sustainability goals.
Digitalization & AI	Digital tools improve ESG reporting and transparency.	Lack of standardized frameworks for ESG in AI/data ecosystems.	Investigate ESG integration in AI governance and sustainable data infrastructure.
ESG Ratings & Capital Markets	High ESG ratings correlate with stronger capital market performance.	Variability in rating methodologies and disclosure quality.	Research harmonization of ESG ratings and their impact on investor confidence.

The body of research on integrating ESG in Nordic companies shows considerable advances in knowledge of the interaction between sustainability and business strategy. Academics and practitioners concur that ESG has evolved beyond compliance, and has become a source of innovation, competitive advantage and legitimacy. Nordic firms excel in embedding business strategies with global standards like the CSRD, SDGs and the Paris Agreement and in innovating with digitalization, AI and new reporting tools. Research consistently shows that the ESG drives innovation, profitability and stakeholder confidence and Nordic companies are leading the world in sustainable business practices.

However, there are still areas for improvement. Studies reveal ongoing issues with the availability of ESG information, especially Scope 3 emissions, which hinder data comparability and decision-making. Although stakeholder engagement is integral to Nordic corporate practices, it is often compliance-focused and fails to include a wide range of

stakeholders, calling into question questions of inclusivity and co-creation. In terms of governance capabilities, a lack of ESG expertise among corporate boards affects their oversight and strategic planning. In addition, although linkages between ESG and financial performance are clear, there is little longitudinal evidence of their effectiveness in times of crises and market uncertainty. New dimensions, like ESG integration with AI and digital technologies, also lack established frameworks and outcomes, leaving enterprises in the dark about how to navigate these waters.

So such internal and systemic challenges need to be tackled. We need frameworks to operationalise ESG across various industries for comparable, accountable, and innovative results. Research should examine ways Nordic firms can navigate regulatory uncertainty with strategic agility, and how governance changes can enhance decision-making skills related to ESG. There is also a need to explore inclusive stakeholder dialogues that go beyond consultative practices to co-creative processes. This research can offer valuable insights for managers and policymakers to help Nordic firms remain competitive and build trust among stakeholders while contributing to global sustainability objectives.

3 Research Methodology

This chapter provides an overview of the research design and approach taken to study the incorporation of Environmental, Social, and Governance (ESG) considerations into business strategies in Nordic companies. It outlines the research approach, data collection and analysis strategies used to achieve the research goals and answer the research questions. The approach focuses on achieving rigor, validity and reliability in the research, while balancing theoretical and practical considerations. The research design aims to integrate qualitative and quantitative data to provide a holistic picture of the phenomenon through a combination of quantitative evidence of the effects of ESG integration, and qualitative insights of stakeholders' views, experiences and practices.

3.1 Research Philosophy and Approach

In this study, the research philosophy used is pragmatism, which acknowledges that ESG integration in Nordic companies is a multi-faceted problem so that multiple epistemological methods must be used. Pragmatism allows the elements of a positivist approach (quantitative assessment of ESG performance metrics and financial results) and those of an interpretivist approach (qualitative views on stakeholder interactions, governance policies and sector-specific challenges) to be combined. This can enable a holistic approach to the measurable impacts of ESG integration, as well as the contextual understanding, insights (Saunders et al., 2019; Creswell, 2018) and real-world significance of such integration.

The research thus uses a mixed-methods design, which includes qualitative cross-case analysis as well as quantitative analysis of the ESG performance measures. The multi-faceted nature of ESG management (environment, social, governance) and the need for both a statistical and an interpretative point of view are the reasons for this design. Mixed-methods research is an appropriate method to use for complex organizational phenomena because of its ability to provide the validity through triangulation and to understand innovation, competitiveness and value creation more comprehensively (Tashakkori & Teddlie, 2010; Yin, 2018).

3.2 Research Design

The research design serves as the blueprint for addressing the study's objectives and research questions. Given the multidimensional nature of ESG integration in Nordic companies, this study adopts a cross-case comparative design. Case study methodology is particularly suitable for examining complex organizational phenomena in real-world contexts, enabling detailed exploration of both similarities and differences across firms (Yin, 2018).

The study comprises of 4 firms from a variety of industries including energy (Neste), manufacturing (Ørsted, Vestas) and ICT (Ericsson). The use of this multiple-case design allows replication logic whereby findings from one case can be compared and contrasted with others in order to enhance the validity and generalizability (Eisenhardt, 1989). Including companies from various industries ensures that the design reflects industry diversity in how they are implementing ESG integration, providing a detailed overview of sustainable strategies.

To strengthen the analysis, the study employs a mixed-methods approach within the cross-case design. Qualitative insights were derived from governance frameworks, stakeholder management practices, and innovation strategies, analyzed through thematic coding. Quantitative assessments were conducted using ESG metrics and reporting frameworks (e.g., GRI, CSRD, SASB), which were scored on a 1–5 scale and normalized across cases. These scores were then aggregated into comparative tables and visualized through heatmaps to highlight sectoral variation and firm-level performance.

Triangulation of methods and data sources further enhances validity and reliability. Evidence was drawn from corporate sustainability reports, regulatory filings, ESG ratings, and academic research. By integrating qualitative thematic analysis with quantitative scoring, the design provides both contextual depth and measurable comparability, offering a balanced and robust examination of ESG integration as a driver of innovation, competitiveness, and stakeholder trust in Nordic business development (Denzin, 1978; Bowen, 2009; Creswell & Plano Clark, 2018).

3.3 Data Collection

The data collection strategy sought to obtain a broad and deep cross-section of Nordic companies and their ESG integration. The four representative firms across different industry sectors (energy, manufacturing, and ICT) were analyzed using a cross-case design. This approach enabled the detection of similarities and differences between sectors with respect to ESG practices, as recommended by Yin (2018) for multiple case studies in order to achieve validity through replication logic.

The study relied primarily on secondary data sources, including sustainability reports, annual reports, corporate disclosures, and ESG ratings. Secondary sources are well recognized as reliable in organizational research, particularly when triangulated (Saunders et al., 2019). These documents provided both quantitative metrics (e.g., emissions, diversity measures, financial performance, ESG scores) and qualitative information (e.g., governance structures, stakeholder engagement, innovation practices).

Information was cross-checked against established frameworks to verify data integrity, including CSRD, ESRS, GRI, SASB, and the EU Taxonomy. Document analysis followed Bowen's (2009) systematic approach to reviewing textual materials. Quantitative indicators were extracted and scored on a 1–5 scale to enable comparability across firms, while qualitative themes were coded to identify recurring patterns in governance, stakeholder relations, and innovation.

Academic research, consultancy reports, and market analyses were integrated with corporate data to provide contextual depth, situating corporate actions within regulatory and theoretical frameworks. The triangulation of qualitative and quantitative data sources ensured that the dataset was comprehensive, credible, and fit for purpose (Denzin, 1978). This combination of corporate disclosures and scholarly sources provided a robust foundation for analyzing ESG integration in Nordic firms.

3.4 Sampling Strategy

The sampling strategy for this study had been designed to reflect a breadth and diversity of the range of ESG integration practices in Nordic companies. The firms included in the

sample were selected using purposive sampling, with 4 firms being known for their leadership in sustainability and being representatives from different sectors: energy, manufacturing and ICT. In qualitative case study research, purposive sampling is especially useful when researchers are specifically looking for information-rich and strategically relevant cases that can help answer the research questions that pertain to the phenomenon they are studying (Patton, 2015).

Purposive sampling was used in this study to focus on the companies that were seen as being trendsetters or active in the ESG transformation process in order to gain insight into opportunities and challenges in integration. The selection of these companies was based on their specific characteristics: they are advanced in their approach to ESG, they have a strategic importance, they have a diverse context and they are visible in the global sustainability rankings. The deliberate selection increases the explanatory power of the study, because it focuses on exemplars which can light up sectoral differences and similarities in the integration of ESG (Eisenhardt, 1989).

The integration of companies from various sectors will strengthen the credibility of cross-sector comparisons and help to reveal the convergence and divergence of ESG approaches by sector. This approach is in line with Yin's (2018) suggestion on multiple-case designs in which the logic of replication enhances the robustness and generalizability of the results.

3.5 Analytical Approach

The method used in this research is a cross-case analytical framework, comparing ESG integration strategies of four Nordic firms from different industries. Cross-case analysis is well established as a powerful tool for identifying both convergences and divergences across cases, thereby enabling a comprehensive understanding of complex organizational phenomena (Yin, 2018; Eisenhardt, 1989). This design allows the study to highlight sectoral variation while also capturing commonalities in ESG integration practices.

The analysis was structured around key dimensions derived from the theoretical lenses employed: Stakeholder Theory, Institutional Theory, and Dynamic Capabilities Theory.

These dimensions encompassed governance, stakeholder relations, innovation, regulatory compliance, and transparency. This framework enabled the study to generate descriptive insights as well as theoretically informed interpretations of the findings (Miles, Huberman & Saldaña, 2014).

To enhance rigor, the study adopted a mixed-methods approach. On the qualitative side, thematic analysis was applied to corporate sustainability reports, governance structures, and stakeholder engagement practices. Themes were systematically identified and coded to reveal patterns in ESG integration (Braun & Clarke, 2006). On the quantitative side, ESG scores were developed to provide measurable comparisons across firms. These scores were derived from corporate disclosures and sustainability indices (e.g., GRI, CSRD, SASB), using a 1–5 scale for transparency, compliance, and innovation. Scores were normalized across cases and aggregated into comparative tables and visualized as heatmaps (Figures 1–2).

This dual-layered approach allowed for triangulation of qualitative themes with quantitative metrics, thereby strengthening validity and reliability (Denzin, 1978). The qualitative analysis provided depth and contextual understanding, while the quantitative scoring offered comparability and clarity. Together, these methods ensured that the findings contribute meaningfully to both academic research and managerial practice, offering insights into how ESG integration functions as a strategic driver of innovation, competitiveness, and stakeholder trust (Bowen, 2009; Creswell & Plano Clark, 2018).

3.6 Ethical Considerations

The integrity of ethics was maintained during the study. Issues of confidentiality and privacy were not encountered as only secondary sources of information, such as sustainability reporting, environmental, social and governance (ESG) disclosures, and published academic work were used in the research. However, ethical issues were addressed by adhering to the principles of academic referencing and citation (Bowen, 2009; Resnik, 2018) and ensuring that all data were used transparently, accurately and ethically.

The case companies were selected using purposive sampling, and the firms in the study were selected to avoid bias by choosing different case companies from various industrial sectors. To ensure that data is not misinterpreted and misrepresented, data has been cross-checked with multiple sources and frameworks (CSRD, ESRS, GRI, SASB, EU Taxonomy) to increase the reliability (Saunders et al., 2019). The study also followed the rule of academic integrity, avoiding any form of plagiarism, and recognizing all theoretical frameworks, empirical findings and methodological references (Bryman, 2016).

Lastly, the research was undertaken with ethical sensitivity to the ethical aspects of ESG itself. The purpose of the study was to provide a contribution to the understanding of responsible business practice which did not unfairly assess or misrepresent corporate initiatives. In this way, the results are meaningful both to the academic world and to society (Bell & Bryman, 2007).

4 Findings

The empirical findings of the cross-case analysis of four Nordic companies Neste, Ørsted, Vestas and Ericsson are discussed in this chapter. The results demonstrate how Environmental, Social and Governance (ESG) considerations are embedded in the strategies for business development across various industries, with insights into the similarities and differences across them. The study focuses on aspects such as governance, stakeholder relations, innovation, regulatory frameworks and transparency through the lenses of Stakeholder Theory, Institutional Theory and Dynamic Capabilities Theory.

The findings shed light on the strategic importance of ESG integration, barriers to implementing ESG practices, and opportunities for building competitiveness and resilience. Comparisons between practices across sectors and approaches provide insights for both research and practice, illuminating the complexities of ESG as a catalyst for innovation, governance improvement and stakeholder trust in the Nordic business context.

4.1 Overview of Case Companies

The four Nordic companies chosen for cross-case study (Neste, Ørsted, Vestas and Ericsson) represent various sectors such as energy, manufacturing and ICT. They have all been involved to a great extent in Environmental, Social, and Governance (ESG) practices, albeit at different stages and facing sector-specific challenges. Their experiences offer insights into the integration of sustainability into business strategy in the Nordic region.

4.1.1 Neste (Finland, Energy)

Neste has evolved from a traditional refinery to a world-leading company in renewable fuels and circular economy. Its 2024 Sustainability Statement confirms that they are fully compliant with the Corporate Sustainability Reporting Directive (CSRD) and that emissions (Scope 1-3) have been assured by a third party. Neste ranked in the top 40 in the Corporate Knights Global 100 Index in 2025 and a Platinum EcoVadis Medal in the top 1% globally (Neste, 2025).

4.1.2 Ørsted (Denmark, Energy)

Ørsted has successfully transitioned to green energy, and is a global leader in offshore wind. It prioritises climate leadership, stakeholder relations and sustainable finance in its ESG strategy. The company provides information in line with GRI, SASB, CSRD and EU Taxonomy standards and in 2024, achieved the top possible CDP Climate rating for a sixth year in a row, and an AAA MSCI ESG rating. Ørsted also ranked 9th globally and 1st in the Energy sector in the Corporate Knights Global 100 Index 2025 (Ørsted A/S, 2025).

4.1.3 Vestas (Denmark, Manufacturing)

Wind turbine supplier Vestas combines ESG considerations into product development, ethical supply chains, and circular economy practices. In 2024, its CSRD-compliant Sustainability Statement outlined achievements in low-emission steel and blade recycling, but noted difficulties to meet mid-term Scope 1-2 targets. In 2025, Corporate Knights recognised Vestas as the most sustainable energy solutions company. ESG data indicate Scope 3 emissions are a significant challenge, totalling almost 8 million tonnes CO₂e per year (Vestas, 2015).

4.1.4 Ericsson (Sweden, ICT)

Ericsson embeds ESG in its digital infrastructure, governance and supply chains. The 2025 Sustainability Statement revealed a 64% decrease in Scope 1-2 emissions between 2020 and 2025, and initiatives on digital inclusion, ethical AI and stakeholder involvement. But Scope 3 emissions and lack of board ESG expertise are areas for improvement. Ericsson adheres to GRI and SASB and is progressing towards CSRD (Ericsson, 2025).

4.2 Comparative Insight

These firms have been chosen for their ESG maturity, as well as their strategic context. Neste and Ørsted represent energy-sector innovation, Vestas represents innovative manufacturing for sustainability, and Ericsson represents the future of ESG in digital governance. They offer a solid foundation for a comparative analysis, revealing best practices, strategic shortcomings and areas for improvement.

Table 2. Comparative Overview of Case Companies.

Company	Country / Sector	ESG Focus Areas	Reporting Frameworks	Global Rankings / Ratings	Key Challenges
Neste	Finland / Energy	Renewable fuels, circular economy	CSRD, ESRS, GRI, SASB, TCFD	Corporate Knights Global 100 (2025: #40); EcoVadis Platinum (Top 1%)	Scope 3 emissions disclosure; balancing growth with decarbonization
Ørsted	Denmark / Energy	Offshore wind, decarbonization, climate advocacy	CSRD, GRI, SASB, EU Taxonomy	Corporate Knights Global 100 (2025: #9, #1 in energy); MSCI ESG AAA; CDP Climate A rating	Biodiversity impact management; scaling green finance
Vestas	Denmark / Manufacturing	Wind turbines, circular design, supply chain sustainability	CSRD, ESRS, GRI, SDGs	Corporate Knights Global 100 (2025: #1 in energy solutions providers)	Scope 3 emissions reporting; mid-term Scope 1–2 targets unmet

Ericsson	Sweden / ICT	Digital inclu- sion, ethical AI, supply chain transparency	GRI, SASB, transition- ing to CSRD	Corpo- rate Knights Global 100 (2025: Top 100 ICT firms); CDP Cli- mate B rating	Scope 3 emis- sions; limited board-level ESG literacy; weak co-crea- tion in stake- holder en- gagement
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4.3 ESG Frameworks and Reporting Standards

ESG frameworks or reporting standards play a crucial role for Nordic firms in understanding how they can guide business strategies towards sustainability. To adapt to increasing regulatory requirements and stakeholder expectations, companies like Neste, Ørsted, Vestas and Ericsson use a combination of international and EU-related frameworks for their ESG disclosures. These instruments provide transparency, consistency and accountability, while adhering to the Corporate Sustainability Reporting Directive (CSRD) regulations, which apply to large firms from 2024 (Carungu et al, 2025).

CSRD mandates the accounting based on European Sustainability Reporting Standards (ESRS) which focus on the concept of double materiality, the impact of sustainability issues on business performance (financial materiality) and the impact of business operations on society and the environment (impact materiality) (UN, 2025). ESRS is also aligned with other frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD), and as such is comparable across borders.

- Neste reports extensively under CSRD and ESRS, with third-party assurance of Scope 1–3 emissions. It also integrates GRI, SASB, and TCFD into its disclosures. In 2025,

Neste ranked 40th in the Corporate Knights Global 100 Index and received a Platinum EcoVadis Medal, placing it among the top 1% of companies worldwide (Neste, 2025).

- Ørsted aligns its reporting with CSRD, GRI, SASB, and ESRS, covering climate action, biodiversity, and human rights. It has consistently achieved an AAA MSCI ESG rating and the highest CDP Climate score, ranking 9th globally and 1st among energy firms in the Corporate Knights Global 100 Index 2025 (Ørsted, 2025).
- Vestas complies with CSRD and ESRS, emphasizing circular economy indicators and supply chain sustainability. Its 2024 Annual Report covers Scope 1–2 emissions, gender diversity, and product lifecycle analysis. Corporate Knights named Vestas the world's most sustainable energy solutions provider in 2025, though the firm acknowledged challenges in meeting mid-term emission targets (Vestas, 2025).
- Ericsson continues to report under GRI and SASB while gradually transitioning to CSRD compliance. Its disclosures emphasize digital inclusion, ethical AI, and supply chain transparency. However, weaknesses remain in Scope 3 emissions reporting and board-level ESG literacy (Ericsson, 2025).

The EU Taxonomy is also an integral part of CSRD/ESRS reporting. It establishes a framework for environmentally sustainable economic activities, with companies needing to disclose the share of revenues, capital expenditure and operating expenditure that are aligned with the Taxonomy (Deloitte, 2024). Companies like Ørsted and Vestas in the Nordic region are well aligned to Taxonomy criteria in the renewable energy and decarbonization sectors, but there are issues with interindustry comparability.

But there are still problems. Nordea's 2025 ESG Insights show that CSRD transition has actually led to lower disclosure in some areas, as companies prioritise material issues when reporting. This has impacted the comparability of water, waste and social issues. Further, although 64% of Nordic companies tie CEO pay to ESG targets, there are still transparency issues with Scope 3 emissions and stakeholder engagement (Nordea, 2025).

Overall, Nordic firms are the most advanced in ESG reporting by integrating global standards with European regulations, promoting transparency and strategy integration.

However, there is a need for better data, stakeholder engagement and interindustry comparability.

4.4 Strategic Alignment of ESG

Integration of Environmental, Social, and Governance (ESG) policies with strategy is a key characteristic of sustainability for Nordic firms. Neste, Ørsted, Vestas and Ericsson among others have integrated ESG in their strategic planning to meet regulatory and stakeholder demands and global climate change challenges. Neste has transformed from fossil fuels to renewable aviation fuel and renewable diesel, with its 2024 Annual Review stating complete compliance with CSRD, and ESG oversight at board level to ensure sustainability goals are integrated with financial and innovation strategies. The company's long-term value creation is rooted in circular economy principles and transparent reporting of Scope 1-3 emissions and in 2025 it was ranked 40 in the Corporate Knights Global 100 Index and awarded a Platinum EcoVadis Medal, highlighting its ESG leadership in the energy sector (Neste, 2025).

Ørsted leads the ESG transition with 99% renewable energy and 87% lower Scope 1-2 emissions from 2018. It plans to finance 100% of its activities with green bonds by 2025 and has a board of directors with half independent members, oversees ESG strategies. Ørsted reports on CSRD, GRI, SASB and TCFD standards, proving that ESG is no longer just compliance but also innovation and trust-building. In 2025, Ørsted was 9th worldwide and 1st in the energy sector in the Corporate Knights Global 100 Index (Ørsted, 2025). Vestas, the global leader in wind turbine production, embeds ESG in its products, supply chain and diversity policies. 2024's CSRD-compliant Sustainability Statement shows improvement in material efficiency and recycling, but organisational changes have impacted mid-term Scope 1-2 targets. A transition plan prioritises circular economy metrics, demonstrating its ESG responsiveness, and Corporate Knights awarded Vestas as the most sustainable energy solutions provider in 2025, despite ESG challenges with Scope 3 (Vestas, 2025).

Ericsson, on the other hand, is slowly integrating ESG with digital infrastructure and governance. It reports via GRI and SASB, and is moving to CSRD, with a focus on sustainable

sourcing, AI ethics and digital inclusion. But there is a lack of maturity in Scope 3 reporting and board-level ESG knowledge, pointing to the need for greater integration (Ericsson, 2025). This relates to the thesis questions: How are ESG principles embedded in Nordic business strategies and what are the opportunities and risks? Energy and manufacturing firms are highly aligned, with ICT firms transitioning.

New research substantiates this. Korkashvili (2024) and Kistic (2025) reveal that 64% of Nordic firms now tie CEO pay to ESG performance, enhancing ESG accountability. The Capital Market ESG (2025) report states that firms listed on Nasdaq Stockholm used 56% renewable energy, demonstrating industry support for climate goals. Likewise, PwC Nordic Value Chain Survey (2023) notes that ESG "Champions" embrace sustainability as a strategic priority, foster innovation and earn stakeholder confidence.

Overall, regulatory, stakeholder and innovation drivers influence ESG alignment in Nordic companies. Despite advancements, there are still issues with data transparency, governance capacity and Scope 3 emissions. However, the trajectory is towards convergence across industries, solidifying ESG as a business imperative for sustainability and growth.

4.5 Governance Structures

ESG integration into strategic business growth is deeply influenced by governance practices that shape how sustainability is integrated into corporate governance, management and strategy. Different levels of ESG governance maturity in Nordic companies (Neste, Ørsted, Vestas and Ericsson) reflect both industry and corporate preferences.

4.5.1 Neste: ESG Intergration at the Board Level

The Finnish energy major Neste has formed ESG committees at board level that oversee the sustainability strategy and performance. ESG performance measures like carbon emissions targets and safety are tied to executive remuneration, promoting accountability (Neste, 2025). Its governance framework includes embedding ESG in strategic decision-making and risk management, which is in line with global standards. Neste received a 2025 EcoVadis Platinum Medal on sustainability, highlighting transparency and stakeholder engagement. According to Cristofaro et al. (2015), ESG governance involves

setting goals, engaging stakeholders and monitoring performance, which are all evident in Neste's governance framework.

4.5.2 Ørsted: Governance as a Driver of Transformation

Ørsted, formerly DONG Energy, exemplifies governance-driven transformation. The Danish firm shifted from fossil fuels to renewables under value-based leadership and board-level sustainability commitment. Its governance system includes ESG committees aligned with the UN Sustainable Development Goals, and executive incentives tied to biodiversity and carbon neutrality targets certified by the Science Based Targets initiative (SBTi). Schüder and Zülch (2026) describes Ørsted's governance model as shared value creation, combining business success with societal benefit. This approach moves beyond conventional CSR, embedding sustainability into the company's mission and board-level supervision.

4.5.3 Vestas: Operational ESG Oversight

Vestas, the Danish wind turbine manufacturer, employs a decentralized governance model. While it lacks a dedicated board-level ESG committee, sustainability units report to senior management and influence strategic decisions on environmental performance and stakeholder engagement (Dinu A. , 2025). This operationally focused model provides flexibility but requires strong internal coordination to ensure coherence in ESG goals. Vestas aligns its sustainability strategy with GRI and SDGs, and its long-term vision includes producing zero-waste wind turbines by 2040. However, the absence of board-level sustainability expertise highlights the challenges of embedding ESG consistently across governance structures.

4.5.4 Ericsson: Limited Board Level ESG Expertise

Ericsson, the Swedish ICT giant, demonstrates limited ESG competence at the board level. While the company has pledged net-zero emissions by 2040 and established sustainability teams within its corporate responsibility division, these units have restricted influence on strategic governance (Ericsson, 2025). The absence of board-level ESG committees or directors with sustainability expertise may impede integration into long-term

corporate strategy. Collevocchio et al. (2025) argue that board experience in sustainability significantly enhances firm performance, particularly when combined with adaptive governance structures—an area where Ericsson remains underdeveloped.

4.5.5 Comparative Analysis and Implications

The governance structures of Neste, Ørsted, Vestas, and Ericsson reveal distinct approaches to ESG integration, reflecting differences in sectoral priorities and organizational maturity. Neste and Ørsted demonstrate advanced governance models, with board-level ESG committees, executive compensation linked to sustainability outcomes, and directors possessing sustainability expertise. Their governance frameworks embed ESG into strategic planning and risk management, enabling transformational change and reinforcing stakeholder trust. Vestas, by contrast, adopts a decentralized model in which sustainability units report to senior management but lack direct board-level oversight. While this operational approach provides flexibility, it risks limiting coherence and long-term strategic alignment. Ericsson remains at an early stage of governance maturity, with sustainability initiatives managed at the operational level but minimal board-level expertise or formal ESG committees.

The comparative overview is summarized in the table below:

Table 3. Comparative Overview of ESG Governance Structure in Nordic Firms

Company	Board-Level ESG Committee	Executive Compensation Linked to ESG	ESG Expertise on Board	ESG Embedded in Strategy
Neste	Yes	Yes	Yes	Strong – integrated into risk management and long-term value creation
Ørsted	Yes	Yes	Yes	Transformational – governance drives renewable

				transition and stakeholder trust
Vestas	No	Limited	No	Operational – decentralized oversight, aligned with GRI/SDGs but lacking board-level expertise
Ericsson	No	No	Limited	Tactical – sustainability teams active, but weak board-level governance alignment

This comparison highlights that firms with board-level ESG committees and explicit links between executive incentives and sustainability outcomes tend to achieve stronger integration of ESG into corporate strategy. As Eliwa et al. (2026) argue, sustainability committees are most effective when they address stakeholder concerns and are tied to measurable performance outcomes. Similarly, (Strand, 2024) emphasize that governance frameworks must evolve to balance shareholder interests with broader societal objectives. Nordic firms, with their tradition of stakeholder inclusiveness, are well positioned to lead this transformation.

The implications are clear: governance maturity directly influences the credibility, transparency, and strategic impact of ESG initiatives. Companies with robust governance frameworks are better equipped to manage regulatory complexity, attract responsible investment, and foster innovation. Conversely, firms with limited board-level ESG expertise risk slower integration and weaker stakeholder confidence. The comparative analysis thus reinforces the thesis objective of examining how governance structures shape the strategic alignment of ESG in Nordic business development.

4.6 Challenges and Opportunities

Despite progress, challenges remain. Firms must navigate regulatory complexity, reconcile ESG metrics, and balance short-term financial demands with long-term sustainability

goals. The absence of standardized reporting systems complicates governance, as highlighted by (Moro-Visconti et al., 2025). Yet opportunities are significant: robust governance frameworks can enhance reputation, attract responsible investment, and drive innovation. As ESG becomes central to strategic business development, governance will play a decisive role in shaping resilience and societal impact across Nordic firms.

4.6.1 Stakeholder Engagement

Stakeholder engagement is a central pillar of ESG integration, enabling businesses to align sustainability strategies with societal expectations, regulatory frameworks, and long-term value creation. Nordic firms such as Neste, Ørsted, Vestas, and Ericsson demonstrate diverse approaches to stakeholder involvement, ranging from participatory workshops and materiality assessments to supplier collaboration and digital platforms. This section examines these practices in light of the Corporate Sustainability Reporting Directive (CSRD) and recent scholarly literature, drawing on qualitative content analysis of secondary data sources.

4.6.2 Neste: Structured Engagement and Biodiversity Dialogue

Neste has developed a structured stakeholder engagement model that includes workshops, materiality evaluations, and dialogue with NGOs, investors, and consumers. These practices align with CSRD requirements, particularly the emphasis on double materiality and transparent reporting. Dinu (2025) highlight the importance of materiality evaluation in identifying both financial and societal ESG issues. Neste's workshops prioritize climate action, biodiversity, and human rights, which are reflected in its sustainability reporting. The company's biodiversity strategy, created in consultation with stakeholders, demonstrates responsiveness to environmental and societal expectations (Neste, 2025). This participatory approach enhances transparency and legitimacy, contributing to strong ESG ratings and stakeholder trust.

4.6.3 Ørsted: Participatory Governance and SDG Alignment

Ørsted involves stakeholders in its fossil fuel exit strategy to renewable energy. Through workshops, consultations and materiality reviews, the company ensures that it meets

UN Sustainable Development Goals (SDGs) and CSRD. Tripathi and Saxena (2024) identifies Ørsted's stakeholder approach as "shared value creation", which integrates business and social value. Periodic materiality reviews include stakeholder input, making ESG reporting more relevant and relevant. Ørsted also works with local communities to integrate offshore wind farms, considering impact on marine ecosystems, aesthetics, and local economic opportunities. This participatory governance model builds trust over time, and positions Ørsted as an ESG leader.

4.6.4 Vestas: Circular Collaboration and Supplier Engagement

Vestas uses a stakeholder-based approach focusing on circular design, supplier training and collaboration. Vestas' approach to the circular economy co-designs products with stakeholders to reduce waste and prolong product life. Rossi and Srari (2025) note that collaboration with stakeholders is vital for circular entrepreneurship, driving innovation and co-creation of sustainable solutions. Vestas trains suppliers in ESG and engages them in workshops, improving value chain transparency and performance. Roelfsema (2026) stress the importance of reciprocity for stakeholder engagement in circular ecosystems. Vestas's decentralized governance structure offers flexibility but must be well-coordinated to ensure alignment with sustainability goals.

4.6.5 Ericsson: Digital Engagement with Limited Co-Creation

Ericsson's stakeholder engagement is largely through surveys, digital and online forums, reaching customers and employees. While this expands its reach, it is still transactional and lacks co-creation. According to Jiang and Lin (2025), digital engagement should move beyond collecting input from stakeholders to involving them. Ericsson's approach fails to fully consider stakeholder viewpoints in strategy development, reducing responsiveness to ESG. (Jiang & Lin, 2025) observe that co-creation promotes digital innovation in fast-moving businesses like telecommunications. Ericsson's transactional engagement strategy limits stakeholder impact on ESG strategy, and is less participatory than its energy and manufacturing counterparts.

4.6.6 Comparative Analysis

The comparative analysis highlights key differences in stakeholder engagement among the four companies. Both Neste and Ørsted are ahead of the curve with systematic and collaborative stakeholder engagement in line with CSRD, integrating stakeholder insights into strategy and reporting. Vestas excels in collaboration with circular design and suppliers, but their decentralised approach needs co-ordination. Ericsson's online presence reaches many stakeholders, but falls short of fostering co-creation and integration.

Table 4. Comparative Overview of Stakeholder Engagement Practices in Nordic Firms

Company	Engagement Type	CSRD Alignment	Co-Creation Depth	Strategic Integration
Neste	Workshops, materiality assessments	High	Moderate	Strong
Ørsted	Workshops, consultations	High	High	Transformational
Vestas	Circular design, supplier training	Moderate	High	Operational
Ericsson	Surveys, digital platforms	Low	Low	Tactical

This evidence confirms that participatory and co-creative engagement practice leads to better CSRD alignment and stakeholder relationships. Jiang & Lin (2025) warns engagement should not be equated with responsibility, and the need to create with stakeholders. Gil-Lamata & Latorre-Martínez (2025) highlight long-term stakeholder engagement leads to innovation and change. They also demonstrate that stakeholder pressure boosts sustainability reporting quality, especially via the GRI approach; Singh et al. (2021) also show that pressure drives green innovation via dynamic capabilities.

The takeout is that stakeholder engagement is not just regulatory compliance, but a way to gain legitimacy, innovate and compete. Nordic companies that prioritise participatory governance and co-creation through ESG are more likely to comply, build investor trust and transform towards sustainability.

4.7 Innovation and Product Strategy

ESG integration into innovation and product strategy supports companies in juggling innovation and sustainability. This can be seen in the innovation of Nordic companies like Neste, Ørsted, Vestas and Ericsson with ESG-driven solutions including renewables, circular economy, digital inclusion and ethical AI. These approaches demonstrate how innovation can be leveraged as a competitive differentiator and to comply with various regulations, build trust with stakeholders and deliver long-term value.

4.7.1 Neste: ESG Driven Innovation in Renewable Fuels and Circularity

Neste is a global leader in ESG-focused innovation with its renewable fuels and circularity strategies. Neste is the largest producer of renewable diesel and sustainable aviation fuel, and factors climate and biodiversity goals into its product development (Neste, 2025). It embodies circularity in its strategies to rethinking plastic waste and boosting resource efficiency (Abd Razak et al., 2026). Munonye and Munonye (2025) explain that it is not possible to achieve carbon neutrality without circular economy approaches, which is evident in Neste's technologies that repurpose waste. This helps to reduce the need for fossil-based feedstocks and environmental impact, enhancing its position as an ESG leader.

4.7.2 Ørsted: Offshore Wind and Green Finance Innovation

Ørsted is a leader in climate innovation with its offshore wind projects and innovative green finance. Its energy transition away from fossil fuels is driven by a values-based approach and in line with UN Sustainable Development Goals (Hao & Dragomir, 2025). This includes its partnership with Google to provide 24/7 carbon-free energy (Ørsted, 2025). Mavlutova et al. (2025) point to the role of green bonds in improving environmental outcomes, with strong internal governance. Ørsted's application of green bonds

to fund renewable energy projects is an example of how financial innovation can support ESG goals. It also leverages digital optimisation solutions to optimise wind farm performance and minimise carbon emissions, further positioning itself as an innovator in sustainable energy solutions.

4.7.3 Vestas: Sustainable Design and Supply Chain Decarbonization

Vestas' innovation strategy is based on sustainable design and decarbonisation of the supply chain. The company aims to produce zero-waste wind turbines by 2040, and has collaborations to set up recycling infrastructure (Vestas, 2025). Innovation projects include turbine modularity, recyclable blade technologies and predictive maintenance software. Conca et al. (2026) note that decarbonizing the supply chain improves economic and environmental performance, a strategy which Vestas adopts in its holistic approach to decarbonizing its value chain. Joint ventures also boost circularity and raw material efficiency, positioning Vestas as a leading product sustainability innovator.

4.7.4 Ericsson: Digital Inclusion and AI Ethics

The innovation strategy of Ericsson focuses on digital inclusion and ethical AI, combining networks that are energy-efficient with the growth of the circular economy and responsible AI development to its sustainability plan (Ericsson, 2025). The company, however, has not done as much at the product level of ESG which limits the potential overall impact of its innovation strategy. (Chen et al., 2026) develop an ESG-AI model based on transparency, fairness, and accountability, the concepts which have already been implemented by Ericsson in ethical AI principles and stakeholder interactions. emphasize the diversity and inclusion as the key in AI development, and Ericsson has already started to work in these areas. However, to improve the performance of the company in terms of sustainability, the company has to increase the lifecycle analysis and measurement of the ESG in developing its products.

4.7.5 Comparative Analysis

The comparative study shows that there are differences in sectoral innovation of ESG. Neste and Ørsted are highly compatible in terms of innovation and ESG goals, as they

consider renewable energy, the circular economy, and green finance as the part of their strategies. Vestas is more concerned with product-level sustainability and decarbonization of supply chain, whereas Ericsson is more concerned with digital ethics and inclusivity but is not so strong in measuring ESG in product innovation.

Table 5. ESG Innovation and Product Strategy Comparison

Company	Innovation Focus	ESG Integration	Strategic Impact
Neste	Renewable fuels, circular economy	High – climate and biodiversity targets embedded	Strong – global leadership in renewable fuels
Ørsted	Offshore wind, green bonds, digital optimization	High – aligned with SDGs and CSRD	Transformational – systemic renewable transition
Vestas	Sustainable turbine design, supply chain decarbonization	Moderate – operational focus with circularity	Operational – product-level sustainability, long-term zero-waste vision
Ericsson	Digital inclusion, ethical AI	Limited – lacks lifecycle ESG measurement	Tactical – innovation in ethics, but weak product-level ESG integration

Such results highlight the importance of companies that incorporate ESG in innovation systems to be more effective in meeting regulatory requirements and generating sustainable investment and long-term value to society. Green finance and circular economy, as well as responsible AI practices, are key avenues toward introducing ESG into innovation in sectors.

4.8 Regulatory Compliance

One of the most important aspects of ESG integration is regulatory compliance: this is a factor that will guarantee that corporate sustainability plans are in line with the changing

legal framework and international standards. The Corporate Sustainability Reporting Directive (CSRD), the EU Taxonomy, and the Sustainable Finance Disclosure Regulation (SFDR) are key tools used in the European setting to direct the actions of corporations. Nordic companies like Neste, Ørsted, Vestas, and Ericsson have shown a congruence of regulations, which are somewhat strong or weak in the sectors, transparency, assurance and value chain reporting.

4.8.1 Neste: Full Alignment with EU ESG Regulations

Neste has in-depth adherence to CSRD, EU Taxonomy and SFDR. Its sustainability reporting incorporates both the double materiality tests and third-party assurance and disclosures of the taxonomy in detail on eligibility and alignment of renewable fuel activities (Lindgren et al., 2026). The improved transparency requirements of CSRD are satisfied by governance disclosure and future-oriented climate ambitions, and the compliance with SFDR is obtained via green finance instruments and disclosures of ESG risks (Neste, 2025). This proactive regulative compliance strategy supports the leadership of Neste in terms of governance of ESG and sustainable innovation.

4.8.2 Ørsted: Integrated Compliance and Green Finance Leadership

At Ørsted, there is a good alignment between the regulations and the company has included CSRD and EU Taxonomy in its annual sustainability report and has also performed a double materiality analysis (Ørsted, 2025). Its ESG reporting is externally verified, and covers Scope 1, 2 and 3 emissions, which is aligned with EU requirements, and its climate disclosure efforts are certified by CDP ratings. Ørsted has a large portfolio of green bonds that is in line with SFDR requirements and climate disclosure practices are verified by CDP ratings. An example of how regulatory compliance can be used as a source of innovation and growth can be found in Ørsted, which invested in offshore wind and renewable infrastructure, green finance (Ørsted, 2025).

4.8.3 Vestas: Strong Alignment with Challenges in Scope 3 Reporting

Vestas is in line with CSRD and EU Taxonomy yet it experiences some ongoing issues with Scope 3 reporting. Its 2023 sustainability report encompasses lifecycle evaluation and

materiality evaluation that is stakeholder-led to aid in aligning with taxonomy (Vestas, 2025). Structural changes however have made it difficult to achieve mid-term Scope 1 and 2 goals and Scope 3 data collection is complicated by variability of the supply chain. All these gaps indicate that there is a necessity to enhance supplier collaboration and data governance to become fully regulatory compliant.

4.8.4 Ericsson: Partial Compliance and Value Chain Transparency Gaps

Ericsson is still at the transitional phase with regard to regulatory compliance. Although its sustainability reporting is covering Scope 1 and 2 emissions, Scope 3 reporting is still minimal and the alignment to taxonomies is not complete (Ericsson, 2025). The company does not provide external assurance on its UN SDGs promotion and publishing of ESG metrics, which makes it less credible. As (Boller et al., 2025) claims, implementing CSRD will push companies towards increased transparency and involvement of stakeholders, which is a direction that Ericsson needs to reinforce by enhancing the quality of data and providing assurance tools.

4.8.5 Comparative Analysis

The comparative analysis shows that there are evident differences in regulatory maturity of the four firms. Neste and Ørsted show and report full compliance with CSRD, EU Taxonomy and SFDR, with an excellent Scope 3 reporting and external assurance. Vestas demonstrates good compliance but has an issue with the Scope 3 transparency; whereas Ericsson is partially compliant, with major discrepancies in value chain reporting and assurance.

Table 6. Comparative Overview of Regulatory Compliance in Nordic Firms

Company	CSRD Compliance	EU Taxonomy	SFDR Alignment	Scope 3 Reporting	External Assurance
Neste	Full	Full	Full	Strong	Yes
Ørsted	Full	Full	Full	Strong	Yes

Vestas	Full	Full	Partial	Weak	Yes
Ericsson	Partial	Limited	Partial	Weak	No

This analogy highlights that not all of the industries are equally compliant with regulations. Compliance is a strategic opportunity used by energy companies, like Neste and Ørsted, as part of their ESG programs, where green finance and extensive reporting are included. The manufacturing companies, such as Vestas, have difficulties in the operation transparency of Scope 3, and ICT companies, such as Ericsson, are in a transition phase, with the gaps in assurance and alignment of taxonomies. In ensuring the credibility and competitiveness, Nordic firms need to keep on enhancing data quality, stakeholder engagement and governance process, as the regulatory requirements change.

4.8.6 Visual Summary of ESG Regulatory Compliance

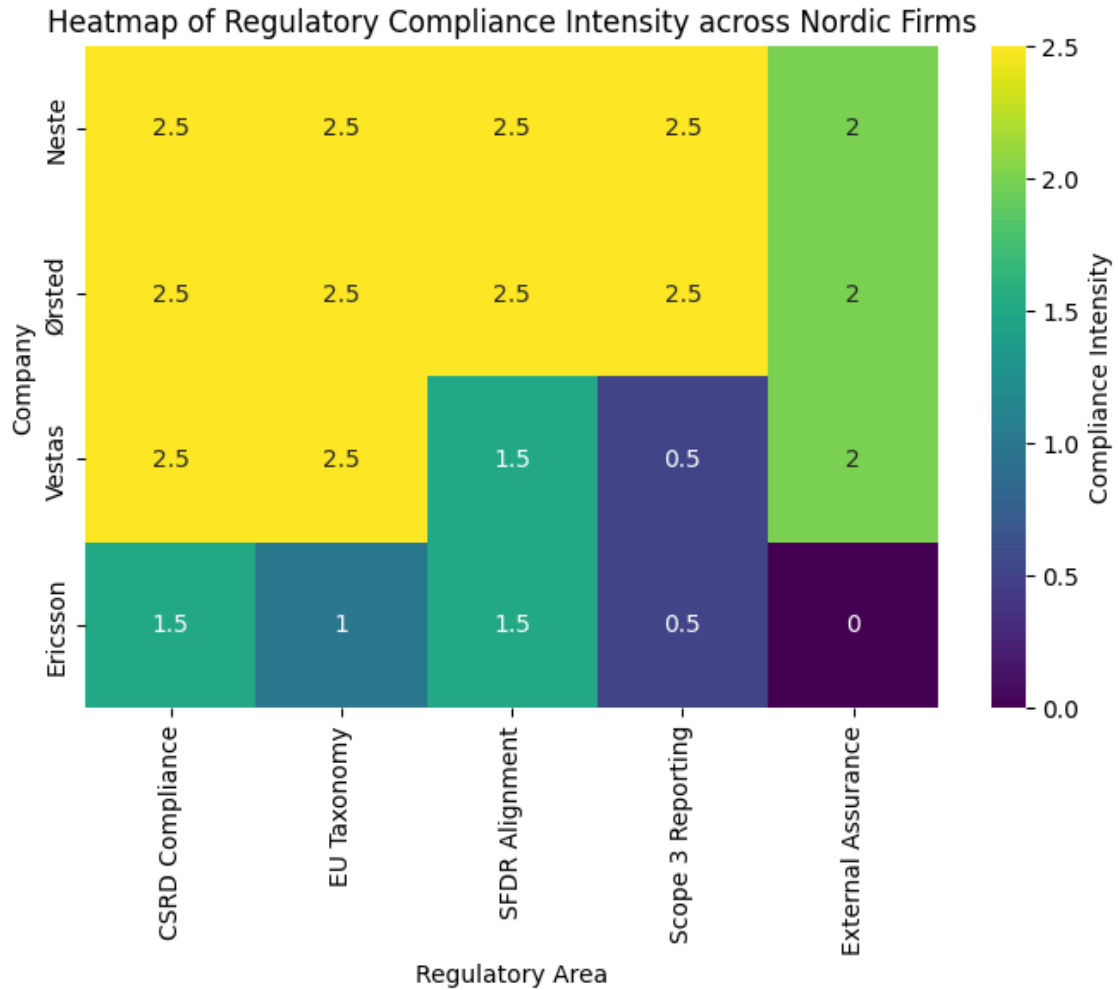


Figure 1. Heatmap of ESG Data Transparency across Nordic Firm.

The heatmap shows a graphic illustration of the strength of the regulatory compliance of the five ESG regulatory areas (CSRD, EU Taxonomy, SFDR, Scope 3 reporting and external assurance) of the four Nordic firms being studied. The color gradient shows the discrepancies in the compliance maturity, the brighter the color, the more compliance there is and the darker the color, the weaker the performance.

It is clear that Neste and Ørsted are leaders and the intensity of compliance in all categories is high. Their deep compliance with the CSRD, EU Taxonomy, and SFDR and effective Scope 3 reporting and external assurance are the evidence of a proactive attitude towards regulatory compliance. This sets them as leaders in ESG governance as compliance acts as not only a legal obligation, but also a competitive edge.

Vestas is very well aligned to CSRD and EU Taxonomy but has poor performance in Scope 3 reporting. This gap is reflected in the heatmap with reduced intensity values and highlights the issues which the company has in the supply chain transparency and data collection. Even though there is external assurance, the small number of Scope 3 disclosures make the entire regulatory robustness less robust and more focused on better collaboration between the supplier.

Ericsson on the other hand, is partially compliant with clear deficiencies in alignment with taxonomy, Scope 3 disclosure and assurance. The darker colouring in the heatmap highlights these shortcomings, and suggest a phase of transition in regulatory adaptation. Although it has advanced in Scope 1 and 2 reporting and is aligned to the UN SDGs, it has limited credibility and responsiveness to regulatory requirements due to its incomplete reporting framework.

In conclusion, the heatmap visualises the differences between sectors. Energy companies like Neste and Ørsted use regulatory compliance to stimulate innovation and trust among stakeholders, manufacturing companies like Vestas struggle with operations to cope with Scope 3 transparency and ICT companies such as Ericsson are still in transition with substantial assurance and value chain reporting gaps. This heatmap supports the conclusion that data, assurance and Scope 3 issues are key areas for improvement in ESG reporting in a regulatory environment that is expected to undergo further change.

4.9 Data Transparency and ESG Metrics

Data transparency is a key component of ESG integration, allowing stakeholders (such as investors, regulators, and civil society) to assess corporate ESG performance, exposure to sustainability risks and climate strategies. ESG data transparency is generally measured by the scope of emissions reporting (Scope 1, 2, and 3), the provision of external assurance and the quality of ESG data management. Here, we assess the ESG data disclosure of four Nordic companies (Neste, Ørsted, Vestas, Ericsson) in line with corporate reporting and recent research.

4.9.1 Neste: Leading in Lifecycle Transparency and Assurance

Neste exhibits best-practice ESG disclosure by fully assuring its reporting of Scope 1, 2 and 3 emissions. It is reported in line with international standards like GRI, TCFD and EU Taxonomy (Neste, 2025). Neste reports Scope 3 emissions upstream (feedstock) and downstream (product use) with lifecycle assessment (LCA) models. Neste has digital tools for real-time monitoring and reporting of ESG data. According to Qian et al. (2026), companies with high-quality and verified ESG disclosures experience increased stock liquidity and decreased information asymmetry, which is evident in the high investor confidence in Neste. Moreover, Qian et al. (2026) also note that embedding ESG indicators into business operations and financial reporting systems leads to better policy setting and benchmarking, as is the case with Neste's science-based targets and assurance.

4.9.2 Ørsted: Integrated ESG Systems and Stakeholder Dashboards

Ørsted also reports assured Scope 1-3 emissions, and integrates ESG indicators into business strategies. It reports its disclosure in annual reports, investor reports, and stakeholder boards (Ørsted, 2025). Scope 3 data on purchased and capital goods, and product use are reported, with collaboration with suppliers to enhance data accuracy. Ørsted uses CDP, SBTi and GRI reporting frameworks, and has verified climate targets. (Yan et al., 2026) highlight the importance of digital ESG platforms in improving transparency and engagement, which is evident in Ørsted's dashboards and real-time emissions monitoring.

4.9.3 Vestas: Advancing Scope 3 Systems Amid Supply Chain Complexity

Vestas reports Scope 1 and 2 emissions, but Scope 3 is challenging because of its global supply chain. Although Vestas' sustainability report adheres to GRI and TCFD standards, Scope 3 information is not fully reported (Vestas 2025). In-house auditing and third-party assurance (to some extent) are applied, but supplier data is not consistent. Hao and Dragomir (2025) highlight that ESG data quality varies by firm size and resources, implying Vestas needs to enhance digital technologies and supplier engagement. New initiatives in supplier training and traceability using blockchain technology show movement

towards more granular data and improved Scope 3 transparency, essential for net-zero goals.

4.9.4 Ericsson: Fragmented ESG Reporting and Infrastructure Gaps

Ericsson's ESG reporting is disjointed, with Scope 1 emissions being reported, and limited reporting on Scopes 2 and 3. Ericsson does not have a robust ESG data management infrastructure and reporting is manual. Its reports include some GRI elements, but lack external verification, which lowers their credibility (Ericsson, 2024). Existing ESG indicators include energy use and network efficiency, but exclude emissions from suppliers and product use. Nazari and Poursoleyman (2025) propose that mandatory disclosure is more effective for firms with less information environments, which could mean that more regulation may increase Ericsson's transparency. Chen et al. (2026) suggest an ESG-AI approach to data management, which requires automated technologies and ethical governance skills, which Ericsson is not yet equipped to provide.

4.9.5 Comparative Analysis

The comparative study reveals variations in ESG data transparency among the four companies. Neste and Ørsted excel in Scope 1-3 emissions reporting, assurance by a third party and digital data infrastructure. Vestas is advanced in Scope 1-2 data but struggles with Scope 3, even though it has programs aimed to enhance data quality from suppliers. Ericsson has made limited disclosures, lacks assurance and has limited data infrastructure.

Table 7. Comparative Overview of ESG Data Transparency Practices in Nordic Firms

Company	Scope 1	Scope 2	Scope 3	Third-Party Assurance	ESG Data Infrastructure
Neste	Yes	Yes	Yes	Yes	Advanced
Ørsted	Yes	Yes	Yes	Yes	Integrated

Vestas	Yes	Yes	Partial	Partial	Developing
Ericsson	Yes	Partial	No	No	Limited

In all, the study shows that ESG data transparency is highest in energy companies, medium in manufacturing and lowest in ICT. For companies to enhance their credibility and to ensure regulatory compliance with standards such as CSRD and SFDR, they need to invest in digital technologies, involve suppliers, and establish third party verification systems. Improved transparency in data not only drives regulatory compliance but also instills trust and enhances sustainability.

4.9.6 Visual Summary of ESG Data Transparency

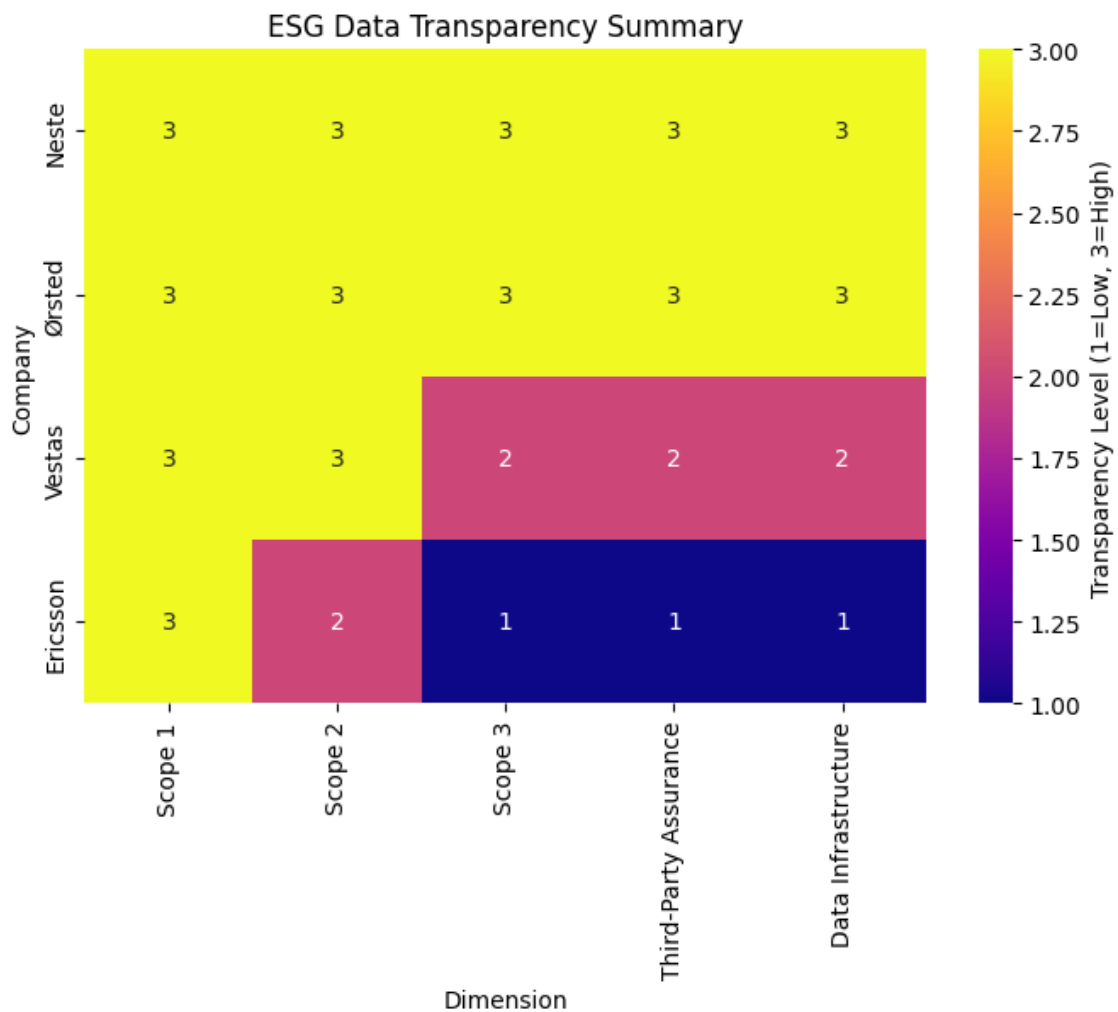


Figure 2. Heatmap of ESG Data Transparency across Nordic Firm.

The infographic shows the relative transparency of four Nordic companies (Neste, Ørsted, Vestas and Ericsson) in five areas: reporting of Scope 1, 2, 3 emissions, third party assurance and ESG data infrastructure. The purple to yellow gradient reflects the differences in transparency levels - from lowest (purple) to highest (yellow).

Neste and Ørsted lead in all areas with complete reporting of Scope 1-3 emissions, external assurance and digital ESG data infrastructures. Their high scores are driven by a holistic incorporation of ESG measures into strategy and reporting schemes like GRI, TCFD and EU Taxonomy. The all-yellow scores highlight their transparency and trustworthiness.

Vestas excels in reporting Scope 1 and 2, but falls short in Scope 3 and assurance. The mid-tone colours in the heatmap show evolving transparency systems, such as supply chain data gathering and infrastructure. The company shows improvement with initiatives like supplier training and blockchain traceability, but is in transition to full transparency.

Ericsson remains well behind, reporting mainly on Scope 1 emissions, some on Scope 2, but none on Scope 3. The lack of third party assurance and manual reporting processes is reflected in the darker colours of the heatmap. This piecemeal reporting approach points to gaps in ESG data systems and transparency, undermining its credibility in meeting stakeholder and regulatory demands.

In summary, the heatmap reveals differences across industries in ESG data transparency. Energy companies (Neste and Ørsted) are at the forefront with adequate systems and assurance, manufacturing companies (Vestas) are in between with some progress but supply chain issues, while ICT companies (Ericsson) are lagging in transparency. This heatmap supports the finding that investments in digital capabilities, partnerships with suppliers, and external assurance are critical for improving ESG data transparency and complying with new regulations.

4.10 Sector Specific Challenges

The ways ESG principles are applied differ between industries, depending on business models, regulatory settings, stakeholder demands, and technology advancement. This knowledge is crucial in assessing the adoption of sustainability transition and the challenges faced by companies. This section discusses ESG issues in three sectors represented by the Nordic case companies: energy, manufacturing and information and communications technology (ICT).

4.10.1 Energy Industry: Regulatory Uncertainty and Transition Risk

Energy companies like Neste and Ørsted are in a sector in transition due to climate change and decarbonization measures. The risks associated with transition (changeover) from fossil fuels to renewable energy are still significant. These include the risks of stranded assets, carbon price variability, and regulatory uncertainty. Ashraf and Shen (2015) point to inconsistencies in the adoption of green innovation and environmental sustainability, especially in emerging markets, and in developed markets regulatory instability (such as the withdrawal of subsidies, carbon taxes and energy market reforms) can upset strategic planning. Akadiri and Özkan (2026) show that institutional investors are increasingly considering climate and regulatory risks in their investment decisions, which affect corporate innovation strategy. In response, Ørsted has integrated its innovation strategy with the United Nations Sustainable Development Goals (SDGs) and has raised funds for offshore wind farms through green bonds. However, political instability and regulatory changes can still impact investor confidence and project viability.

4.10.2 Manufacturing Industry: Supply Chain Complexity and Emission Accountability

The ESG challenges of manufacturing companies like Vestas include global supply chains and resource intensity, as well as emissions. Managing Scope 3 emissions based on supplier operations and product use is challenging. Steiner et al. (2024) note that larger firms have higher ESG scores due to their ability to invest in data collection and supplier management, leaving smaller firms "data-poor". Even global wind turbine manufacturer Vestas admits challenges in gathering Scope 3 data and integrating ESG metrics into its

supply chain. Manufacturers must also navigate the tension between emissions reduction targets and productivity and cost efficiency, which may require product innovation, circular economy strategies, and supplier engagement. Moreover, regulatory requirements like the European Union's Corporate Sustainability Reporting Directive (CSRD) add to the pressure on manufacturers to improve transparency and report on progress towards net-zero.

4.10.3 ICT Industry: Digital Ethics, Governance and ESG Literacy

ICT companies like Ericsson face different ESG issues from the energy and manufacturing sectors. These include digital ethics, data protection, AI governance and ESG literacy. Addressing issues such as algorithmic bias, misinformation, and digital inclusion needs effective governance. Zhou et al. (2025) highlight that ESG scandals like data breaches or unethical AI can have a significant negative impact on company performance if governance is inadequate. ICT boards often lack capacity to monitor ESG risks and impacts of emerging technologies, leading to misalignment and stakeholder communication. Ericsson has made strides in energy-efficient networks and circular design, but needs to refine product-level ESG assessments. Governance is changing but there are gaps in sustainability integration and digital ethics in innovation. The Tilburg Institute of Law, Technology and Society (TILT) emphasises the need for more regulation to address AI ethics and data governance, revealing the industry's dependence on external regulation to drive ESG integration.

4.11 Cross Sectorial Themes and Strategic Implications

However, there are certain ESG issues that cut across sectors. First, a strong ESG data system (especially for Scope 3 emissions) is needed across the board. Data gathering, verification and reporting remain problematic for transparency and accountability purposes. Second, stakeholder engagement is important, with firms needing to respond to varied interests of regulators, investors, customers, and community. Governance also is critical for responding to industry-specific ESG challenges. Khurshid et al. (2026) report that firms with effective sustainability strategies tend to have dedicated boards for ESG, active stakeholder engagement, and a long-term focus. These governance practices are

vital for resilience and ESG integration. Lastly, ESG strategies need to be adaptable to regulatory changes, technological advances, and societal changes. With ESG impacting financial performance and reputation, companies need to build capacity, promote cross-disciplinary collaboration and learning to compete and maintain a credible position in the transition to sustainable value.

4.12 Strategic Opportunities

Environmental, Social, and Governance (ESG) criteria are no longer just the means to compliance, but can be used for innovation, confidence building, and competitive advantage. Examples from Nordic companies like Neste, Ørsted, Vestas, and Ericsson show how incorporating ESG practices can create opportunities not just limited to compliance but also delivering long-term value across various firm strategic objectives.

ESG-driven sustainable growth is now recognised as an enabler of innovation. (Xia et al., 2026) using the Technological Innovation Panel show that firms focusing innovation on ESG goals exhibit better productivity, exports and survival than non-ESG firms. This supports stakeholder theory, which argues that businesses responding to societal issues are more likely to thrive.

Vestas has been a model in ESG-led innovation with its initiatives of the circular economy. The company has targeted that it will manufacture zero-waste turbines by 2040, with 100 percent rotor recyclability, and 90 percent material efficiency being achieved by 2030 (Vestas, 2025). Low-emission steel towers, chemical recycling of turbine blades (BALTIC WIND, 2023), and other innovations not only decrease the environmental impact but also increase the compliance with the Corporate Sustainability Reporting Directive (CSRD) by the EU, which can also boost the trust of stakeholders and regulatory credibility.

Another strategic opportunity which can be enabled by ESG integration is green finance. Neste has redesigned its Green Finance Framework, which has already issued green bonds worth 2.1 billion and a green term loan worth 500 million to finance renewable and circular projects, such as refinery projects at Singapore and Rotterdam (Neste, 2025).

It has integrated renewable hydrogen, which is estimated to cut the emissions by more than 20 percent by 2030, which, in turn, serves as an additional strength of investor attraction and makes Neste one of the world leaders in terms of its ESG. It has a 2025 Green Finance Framework, which encompasses battery energy storage systems, and complies with EU Taxonomy and Green Bond Standards (Ørsted, 2025). High-profile green bond issuances, such as €2 billion in 2023 (NatWest, 2024), have bolstered Ørsted's reputation as a sustainable energy pioneer.

There is additional empirical research on the financial gains of ESG integration. A study of 1,360 Nordic firm-years (Fidanza, 2025) revealed that a high correlation of ESG scores with financial performance is present when there is a strong corporate governance. A comparative case study of Neste and Unilever has shown that the systematic integration of ESG at Neste had better risk-adjusted returns and strategic resilience (Garbuio et al., 2026).

ESG also improves the brand image and stakeholder involvement. The sustainability strategy of Ericsson focuses on digital sustainability and achieves substantial decreases in both Scope 1 and 2 emissions, as well as enhances energy efficiency. It has more than 500,000 students in the world through its social impact programs, like Connect to Learn (Ericsson, 2024). Such initiatives are in line with the UN Sustainable Development Goals (SDGs) SDG 9 (Industry, Innovation, and Infrastructure) and SDG 17 (Partnerships) which support global branding of Ericsson and its status as a responsible technology provider.

Another opportunity that is critical is digital transformation. In a meta-analysis of 59 studies, Younus and Kashif (2025) concluded that the upgrades to digital infrastructure and AI-supported ESG processes can greatly affect the ESG score, although ethical governance frameworks should be established. Ericsson is one of the examples of this trend as it implements digital solutions to ESG reporting and interaction with stakeholders, which enhances the effectiveness of sustainability efforts.

The strategic opportunities are also created by regulatory alignment. Nordic companies have been motivated to integrate the concept of ESG in their strategic planning due to the CSRD and European Sustainability Reporting Standards (ESRS). Vestas, in particular,

also incorporates sustainability in its yearly reports and works toward the decarbonization of its operations, including switching the service fleets to low-emission vehicles and switching to hydrogen-powered crew transfer vessels (Vestas, 2025). Such steps do not only signify compliance with regulations, but also long-term strategic vision.

To sum up, ESG integration will provide Nordic companies with a complex range of strategic opportunities. It promotes innovation, putting sustainability in the development of products, makes the company more attractive to investors by encouraging green finance, builds a strong brand reputation by launching social impact initiatives, and becomes resilient by aligning with regulations. The evidence and case studies used confirm that ESG is not only a compliance but also an element of long-term strategic value creation.

4.13 Cross Case Summary Table

This part summarizes ESG integration practices of four large Nordic companies (Neste, Ørsted, Vestas and Ericsson) in 9 strategic dimensions: frameworks, alignment, governance, stakeholder engagement, innovation, compliance, transparency, challenges, and opportunities. The comparative overview draws attention to the strengths and weaknesses of the sectors, showing the differences in the incorporation of the ESG principles by the industries.

Table 8. Comparative Overview of ESG Integration Practices in Nordic Firms

Company	Frameworks	Alignment	Governance	Stakeholders	Innovation	Compliance	Transparency	Challenges	Opportunities
Neste	GRI, SASB, CSRD	High	Strong	Advanced	High	Full	Scope 1–3	Fossil legacy	Green finance
Ørsted	GRI, CSRD	High	Strong	Advanced	High	Full	Scope 1–2	Offshore risks	Investor trust

Vestas	CSRD, ESRGs	Moderate	Moderate	Moderate	High	Partial	Scope 1–2	Supply chain	Circular design
Ericsson	GRI, SASB	Partial	Limited	Basic	Medium	Partial	Scope 1	Digital ethics	ESG branding

4.13.1 Company Narratives

Neste has the best ESG alignment, which is backed by a well-established governance and developed stakeholder engagement. The variety of frameworks used (GRI, SASB, CSRD) make sure that it provides full disclosures, such as Scope 1-3 emissions. This is through investments in renewable hydrogen and biofuels to drive innovation and enhance transparency through full-scale reporting. Neste is a leader in green energy transitions by reducing risks with green finance instruments like bonds and loans despite its fossil fuel history, as well as its green energy strategies (Neste, 2025; Garbuio et al., 2026).

Ørsted has a high level of integration of ESG, which incorporates sustainability into the strategic planning and governance. Its compliance with GRI and CSRD models guarantee consistency in its reporting, and the engagement with the stakeholders is developed by the community partnerships and investor relations. Offshore wind and battery energy storage systems are the focus of innovation, and Ørsted is transparent in reporting Scope 12 emissions and in its Green Finance Framework. Operational risks of offshore projects are the key challenge, but its good ESG profile has earned the trust of many investors, which is demonstrated by the successful issuance of green bonds (Ørsted, 2025; NatWest, 2023).

Vestas has an average ESG alignment, which is directed by CSRD and ESRG guidelines. It is still in the process of transitioning in governance and stakeholder engagement but innovation is a strength strategy, specifically in circular design and low-emission materials. It has a vision of zero-waste turbines by 2040, and stop-loss milestones of rotor

recyclability and material efficiency (Vestas, 2025). The compliance is partial as the Scope 1-2 is reported and Scope 3 is still being developed. The level of transparency is also improving but is still less than that of Neste and Ørsted. Circular innovation has great potential of strategic opportunities but the complexity of the supply chain is a significant challenge (Baltic Wind, 2023).

Ericsson has partial ESG alignment, with underdeveloped governance and simple stakeholder engagement. Although it uses GRI and SASB guidelines, the adoption of CSRD is not fully developed. Innovation is about digital sustainability and energy efficient technologies, but compliance is selective with reporting on Scope 1 as well as partial Scope 2. There is lesser transparency than peers and there are such challenges as digital ethics, data privacy and responsible use of AI. However, the possibility of differentiation in the ICT sector is brought about by ESG branding and alignment with the UN SDGs (Ericsson, 2025; Younus and Kashif, 2025).

4.13.2 Cross Case Insights

The comparative analysis shows that energy companies (Neste, Ørsted) are the leaders in ESG integration, and full frameworks, good governance, and development of stakeholder engagement are observed. The manufacturing companies (Vestas) show potential of innovation but have issues related to transparency of supply chain and Scope 3 reporting. ICT companies (Ericsson) are lagging in terms of governance and compliance, but use ESG branding and digital sustainability as strategic opportunities.

Overall, the table underscores that while ESG integration is sector-specific, common themes such as the need for robust data infrastructure, stakeholder engagement, and governance remain critical across industries. Strategic opportunities in innovation, green finance, and branding highlight the transformative potential of ESG beyond compliance, positioning Nordic firms at the forefront of sustainable business practices.

5 Discussion

This chapter discusses the study's findings by connecting them with the existing theoretical and empirical knowledge about the integration of ESG in business strategy. It goes beyond descriptive findings to discuss the critical implementation of sustainability strategies in Nordic firms under institutional and stakeholder pressures, and regulatory frameworks like CSRD and the EU Taxonomy. By drawing on Stakeholder Theory, Institutional Theory, and the Resource-Based View, the discussion surfaces potential opportunities and challenges of integrating ESG in business strategy. This, in turn, connects compliance-oriented practices to strategic change, with theoretical and practical implications.

This research offers clear insights into the key research questions, showing that ESG is implemented in Nordic companies in accordance with institutional, stakeholder, and industry factors. As such, while energy and financial companies have made strides in ESG integration, manufacturing and IT companies struggle with supply chain management and digital ethics (Chakraborty et al., 2026). This proves that ESG integration is not equal but still transformational and aligns with Stakeholder Theory (emphasising legitimacy) and Institutional Theory (emphasising regulation) (Cristofaro et al., 2025).

In terms of business strategy development, ESG transforms traditional models. The Ansoff Matrix, which focuses on market and product development, is influenced by sustainable development, with companies like Neste moving into renewable energy (Ros-tamicheri et al., 2026). Porter's Five Forces are recast by sustainability factors, with consumer preferences for sustainable products affecting buyer power and regulatory frameworks affecting entry barriers (Yan, 2025). Similarly, Blue Ocean Strategy is confirmed in Ørsted's development of new uncontested markets in offshore wind, where ESG innovation gains a competitive edge (Hao & Dragomir, 2025). Finally, the Dynamic Capabilities perspective is confirmed, with firms that have adaptive capabilities such as restructuring supply chains or integrating ESG into governance being more likely to be resilient and legitimate (Haryanto et al., 2026).

In conclusion, the discussion shows that ESG is not a fringe but core element to strategic business growth. The Nordic examples show how pressures for sustainability transform

corporate growth strategies, competition, and capabilities, and thus address the research questions and substantiate the theoretical argument that ESG is not a cost but a strategic advantage.

6 Conclusion

Environmental, Social, and Governance (ESG) integration is a pivotal element in the transformation of business development in the 21st century. This thesis has shown that while Nordic firms are acknowledged as sustainability pioneers, the integration of ESG principles into strategic agendas is intricate, fragmented and challenged by institutional and organisational forces. By contextualising the empirical findings within existing theoretical frameworks and existing research, a few points stand out.

First, the literature repeatedly stresses that ESG has evolved from a voluntary ethical endeavour to a strategic imperative, supported by standards like the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Corporate Sustainability Reporting Directive (CSRD) (Rusu et al., 2024; Cristofaro et al., 2025). The results of this research verify that Nordic companies have adopted these frameworks, sometimes surpassing global standards, but also that there are ongoing difficulties in implementing ESG practices across industries. For instance, while the energy sector (e.g. Ørsted and Neste) has embraced sustainability as part of their business strategy, manufacturing and tech firms are still grappling with supply chain issues, digital ethics and resource allocation (Hao & Dragomir, 2025; Chakraborty et al., 2026). This variation highlights that ESG integration is not a one-size-fits-all approach but varies across sectors and firms.

Second, both research and findings point to the influence of regulation as a driver of change. The EU Taxonomy and CSRD have forced companies to align disclosures and integrate sustainability into their governance practices, thus moving ESG from reporting to the strategy room (Chrzan & Pott, 2024). But the research shows small firms and specific sectors are disproportionately impacted by these requirements, reflecting concerns in the literature about regulatory complexity and uptake (Claessen et al., 2026). This highlights that while regulation plays a critical institutional role, it must be met with organisational and industry agility.

Third, the thesis supports the idea that ESG can be used as a strategic resource, in line with the Resource-Based View and Dynamic Capabilities approaches. Existing research

claims that firms with favourable ESG performance enjoy better risk-adjusted returns and better withstand economic shocks (Minhas, 2026). This is confirmed in Nordic firms where ESG has been used to secure sustainable finance, transform business models and boost stakeholder confidence. However, the lack of organisational change, limited ESG education and data quality issues restrict such strategic advantages (Costa et al., 2025). This suggests that while the theoretical potential of ESG for competitiveness is confirmed, its practical implementation needs to break down structural and cultural inertial.

Lastly, the Nordic experience shows promise and challenge. Strong trust, regulatory and institutionalised cultures of sustainability offer a conducive environment for ESG (Strand, 2024). However, there are also concerns regarding environmental reporting, governance structures and CSRD implementation (Rostamicheri et al., 2026). These insights reveal that even sustainability leaders need to further improve their practices to enable complete integration.

In all, ESG practices in Nordic companies are a transformative shift in strategic business development from compliance to innovation, resilience and creation of sustainable value. Our analysis of theory and practice shows that there is a consensus on the need for ESG, but differences in its implementation across industries and firms. Thus, future research should focus on how companies can build their dynamic capabilities, improve data transparency and promote inter-sectoral cooperation to bridge the gap between compliance-oriented practices and forward-looking strategic change. In this way, Nordic firms can further establish their position as sustainability leaders and offer scalable approaches to corporate strategy worldwide.

6.1 Theoretical Implications

This study's findings have important theoretical implications for the integration of Environmental, Social and Governance (ESG) in strategic business development. Through integrating empirical insights from Nordic firms with existing management theories, this

study helps to refine theoretical understanding of the impact of sustainability challenges on organisational practices, governance and competitiveness.

To start with, the research supports the applicability of the Stakeholder Theory in the explanation of ESG adoption. The literature highlights that companies have been increasingly forced to take their strategies in line with the demands of various stakeholders, such as investors, regulators, employees, and communities (Rusu et al., 2024; Huq and Mohammadrezaei, 2025). The results corroborate the idea that Nordic companies proactively incorporate the concerns of stakeholders into the governance systems, such as by basing executive pay on ESG-related indicators and focusing on gender diversity in top management (Rostamicheri et al., 2026). This will substantiate the theoretical argument, which states that the legitimacy of stakeholders is not peripheral but central to the process of strategic development and, therefore, extends the Stakeholder Theory to the area of sustainability-driven corporate transformation.

Second, the findings indicate the explanatory nature of the Institutional Theory. Previous research has suggested that regulatory measures like the CSRD and EU Taxonomy can be seen as institutional forces, which force companies to implement homogeneous ESG practices (Chrzan and Pott, 2024; Cristofaro et al., 2025). Nordic companies prove this point of view, and it is possible to state that regulation has actually triggered strategic change. Nevertheless, the fact that institutional pressures are unevenly adopted across the sectors and the size of firms also reflects the shortcomings of the institutional pressures, with smaller businesses having a disproportionate share of compliance loads (Claessen et al., 2026). This indicates that the Institutional Theory should not only consider the impact of coercive forces but also incorporate organizational capabilities and differences in sectors in explaining ESG integration.

Third, the research contributes to the development of the Resource-Based View (RBV), by showing that ESG could also be used as a strategic resource. It has been long argued in literature that companies with good ESG performance are better resilient and risk-adjusted returns (Minhas, 2026). These results support this argument, especially when it comes to Ørsted and Neste, where the integration of ESG has facilitated business

model change and access to sustainable finance (Hao and Dragomir, 2025). However, the fact that data constraints and bureaucratic nature persist suggests that the potential of ESG resources depends on the ability of firms to invest in training, transparency, and cross-functional teamwork (Costa et al., 2025). This builds on top of RBV and places ESG in a more dynamic capacity than a resource, putting it in a dynamic capability that needs to be developed constantly.

Lastly, the research is an addition to Dynamic Capabilities Theory, which focuses on the flexibility and innovation in swiftly evolving environments (Haryanto et al., 2026). The fact remains that Nordic companies with high dynamic capabilities, including the possibility to re-organize supply chains, embrace green technologies, and react to changes in regulations, are more effective in integrating ESG into strategy. In contrast, those companies, which do not have such abilities, are limited to compliance-based practices. This highlights the fact that ESG integration should be seen as a dynamic process, and organizational learning as well as innovation are essential in maintaining the competitive edge.

Overall, the theoretical consequences of this study are that it shows that none of the existing frameworks can explain the integration of ESG appropriately. Rather, it has to be viewed through a multi-theoretical prism that incorporates Stakeholder Theory, Institutional Theory, RBV, and Dynamic Capabilities. These views combined provide us with an understanding that ESG is both a source of legitimacy, an institutional requirement, a strategic resource, and a dynamic capability. Integrating these insights, the research will enhance the theoretical discussion in the field of sustainable business development, and it will provide a more comprehensive picture of how companies can maneuver in the multifaceted nature of the relationship between sustainability pressures and strategic imperatives.

6.2 Managerial Implications

The results of this research have significant implications to the managerial practice, especially when it comes to implementing Environmental, Social and Governance (ESG) in the strategic business development. Although the Nordic companies are said to be the best in sustainability in the world, the evidence shows that integration is not at par with

each other and that managers need to employ proactive approaches that go beyond the compliance to innovation and generation of long term value.

To begin with, managers need to realize that ESG is not merely a regulatory tool, but a strategic requirement. This has been shown in previous research that found that companies who have high ESG performance deliver better resilience and risk-adjusted returns (Minhas, 2026). This is supported by the empirical evidence of Nordic firms, especially where the leveraging of ESG has been used to reposition the business models and draw in sustainable finance (Hao and Dragomir, 2025). This highlights to managers the importance of integrating ESG in the main decision-making process, and connecting the sustainability goals to the corporate strategy, investment priorities, and innovation direction. Taking ESG as a compliance measure would jeopardize losing competitive advantage and trust of the stakeholders.

Secondly, the paper reveals the significance of governance frameworks in facilitating an effective ESG integration. The literature notes that transparency in governance and oversight at board-level are essential in inculcating sustainability in the organizational culture (Cristofaro et al., 2025). The examples of Nordic companies Ørsted and Vestas demonstrate that governance changes, like independent boards and executive compensation based on ESG indicators, can enhance accountability and performance (Rostamicheri et al., 2026). Other managers in industries should thus put governance reforms that institutionalize ESG at their forefront to make sure that sustainability is not confined in CSR departments but rather cut across organizational hierarchies.

Third, the managers will have to deal with the ongoing issue of the quality and transparency of ESG data. Scholarship and findings indicate that inconsistency in quantifying Scope 3 emissions, social impact indicators, and governance practices mistrust investor confidence in the strategy and decision-making (Costa et al., 2025). To eliminate this, managers need to invest in the data systems, cross-functional teamwork, and standardized reporting with references to such frameworks as CSRD and SASB (Chrzan & Pott, 2024). Enhancing data reliability is not only a way to enhance compliance but also provide more strategic defense of ESG-based innovation and finance.

Fourth, the paper shows that ESG adoption is influenced by sectoral differences and organizational differences. Although energy and financial corporations have developed best practices, other sectors of the economy, such as manufacturing and technology, encounter further challenges in the complexity of the supply chain, and digital ethical considerations (Chakraborty et al., 2026). Managers should, therefore, risk ESG strategies to different dynamics in the sector since one-size-fits-all approach will not work. As an illustration, technology companies must emphasize on digital inclusiveness and ethical management, whereas manufacturing companies are supposed to emphasize on supply chain transparency and resource-efficiency. This sector sensitivity increases the competence and adequacy of ESG endeavors.

Lastly, ESG integration should be perceived by the managers as an ability that is in motion, not as a resource. The dynamic capabilities literature also highlights the fact that companies need to be able to constantly adjust, learn and innovate as the demands of the stakeholders and the regulatory forces change (Haryanto et al., 2026). The results affirm that Nordic companies that have high adaptive capacities are more effective in integrating ESG into strategy. To managers, this means investing in organizational learning, employee training, and innovation systems that provide the ability to keep reconfiguring business models in accordance with sustainability imperatives.

Finally, the managerial implication of the research is that the ESG integration must be done in a holistic manner that involves governance reform, data transparency, sectoral sensitivity and dynamic capabilities. To institutionalize sustainability, managers are forced to go beyond compliance-related practices and entrench sustainability into the strategic framework of their organisations. In so doing, they will be able to enhance stakeholder confidence, draw on sustainable capital and guarantee sustainable competitiveness in the long term. The Nordic experience shows that despite the existing difficulties, active managerial leadership can turn ESG into an innovation and vulnerability generator.

6.3 Future Research Recommendations

The thesis has helped in the comprehension of how Nordic firms implement Environmental, Social, and Governance (ESG) concept into strategic business development. However, there are still a number of directions that can be probed in the future and contribute to the theoretical enlightenment and practical applicability.

To begin with, primary data will be used in future research like interviewing, surveying and focus group with executives, sustainability officers and stakeholders. Although this study was based on secondary sources and the cross-sectoral analysis, the inner decision-making procedures and the dynamics of ESG integration in real time were beyond the scope of the study. Primary data would help to further enrich the understanding of organizational perceptions, strategic alignment, and resistance to adopting ESG, complementing the current literature (Korkashvili, 2024; Pulliainen, 2024).

Second, more focus is to be placed on small and medium-sized enterprises (SMEs). The present research concentrated on large companies to a major extent, but the SMEs have unique challenges because of their limited resources, technical ability, and regulatory restrictions. As Mammadova and Peschova (2025) suggest, SMEs cannot implement new frameworks like CSRD without difficulties. A comparative study of the SMEs and large firms in the Nordic region would reveal the gaps in scalable practices and policy support, which would provide a more holistic view of ESG integration.

Third, the quantitative method to evaluate the financial effects of ESG strategies should be included in the future research. Although qualitative data indicate positive correlation between ESG maturity and resilience, econometric analysis based on indicators like Return on Assets (ROA), Return on Equity (ROE), and market capitalization would be more effective to support the business case of ESG. Research like Ghannadighomi et al. (2023) and Hoque (2025) has started this investigation, yet more sector-specific and longitudinal research is necessary to quantify the long-term financial effects of ESG adoption.

Fourth, ESG and digital transformation are two areas that should be investigated further. ESG reporting and ethical actions are increasingly associated with emerging technologies

like artificial intelligence (AI), blockchain, and sophisticated data governance systems. The digital ethics and responsible AI models developed by companies, such as Ericsson, have started to incorporate ESG (Lee et al., 2025; Accenture et al., 2023). Further studies are needed on the capabilities of digital tools to improve ESG reporting, stakeholder interactions, and innovation, especially as Nordic companies invest in AI-enabled data centers and digital ESG technologies (Nordea, 2025).

Fifth, cross-regional and cross-cultural comparisons would add to the knowledge on ESG integration. Although the Nordic region will be the most interesting example as it has a robust culture of sustainability and a regulatory leadership, there is a wide range of adoption of ESG in Europe, North America, and Asia. Comparative analysis may indicate the extent to which cultural, institutional, and market conditions influence ESG policies, and to what extent Nordic practices could be successfully implemented in new situations.

Lastly, stakeholder co-creation models and their impact on ESG materiality and strategic performance should be explored in the future. Despite the well-known importance of stakeholder involvement, research indicates that participatory governance is not as practiced (Lehtinen, 2025; Semenova and Hassel, 2018). The research on the mechanisms of relational engagement and co-creation may offer worthwhile advice in terms of improving the ESG legitimacy, accountability, and effectiveness.

To conclude, the future research must increase the methodological framework, expand the boundaries of organization, and investigate new intersections between ESG, finance, technology and engagement of stakeholders. By focusing on these aspects, researchers are able to contribute to both theoretical and managerial discourse and make sure that the ESG integration becomes a dynamic and globally applicable aspect of strategic business development.

6.4 Limitations

Despite the fact that the study offers excellent perspectives on the ways in which Nordic companies can incorporate the Environmental, Social, and Governance (ESG) principles in the strategic business development, there are a number of limitations that should be

listed. First, the study was based on the use of secondary data (corporate reports, scholarly literature, and regulatory documents) as the primary. Although these sources provided scope and cross-sectoral insight, they failed to address the inner workings of the decision-making process and dynamics of ESG adoption. Such a use of secondary data might have limited the depth of the analysis, especially the organizational culture and perceptions of the managers (Korkashvili, 2024; Pulliainen, 2024).

Second, the research concentrated on the large businesses in the first place, as they are usually more resourceful and prominent in the sustainability reporting. Small and medium-sized enterprises (SMEs) with their unique characteristics of the ESG implementation system because of the lack of technical and financial resources were not thoroughly studied. Such a lack limits the external validity of the results in the more general business environment (Mammadova and Peschova, 2025).

Third, the study was qualitative and interpretive because it focused on thematic synthesis, as opposed to econometric modeling. Although this provided a more subtle insight into ESG integration, it constrained the possibility of quantifying financial performance or developing causal connections between ESG maturity and firm performance.

Overall, these constraints underscore the importance of future research to include primary data, expand the organizational focus, and use mixed-method methods to enhance the strengths and generalizability of the results.

References

- Abd Razak, J., Azraai, S. B., Semiun, N., & Narayanan, T. (2026). A Brief Review on Circular Economy Pathways in Plastic Recycling. *International Journal of Research and Innovation in Social Science (IJRISS)*, 9(12). <https://doi.org/10.47772/IJRISS.2025.91200231>
- Abraham, J., Olbert, M., & Vasvari, F. (2024). ESG Disclosures in the Private Equity Industry. *Journal of Accounting Research*, 62(5), 1611–1660. <https://doi.org/10.1111/1475-679X.12570>
- Adowa, A. H. (2025). Corporation Financialization and Its Impact on Green Project Investments: A Systematic Literature Review. *Journal of Project Management*, 10, 745–762. <https://doi.org/10.5267/j.jp.m.2025.7.003>
- Afzali, M., Colak, G., & Vähämaa, S. (2025). Climate Change Denial and Corporate Environmental Responsibility. *Journal of Business Ethics*, 196(1), 31–59. <https://doi.org/10.1007/s10551-024-05625-y>
- Akadiri, S. S., & Özkan, O. (2026). Navigating Uncertainty: The Impact of ESG Factors on Clean Energy Markets and Investment Dynamics. *Corporate Social Responsibility and Environmental Management*, 33(1), 1270–1285. <https://doi.org/10.1002/csr.70227>
- Al Zhavira, N., Ratnawati, A., & Shalihati, F. (2025). Implementation of ESG in Blue Ocean Strategy: A Case Study of PT Wijaya Karya (Persero) Tbk. *Business Review and Case Studies*, 6(1), 75–75. <https://doi.org/10.17358/brcs.6.1.75>
- Alhazemi, A. (2025). Integrating ESG Framework with Social Sustainability Metrics: A Dual SEM-PLS Formative–Reflective Model Perspective. *Sustainability*, 17(6). <https://doi.org/10.3390/su17062566>
- Al-Shaibani, E. M., Putra, B. A., & Ashidiqy, A. B. (2025). Sustainability in Business: A Strategic Tool for Long-Term Growth. *Business Management*, 4(4). <https://ejournal.mandalanursa.org/index.php/Bisnis/user>

- Ashitha, P. U. (2026). ESG in Emerging Technologies and Corporate Governance. *International Journal of Research and Innovation in Social Science (IJRISS)*, 10(19), 401-404. <https://doi.org/10.47772/IJRISS.2026.10190033>
- Ashraf, .. (2026). ESG and Commercial Sustainability: A Commercial Threat and Value Perspective. *International Journal of Latest Technology in Engineering Management & Applied Science*, 15(2), 971–975. <https://doi.org/10.51583/IJLTEMAS.2026.15020000086>
- Ashraf, B. N., & Shen, Y. (2025). Guest Editorial: Climate Change and Business: Challenges and Innovations. *China Finance Review International*, 15(3), 445–447. <https://doi.org/10.1108/CFRI-09-2025-771>
- BALTIC WIND. (2023). *Vessel Details: IMO 9953999*. VesselFinder. <https://www.vesselfinder.com/vessels/details/9953999>
- Bano, S., Ali, A., Capalbo, F., & Smarra, M. (2025). Harnessing Board Sustainability Expertise for Corporate Sustainability: Unveiling the Influence of Gender Diversity and Compensation. *Corporate Social Responsibility and Environmental Management*, 1–17. <https://doi.org/10.1002/csr.70362>
- Bell, E., & Bryman, A. (2007). *The ethics of management research: An exploratory content analysis*. *British Journal of Management*, 18(1), 63–77.
- Boller, M. L., Bosch, C., Heinzl, K., Birkenberg, A., & Krupitzer, C. (2025). Brewing a Sustainable Future: A Firm-Level Analysis of Sustainability Initiatives in the Coffee Sector. *Environment Systems and Decisions*, 45(4), 55. <https://doi.org/10.1007/s10669-025-10047-w>
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative research journal*, 9(2), 27-40. <https://doi.org/10.3316/QRJ0902027>
- Braun, V., & Clarke, V. (2006). *Using thematic analysis in psychology*. *Qualitative Research in Psychology*, 3(2), 77–101.

- Bruijl, G. (2026). The Five Forces Plus Model: Competitiveness in the Digital, Algorithmic, and Geopolitical Era. *Management Decision*, 1–17. <https://doi.org/10.1108/MD-11-2025-3658>
- Bryman, A. (2016). *Social Research Methods* (5th ed.). Oxford University Press.
- Carungu, J., Dimes, R., & Molinari, M. (2025). *The Influence of Global Sustainability Reporting Standards on the Discourse within the EU*. *Sustainability Accounting, Management and Policy Journal*. <https://app.jenni.ai/editor/QMAcQUJFSx9AOtiGBOhe>
- Cavaliere, F., Bellazzecca, E., & di Castiglionchio, E. E. (2026). Walking the Tightrope of Sustainability Reporting Standardization: Insights From Italian Small and Medium-Sized Enterprises. *Corporate Social Responsibility and Environmental Management*, 1–16. <https://doi.org/10.1002/csr.70401>
- Cepêda, C., Monteiro, A., & Aibar-Guzmán, B. (2025). Bridging the ESG Credibility Gap: The Role of Institutional Investors in Mitigating ESG Decoupling. *Business Strategy and the Environment*, 34, 7139–7160. <https://doi.org/10.1002/bse.4336>
- Chakraborty, A., Banerjee, D., & Roy, A. (2026). Strategic Integration of Corporate Social Responsibility and ESG Principles for Advancing Sustainable Business Practices: A Study on Technology Sector. *International Journal For Multidisciplinary Research*, 8(1). <https://doi.org/10.36948/ijfmr.2026.v08i01.65553>
- Chen, J., Ismail, N. H., & Shaari, M. S. (2026). ESG Integration, Financial Resilience, and Clean Production: Implications for Green Finance and Renewable Energy Transition in China. *PaperASIA*, 42(1b), 79–95. <https://doi.org/10.59953/paperasia.v42i1b.983>
- Chrzan, S., & Pott, C. (2024). Limiting Environmental Reporting Flexibility: Investor Judgment Based on the EU Taxonomy. *Review of Quantitative Finance and Accounting*, 63(4), 1511–1548. <https://doi.org/10.1007/s11156-024-01297-x>

- Chua, K. T., & Hae-Young, B. (2025). Valuation Implications of ESG Initiatives and Technological Innovation: A Comparative Analysis of High-Tech and Low-Tech Industries. *Investment Management & Financial Innovations*, 22(3), 184. [https://doi.org/10.21511/imfi.22\(3\).2025.15](https://doi.org/10.21511/imfi.22(3).2025.15)
- Claessen, A., Sigurjonsson, T. O., & Wendt, S. (2026). Sustainability Reports, Corporate Governance, and Organizational Units. *Journal of Governance and Regulation*, 15(2), 189–196. <https://doi.org/10.22495/jgrv15i2art16>
- Collevecchio, F., Temperini, V., Barba-Sánchez, V., & Meseguer-Martínez, A. (2025). Sustainable Governance: Board Sustainability Experience and the Interplay with Board Age for Firm Sustainability. *Journal of Business Ethics*, 197(2), 371–389. <https://doi.org/10.1007/s10551-024-05739-3>
- Conca, L., Campobasso, F., & Toma, P. (2026). Exploring the Impact of Circular Economy Practices on Corporate Performance: A Global Analysis. *Business Strategy and the Environment*, 35(2), 2618–2632. <https://doi.org/10.1002/bse.70315>
- Costa, E. C., Oliveira, I. d., & Costa, E. C. (2025). The Challenges of Strategic ESG Practices in Organizations. *Revista Interface Tecnológica*, 21(2), 415–426. <https://doi.org/10.31510/infa.v21i2.2036>
- Creswell, J. W. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). Sage.
- Cristofaro, M., Cucari, N., Yamak, S., Quiñones, P. G., Sassen, R., & Bao, Y. (2025). Guest Editorial: Environmental, Social and Governance (ESG) Assets: A Path of Lights and Shadows for Management. *Management Decision*, 63(2), 389–400. <https://doi.org/10.1108/MD-02-2025-273>
- Daramola, G. (2026). Sustainability Duties in Action: EU Corporate Reporting and Due Diligence Rules and Their Impact on Energy and Extractive Companies in France, Germany and Norway. *European Journal of Innovative Studies and Sustainability*, 2(1), 132–136. [https://doi.org/10.59324/ejiss.2026.2\(1\).08](https://doi.org/10.59324/ejiss.2026.2(1).08)

- Delmas, M. A., Clark, K., Minor, D., & Timmer, T. (2026). *Improving the Credibility of Corporate Sustainability Metrics*. SSRN. <https://ssrn.com/abstract=6502280>
- Deloitte. (2024). *CxO Sustainability Report 2024 – Nordic Insights*. Deloitte Sverige. <https://www.deloitte.com/se/sv/issues/climate/2024-cxo-sustainability-report.html>
- Denzin, N. K. (2017). *The research act: A theoretical introduction to sociological methods*. Routledge.
- Dinu, A. (2025). Sustainability Reporting and Corporate Governance in the European Energy Sector. *Journal of Accounting and Management Information Systems*, 24(3), 509–529. <https://doi.org/10.24818/jamis.2025.03005>
- Dinu, E. M., Jurcuț, C. N., Gligor, D. A., Cișmașu, I., & Buglea, A. (2025). Integrating Digital Technologies to Enhance ESG Performance: A Focus on Central and Eastern European Countries. *Amfiteatru Economic*, 27, 903–921.
- Dsouza, S., & Jain, A. K. (2026). ESG and Strategic Value Creation in Scandinavian Markets. *Business Strategy & Development*, 9(2), e70318. <https://doi.org/10.1002/bsd2.70318>
- Ed-Dafali, S., Patel, M., Adardour, Z., & Theodoraki, C. (2026). Mapping ESG-Driven Sustainable Development: A Retrospective Review and Future Research Agenda. *Innovation and Green Development*, 5(1), 100326. <https://doi.org/10.1016/j.igd.2026.100326>
- Eisenhardt, K. M. (1989). *Building theories from case study research*. *Academy of Management Review*, 14(4), 532–550.
- Eliwa, Y., Saleh, A., & Ahmed, A. (2026). Aligning Pay With Purpose: ESG-Linked Compensation and ESG Decoupling. *Business Strategy and the Environment*, 35(2), 1805–1829. <https://doi.org/10.1002/bse.70258>
- Ericsson. (2025). *Sustainability and Corporate Responsibility Report*. Ericsson. <https://www.ericsson.com/en/about-us/sustainability-and-corporate-responsibility/sustainability-report>

- ESG. (2025). *Resilience and refinement in a changing world*. ESG Global. [Capital Group ESG Study](#)
- Farag, M. I. (2026). Sustainability as a Management Strategy: Integrating Environmental, Social, and Governance Practices into Business Administration. *Management Science Advances*, 3(1). <https://doi.org/10.31181/msa315n2p230>
- Fidanza, B. (2025). The Effects of Environmental, Social and Governance Orientation: An International Empirical Literature Review. *Journal of Management and Sustainability*, 15(2), 24. <https://doi.org/10.5539/jms.v15n2p24>
- Fülöp, M. T., & Cifuentes-Faura, J. (2026). Do ESG Strategies Drive Green Innovation in Emerging Economies? *Business Strategy and the Environment*, 35(2), 2453–2468. <https://doi.org/10.1002/bse.70296>
- Garbuio, M., Leeson, C., & Gheno, G. (2026). ESG Improvement as a Critical Driver of Improved Shareholder Returns: A Study of Comparative Portfolios. *Finance Research Letters*, 99, 109905. <https://doi.org/10.1016/j.frl.2026.109905>
- Gil-Lamata, M., & Latorre-Martínez, M. P. (2025). Stakeholder Engagement and SDG Implementation: Driving Environmental Performance in European Public Companies. *Corporate Social Responsibility and Environmental Management*, 1–15. <https://doi.org/10.1002/csr.70327>
- Gionfriddo, G., & Piccaluga, A. (2024). Startups' Contribution to SDGs: A Tailored Framework for Assessing Social Impact. *Journal of Management & Organization*, 30(3), 545–573. <https://doi.org/10.1017/jmo.2024.3>
- Githui, F., & Njuru, J. (2026). The Strategic Impact of Circular Economy Implementation on Competitive Advantage and Financial Resilience in Select Emerging Market Industries. *African Journal of Economics and Sustainable Development (AJESD)*, 9(1), 65-76. <https://doi.org/10.52589/AJESD-KQSYSWW9>
- González, M. E., Barrios, N., Venditti, R. A., & Pal, L. (2025). Advancing Sustainability in the US Pulp and Paper Industry: Decarbonization Through Energy Efficiency,

- Electrification, Low-Carbon Fuels, and the Social Cost of Emissions. *Journal of Cleaner Production*, 522, 146196. <https://doi.org/10.1016/j.jclepro.2025.146196>
- Hao, N., & Dragomir, V. D. (2025). Renewable Energy, Sustainable Business Models, and Decarbonization in the European Union: Comparative Analysis of Corporate Sustainability Reports. *Sustainability*, 17(8), 3646. <https://doi.org/10.3390/su17083646>
- Haryanto, T., Sobandi, A., & Rasto, R. (2026). Green Strategies, Digital Capabilities, and Stakeholder Value: Synthesizing RBV/NRBV and Dynamic Capability Perspectives on Sustainable Competitive Advantage. *JURNAL LOCUS: Penelitian dan Pengabdian*, 5(2). <https://doi.org/10.58344/locus.v5i2.5112>
- Hasan, I., Lee, H., Qiu, B., & Saunders, A. (2025). Climate-Related Disclosure Commitment of the Lenders, Credit Rationing, and Borrower Environmental Performance. *Review of Accounting Studies*, 31, 74–117. <https://doi.org/10.1007/s11142-025-09918-z>
- Hoai, N. T. (2026). The Mediating Role of Trust in Bridging the ESG Assurance Credibility Chasm. *Discover Sustainability*, 7, 369. <https://doi.org/10.1007/s43621-026-02747-3>
- Höijer, H. (2025). *The Impact of the European Union's Sustainable Finance Framework: Competitiveness Implications and the European Union's Global Position*. University of Turku. <https://www.utupub.fi/items/cd72c6aa-11bb-4d95-b92b-b301528ed749>
- Huberman, A. M. M. B. (2014). *Qualitative data analysis a methods sourcebook*.
- Huiping, G., Seng Teck, T., & Nellikunnel, S. (2024). Navigating the Complexities of ESG Integration: Challenges, Opportunities and Path to Sustainable Corporate Development. *Journal of Business and Social Sciences*, 2024.
- Huq, A. M., & Mohammadrezaei, M. (2025). A Review of Ex Ante and Ex Post Materiality Measures, and Consequences and Determinants of Material Disclosures in

- Sustainability Reporting. *Journal of Accounting Literature*, 47(5), 71–98.
<https://doi.org/10.1108/JAL-04-2024-0084>
- Işık, C., Ongan, S., Islam, H., Yan, J., Alvarado, R., & Ahmad, M. (2025). The Nexus of Economic Growth, Energy Prices, Climate Policy Uncertainty (CPU), and Digitalization on ESG Performance in the USA. *Climate Services*, 38, 100572.
<https://doi.org/10.1016/j.cliser.2025.100572>
- Jiang, Y., & Lin, H. (2025). Bridging Sustainability and Value Co-Creation: The Financial and Strategic Role of ESG Performance. *International Review of Economics & Finance*, 105, 104861. <https://doi.org/10.1016/j.iref.2025.104861>
- Kharaghania, M. S., & Madadkhania, A. (2025). Evaluating ESG Efficiency Using DEA: An Analysis of Dow Jones Industrial Average Companies. *Accounting*, 11, 197–208.
<https://doi.org/10.5267/j.ac.2025.5.001>
- Khurshid, A., Xu, S., Khan, K., & Cifuentes-Faura, J. (2026). Resilience, Dynamic Capabilities, and ESG: The Strategic Connection. *Business Strategy and the Environment*, 1–15. <https://doi.org/10.1002/bse.70627>
- Kisic, N. (2025). *Encouraging Car Use Reduction Through Motivational Messaging: An Analysis of How Thematic Content and Message Formulation Are Ranked and Rated Across Socio-Demographic and Lifestyle Categories*. lup.lub.lu.se.
- Korkashvili, M. (2024). *Beyond Compliance: Exploring ESG Integration in Nordic Corporations*. Lund University. <https://lup.lub.lu.se/student-papers/search/publication/9157442>
- Li, X., Katafuchi, Y., Moran, D., Yamada, T., Fujii, H., & Kanemoto, K. (2024). *Systematic Underreporting in Corporate Scope 3 Disclosure*. Research Square.
<https://doi.org/10.21203/rs.3.rs-3670939/v2>
- Lindgren, J. K., Klungseth, N. J., & Andersen, B. S. (2026). From Double Materiality to Performance: Conceptualizing Reporting Under the European Sustainability

- Reporting Standards. *Business Strategy and the Environment*, 1–26.
<https://doi.org/10.1002/bse.70714>
- Liu, E. X., & Song, Y. (2025). ESG Performance, Environmental Uncertainty, and Firm Risk. *Journal of International Financial Management & Accounting*, 36, 292–322.
<https://doi.org/10.1111/jifm.12227>
- Lu, W. M., Kweh, Q. L., & Ku, H. L. (2026). ESG as a Context-Contingent Capability: Competitive Intensity, Internationalization, and Efficiency in the Global Clothing Industry. *Corporate Social Responsibility and Environmental Management*, 1–24.
<https://doi.org/10.1002/csr.70460>.
- Lungu, C. I., Caraiani, C., Bojan, A. M., Dascălu, C., & Achim, R. A. (2025). Double Materiality in Sustainability Reporting: Revealing ESG–SDGs Connections for Businesses’ Awareness. *Amfiteatru Economic*, 27(70), 939–956.
<https://doi.org/10.24818/EA/2025/70/939>
- Mauludin, R. A., & Hanoum, S. (2025). Business Strategy Development for Drilling Cutting’s Waste Industry Using Ansoff Matrix. *Journal La Bisecoman*, 6(5).
<https://doi.org/10.37899/journallabisecoman.v6i5.2758>
- Mavlutova, I., Spilbergs, A., Romanova, I., Kuzmina, J., Fomins, A., Verdenhofs, A., & Natrins, A. (2025). The Role of Green Digital Investments in Promoting Sustainable Development Goals and Green Energy Consumption. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(2), 100518.
<https://doi.org/10.1016/j.joitmc.2025.100518>
- Meltzer, H. M., Eneroth, H., Erkkola, M., Trolle, E., Fantke, P., Helenius, J., & al., e. (2024). Challenges and Opportunities When Moving Food Production and Consumption Toward Sustainable Diets in the Nordics: A Scoping Review for Nordic Nutrition Recommendations 2023. *Food & Nutrition Research*, 68.
<https://doi.org/10.29219/fnr.v68.10489>
- Minhas, T. F. (2026). The Business Case for Sustainability: Evidence on How ESG Integration Drives Financial Performance in a Pragmatic 2026 Environment. *The*

- Critical Review of Social Sciences Studies*, 4(1), 1573–1586.
<https://doi.org/10.59075/ynnd0092>
- Moro-Visconti, R., Rambaud, S. C., Pascual, J. L., & García, J. S. (2025). Sustainable Metaverse Ecosystems: From ESG Compliance to Multilayer Network Scalability. *Financial Innovation*, 11(1), 117. <https://doi.org/10.1186/s40854-025-00786-9>
- Münch, M., Mayer, J. H., & Quick, R. (2025). Making a Virtue Out of Necessity – Design Principles for an ESG Reporting Platform. *Journal of Management Control*, 1–24.
<https://doi.org/10.1007/s00187-025-00398-5>
- Munonye, W. C., & Munonye, D. I. (2025). Beyond Greenwashing: How Circular Economy Metrics Could Revolutionize ESG Investing. *Frontiers in Sustainability*, 6, 1588374.
<https://www.frontiersin.org/journals/sustainability/articles/10.3389/frsus.2025.1588374/full>
- NatWest. (2024). *Annual Results 2023*. NatWest Group – News and Insights (Financial Reporting). <https://www.natwestgroup.com/news-and-insights/latest-stories/financial-reporting/2024/feb/annual-results-2023.html>
- Nazari, J. A., & Poursoleyman, E. (2025). Corporate Social Responsibility Signalling Under External Transparency Demands. *International Review of Financial Analysis*, 101, 104045. <https://doi.org/10.1016/j.irfa.2025.104045>
- Neste. (2025). *Sustainability reporting*. Neste.
<https://www.neste.com/sustainability/reporting>
- Nichita, E. M., Manea, C. L., Apostu, S. A., & Irimescu, A. M. (2025). Empirical Insights Regarding Romanian Companies' Preparedness for CSRD. *Amfiteatru Economic*, 27(70), 788–788.
- Nordea. (2025). *How are Nordic companies performing on ESG? Latest Insights*. Nordea Bank Abp. <https://www.nordea.com/en/news/how-are-nordic-companies-performing-on-esg-nordeas-latest-insights>

- NordicESG. (2024). *Capital Market ESG Report 2024*. NordicESG Insights. <https://nordicesg.com/insights/capital-market-esg-report-2024>
- Ørsted A/S. (2025). *Green finance impact report*. Ørsted A/S. <https://www.marketscreener.com/quote/stock/ORSTED-A-S-28607554/news/Orsted-A-S-Green-finance-impact-report-48976980>
- Oyetunji, S. A. (2024). Investigating Data Protection Compliance Challenges. *International Journal of Innovative Science and Research Technology*, 9(8), 2131–2147. <https://doi.org/10.38124/ijisrt/IJSRT24AUG1583>
- Paluseri, A. H., Kaihatu, T. S., Sutrisno, T. F., & Bernardus, D. (2025). Identifying the Role of Aggressive Low Carbon Innovation on a Firm's Environmental, Social, and Governance Performance. *Eastern-European Journal of Enterprise Technologies*, 13(4), 136. <https://doi.org/10.15587/1729-4061.2025.335639>
- Peña Bermúdez, A. M., Hernandez Piñeros, J. N., & Zamora, J. (2025). *Sustainable Business Strategies and Green Products: Current Trends in Environmental and Economic Integration*. Zenodo. <https://doi.org/10.5281/zenodo.17725633>
- Pokharel, P. R. (2025). Unpacking the Role of Biodiversity Impact Reduction in ESG Performance. *Corporate Social Responsibility and Environmental Management*, 32(6), 8094–8110. <https://doi.org/10.1002/csr.70130>
- Puyt, R. W., & Antoniou, P. H. (2026). Guest Editorial: The Lasting Impact and Intellectual Legacy of H. Igor Ansoff, the Father of Strategic Management. *Strategic Change*. <https://doi.org/10.1002/jsc.70055>
- PWC. (2023). *Global Annual Review 2023*. PWC. <https://www.pwc.com/gx/en/global-annual-review/2023/pwc-global-annual-review-2023.pdf>
- Qian, X., Wang, H., Xu, Y., & Zhang, R. (2026). The Effects of Green Innovation on Stock Liquidity: Evidence from US Companies. *Journal of Risk and Financial Management*, 19(2), 147. <https://doi.org/10.3390/jrfm19020147>
- Resnik, D. B. (2018). *The Ethics of Research*. Springer.

- Roelfsema, H. (2026). Circular Business Models and Ecosystems: Governance by Aligning Incentives. *Sustainability*, 18(3), 1619. <https://doi.org/10.3390/su18031619>
- Rossi, L. A., & Srai, J. S. (2025). The Role of Digital Technologies in Configuring Circular Ecosystems. *International Journal of Operations & Production Management*, 45(4), 863–894.
- Rostamicheri, P., Popescu, V., Birau, R., & Bărbăcioru, I. C. (2026). ESG Score and Firm Performance: A Comparative Analysis of Nordic and European Companies. *Sustainability*, 18(3), 1707. <https://doi.org/10.3390/su18031707>
- Rusu, T. M., Odagiu, A., Pop, H., & Paulette, L. (2024). Sustainability Performance Reporting. *Sustainability*, 16(19), 8538. <https://doi.org/10.3390/su16198538>
- Sankara, J., & Trimble, M. (2025). Prevalence of Sustainability Metrics within Executive Compensation Schemes in Large US Companies. *Journal of Management & Sustainability*, 15, 116. <https://doi.org/10.5539/jms.v15n1p116>
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Students* (8th ed.). Pearson.
- Schüder, M., & Zülch, H. (2026). What Drives Corporate Climate Progress? The Role of Sustainability Committees and Board Gender Diversity. *Business Strategy & Development*, 9(1), e70265. <https://doi.org/10.1002/bsd2.70265>
- Steiner, B., Münch, C., Beckmann, M., & von der Gracht, H. (2024). Developing Net-Zero Carbon Supply Chains in the European Manufacturing Industry – A Multilevel Perspective. *Supply Chain Management: An International Journal*, 29(7), 164–181. <https://doi.org/10.1108/SCM-06-2024-0372>
- Strand, R. (2024). Global sustainability frontrunners: Lessons from the Nordics. *California Management Review*, 66(3), 5–26. <https://doi.org/10.1177/00081256241234709>
- Tashakkori, A., & Teddlie, C. (2010). *Mixed Methodology: Combining Qualitative and Quantitative Approaches*. Sage.

- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Yin, R. K. (2018). *Case study research and applications* (Vol. 6). Thousand Oaks, CA: Sage.
- Tripathi, A., & Saxena, V. (2024). *The Integrated ESG Paradox: An Analysis of Decoupling Between Environmental, Social, and Governance Disclosures and Operational Practices in Blue-Chip Corporations*. *International Journal of Scientific Engineering and Research (IJSER)*.
- UN. (2025). *2025 Commission work programme and annexes*. European Commission.
- UNGC. (2023). *Global Stocktake*. UNGC. <https://unfccc.int/topics/global-stocktake>
- Vestas. (2025). *Reports and ratings*. Vestas Wind Systems A/S. <https://www.vestas.com/en/sustainability/reports-and-ratings>
- Vracheva, V., & Moussetis, R. C. (2025). The Efficacy of Igor Ansoff's Strategic Success Hypothesis: A Comparative Analysis of Strategic Diagnostic Models. *Strategic Change*, 1–17. <https://doi.org/10.1002/jsc.70037>
- Waqar, M., Riaz, A., Ali, F. H., Baig, J., & Cai, Z. (2026). Bridging Innovation and Sustainability: The Impact of Entrepreneurial Practices on ESG Outcomes. *Journal of Innovation & Knowledge*, 15, 101005. <https://doi.org/10.1016/j.iik.2026.101005>
- Wei, Y.-M. (2025). A Framework for Sustainability-Aligned Business Development Across Sectors: A Design Science Approach. *World*, 6(4), 153. <https://doi.org/10.3390/world6040153>
- Wibowo, H. A., Noy, I., & Sutisman, E. (2026). Evaluation of the Challenges of Implementing Sustainability and ESG Principles in Modern Corporate Financial Reporting. *Advances in Management & Financial Reporting*, 4(1), 236–251. <https://doi.org/10.60079/amfr.v4i1.738>

- Wulf, C., Mesa Estrada, L. S., Haase, M., Tippe, M., Wigger, H., & Brand-Daniels, U. (2025). MCDA for the Sustainability Assessment of Energy Technologies and Systems: Identifying Challenges and Opportunities. *Energy, Sustainability and Society*, 15(1), 45. <https://doi.org/10.1186/s13705-025-00546-8>
- Xia, M., Jian, B., & Tian, Y. (2026). Corporate ESG Performance and Export Product Quality: Evidence from Chinese Listed Companies. *Sustainability*, 18(4), 2118. <https://doi.org/10.3390/su18042118>
- Yan, J., Luo, L., & Nuhu, N. (2026). Stock Exchange ESG Disclosure Guidance and Corporate Carbon Mitigation: International Evidence. *Business Strategy and the Environment*, 1–31. <https://doi.org/10.1002/bse.70787>
- Yan, S. (2025). Sustainability and Competitive Advantage: The Impacts of ESG Practices on Business Performance. *International Journal of Business and Management*, 20(6). <https://doi.org/10.5539/ijbm.v20n6p261>
- Younus, H., & Kashif, A. R. (2025). Role of Artificial Intelligence in Sustainable Development: The Strategic Place of AI and ESG Integration in Corporate Governance. *Journal of Asian Development Studies*, 14(4). <https://doi.org/10.62345/jads.2025.14.4.12>
- Zhavira, N. A., Ratnawati, A., & Shalihati, F. (2025). Implementation of ESG in Blue Ocean Strategy: A Case Study of PT Wijaya Karya (Persero) Tbk. *Business Review and Case Studies*, 6(1), 75. <https://doi.org/10.17358/brcs.6.1.75>
- Zhou, X., Peng, Y., Sun, X., Cao, X., Wang, Z., & Zhang, J. (2025). Advancing New Energy Industry Quality via Artificial Intelligence-Driven Integration of ESG Principles. *Humanities and Social Sciences Communications*, 12(1), 1–20. <https://doi.org/10.1057/s41599-025-05800-0>