

Chapter 4

An Inquiry Into the Obstacles Hindering the Widespread Use of Artificial Intelligence in Environmental, Social, and Governance Practices

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ABSTRACT

This chapter examines the correlation between artificial intelligence (AI) and the integration of environmental, social, and governance (ESG) factors in contemporary business and technology. The chapter explores how AI might provide practical answers to current urgent social issues regarding sustainability. The chapter focuses on the ethical dimensions of sustainable technologies that address ecological issues, as well as AI-driven forecasts for ESG indicators, ethical supply chains, and forthcoming legislation. The growing integration of AI and ESG presents opportunities for sustainable-oriented organizations to expand their market share via the adoption of environmentally friendly strategies. This convergence allows for the alignment of sustainability goals with advanced technology, resulting in a truly transformative partnership.

INTRODUCTION

An overview of how the integration of artificial intelligence (AI) with environmental, social, and governance (ESG) principles contribute to the promotion of sustainability.

Artificial intelligence (AI) and environmental, social, and governance (ESG) are closely linked areas that have a prominent role in modern business and technology (Makridakis, 2017; Saetra, 2021). Artificial intelligence (AI) refers to a broad spectrum of technical advancements that enable computers to

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imitate human intellect. The term “intelligence of machines” is sometimes used to describe it (Trujillo, 2021). These technologies include robotics, computer vision, machine learning, and natural language processing. Artificial intelligence revolutionizes business practices and sectors, offering the capacity to address significant social challenges, such as the urgent need for sustainable solutions to contemporary difficulties (Nishant et al., 2020; Sestino and De Mauro, 2022).

ESG, as described by Johnson Jr. et al. (2020), is a complete taxonomy that considers an organization’s non-financial requirements related to the environment, society, and governance. ESG may be attributed to two primary factors. Businesses worldwide are subject to regulations and legislation that emphasize the need of adhering to specified standards and demonstrating knowledge in areas unrelated to finance (Krishnamoorthy, 2021). Environmental considerations include subjects such as carbon emissions, climate change, and the responsible use of limited resources such as air, water, and waste. Social concerns such as human trafficking, child labor, health and safety, inclusion and diversity, racial and social justice, data privacy, employment, and the general well-being of workers and humanity are considered in the ongoing battle. Johnson Jr. et al. (2020) identify the following as governance variables: organizational objective; legislative and social effect; concerns related to pay and corruption; and the independence, control, and assessment of the board and management. The heightened global awareness and urgency around the ecological disaster have led to the development of technological solutions that seek to tackle or mitigate the underlying issues at its heart (Falk & van Wynsberghe, 2023).

Sustainable development refers to the practice of fulfilling the requirements of the current generation without jeopardizing the capacity of future generations to fulfill their own requirements (UN, 1987). The United Nations formulated Agenda 2030 along with the 17 sustainable development objectives (Schrijver, 2008). Achieving sustainable development requires a firm commitment to corporate social responsibility, abbreviated as CSR. Corporate Social Responsibility (CSR) encompasses socially responsible investment, safeguarding the interests of stakeholders, promoting sustainable development, and enhancing corporate governance (Zhao and Fariñas, 2023). By enhancing their efficacy and efficiency, artificial intelligence (AI) has the capacity to enhance corporate social responsibility (CSR) initiatives (Naqvi, 2021). With the increasing awareness of the importance of environmental and social responsibility, sustainability has become a paramount concern for companies. Unilever, a firm that recognized the need of sustainability, actively endeavored to encourage other companies to adopt similar practices. The initiation of Unilever’s Sustainable Living Plan in 2010 serves as a prime example of an ESG case study. The Unilever Sustainability Living Plan is characterized as a cutting-edge strategy, referred to as a “virtual circle of growth” (Lawrence et al., 2018). The strategy was underpinned by three key principles of sustainability: enhancing the living standards of individuals inside the company’s value chain, mitigating the adverse environmental effects of Unilever goods, and enhancing the well-being and health of one billion people. Unilever’s commitment to integrating social, governance, and environmental aspects into its core business strategy is seen in their extensive sustainability initiative. Unilever promoted transparency and proper hiring procedures, ensuring that board membership and leadership aligned with the company’s commitment to sustainability, as outlined by its governance principles. This project demonstrates the potential of a major multinational consumer goods corporation to effectively achieve a harmonious equilibrium between profitability and an unwavering commitment to social responsibility, environmental conservation, and transparent governance procedures. Carney (2021) identifies Unilever as the leading corporation in terms of embodying ESG efforts.

Robots equipped with artificial intelligence (AI) have the ability to acquire knowledge via experience, adjust to novel information, and perform activities that resemble human skills (Duan et al., 2019, p. 63).

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