Chapter 12
ESG in Practice:
Sustainability, Ethics, and Innovation Tailored to Sectors

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ABSTRACT

Environmental, social and governance (ESG) principles have become critical to corporate strategies across industries. However, ESG requires sector-specific approaches as industries face unique challenges. This chapter examines ESG applications in four sectors: finance, energy, fashion and food. In finance, ESG factors influence investment decisions and risk management with institutions evaluating companies' performance in addressing climate risks, regulatory challenges and social concerns. The energy sector, a major carbon emitter, prioritizes renewable energy transitions and emission reductions, alongside employee safety and regulatory compliance. The fashion industry, responsible for 4-8% of global greenhouse gas emissions, faces scrutiny over environmental impacts, fair wages and ethical supply chains. In the food sector, ESG concerns focus on water use, waste management, animal welfare and food safety. The chapter emphasizes sector-specific ESG challenges and the role of emerging technologies, such as machine learning and AI, in improving transparency and accountability.

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1. INTRODUCTION

The ESG framework, or the trio of Environmental, Social, and Governance concerns, has turned into a defining element in modern business strategy and the very essence of how organizations go about their operations. It guides companies toward environmental sustainability, social responsibility, and ethical governance. Such a change has been driven by climate change, growing social inequalities, and increasing demands for more transparency and accountability in corporate governance. Various researches indicate that those firms that adhere to ESG standards tend to offer better financial performance in the long run, especially when their operations are in tandem with global goals such as the UN Sustainable Development Goals (Rane et al, 2024; De Silva et al, 2024, Managi et al, 2024).

While founded in the early 2000s, especially through the United Nations Principles for Responsible Investment of 2006 that urged the inclusion of sustainability factors in their investment processes among investors (UN PRI, 2024), today ESG goes beyond a niche framework to one imposed upon countries across the world through its adoption and promotion by government administrations and global associations. The European Union, for example, enacted the CSRD for enhanced transparency and consistency in disclosures regarding ESG topics (European Commission, 2024c).

Beyond regulatory requirements, industry leaders such as Unilever and Tesla have illustrated how ESG principles drive innovation, foster competitive advantages, and underscore the economic benefits of sustainable practices (Valette, 2024). Additionally, research highlights a growing consumer preference for ethical and sustainable brands, further embedding ESG as a critical component of corporate strategy (Liu et al., 2023).

The adoption of ESG is increasingly influenced by stakeholders who prioritize accountability and sustainability (Raghav et al., 2024) (Kaushik et al., 2024). For example, investors are integrating ESG indicators into their valuation processes, recognizing that strong ESG performance reduces risk and increases investment returns. BlackRock's initiatives to make ESG compliance the basis of investment decisions illustrate this trend (Zhang & Chang, 2024). Similarly, employees seek to align their organization's values with their own ethical principles, which leads to a greater sense of support for diversity, equity, and inclusion in the workplace (De Silva et al., 2024).

Consumer expectations play a significant role as well. Studies indicate that over 60% of consumers favor brands with robust sustainability practices, prompting companies to adopt ESG frameworks (Managi et al., 2024). Similarly, supply chain partners face heightened scrutiny as organizations apply ESG criteria to ensure ethical sourcing and maintain operational integrity (Liu et al., 2023).

Application methods differ significantly across industries due to unique challenges and priorities, while regional differences affect how ESG is applied. In more regulated regions like the European Union, the demand for compliance is greater than in less regulated markets (De Silva et al., 2024). For that reason, flexibility should be allowed to balance global objectives against local specificities.

Technology plays a key role in the implementation of ESGs. Artificial intelligence enables efficient data collection and analysis, facilitating ESG compliance (Rane et al., 2024). Blockchain technology helps to verify sustainability claims and reduce risks by increasing transparency, especially in sectors with complex supply chains (Liu et al., 2023; Valette, 2024). IoT (Internet of Things) applications provide real-time insights into resource use, especially in agriculture and logistics (Vieru & Plugge, 2025).

ESG frameworks are not just regulatory obligations, but also act as catalysts for value creation and innovation. Integrating ESG principles not only improves operational efficiency, but also builds stronger relationships with stakeholders and creates new

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