





# Ethical Management towards Sustainability in the Era of the 4th Industrial Revolution: A Case Study of Selected Social Enterprises

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**Abstract.** This research explores how ethical management supports sustainability in the era of the 4<sup>th</sup> Revolution, focusing on selected social enterprises. As technology advances rapidly, businesses face the challenge of balancing innovation with social and environmental responsibilities. Social enterprises, which prioritize positive societal impact, provide valuable insights into this balance. Using a qualitative approach, the study explores how these organizations integrate ethical practices with technologies like artificial intelligence and data analytics to improve efficiency and sustainability. While these tools offer significant benefits, they also raise concerns about data privacy, ethics, and inclusivity. The proposed findings highlight the importance of ethical leadership in driving sustainable practices, emphasizing that ethical management is not merely a compliance requirement but a catalyst for long-term growth and impact. It also underscores the role of collaboration between policymakers, business leaders, and technology developers in creating frameworks that support ethical innovation. By focusing on the intersection of technology, ethics, and sustainability, this research provides valuable insights for organizations striving to balance innovation with their social and environmental responsibilities, contributing to a more equitable and sustainable future. Highlight the need for leaders to prioritize integrity, transparency, and inclusiveness, showing that ethical management is essential for long-term sustainability. This research offers practical insights for businesses and policymakers aiming to align technological progress with ethical and sustainable development goals.

**Keywords:** Ethical Management, Sustainability, 4<sup>th</sup> Industrial Revolution, Social Enterprises

## 1 Introduction

In principle, social entrepreneurship cannot be separated from economic theory. Since Adam Smith (1776) introduced the idea of profit maximization, businesses have played a significant role in driving economic growth. While generating profits, these enterprises also contribute substantially to society through taxes and philanthropy. As economic activities evolve, there is increasing recognition of social entities as part of social

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entrepreneurship. The ongoing challenge is how entrepreneurs in social ventures combine economic goals with social and ethical responsibilities within their organizations. Traditional economic models, often expressed through mathematical formulas, fall short in resolving this integration. Similarly, many qualitative studies reveal conceptual gaps when trying to harmonize these dual aims in social entrepreneurship.

The Fourth Industrial Revolution (4IR) is marked by the convergence of physical, digital, and biological technologies, powered by innovations like artificial intelligence (AI), Internet of Things (IoT), blockchain, robotics, and big data. This transformation brings remarkable potential for enhanced efficiency, creativity, and global interconnectivity but also raises significant ethical, social, and environmental concerns. As companies implement 4IR technologies, they must navigate the complex choice of fostering innovation while maintaining ethical standards and sustainable practices. For profit-driven businesses, ethical priorities may often be overshadowed by competitive pressures. Conversely, social enterprises—organizations committed to balancing financial health with social and environmental missions—place ethical governance at the core of their operations.

This study centers on social enterprises as models for embedding ethical values within technological advancement. It explores how ethical leadership and responsible management enable these organizations to leverage 4IR innovations to promote sustainability and tackle challenges such as data protection, inclusiveness, and environmental responsibility.

## **2 Problem Statement**

The swift progress of technologies defining the Fourth Industrial Revolution (4IR)—such as artificial intelligence, big data analytics, and blockchain—has revolutionized how businesses operate, unlocking new potential for efficiency, creativity, and worldwide connectivity. At the same time, these innovations bring major ethical, social, and environmental concerns, including issues around data privacy, biases in algorithms, digital exclusion, and environmental harm. Whereas traditional companies often prioritize profit and competitive advantage, there is an urgent need to explore how organizations can reconcile cutting-edge technological adoption with ethical responsibility and sustainability goals. Social enterprises, which strive to balance social mission with economic sustainability, present a valuable perspective to examine this challenge. Nevertheless, there is a scarcity of research focusing on how these enterprises incorporate ethical management into leveraging 4IR technologies to foster sustainable results. Filling this research gap is essential to shaping policies and practices that promote responsible and sustainable technological innovation

## **3 Literature Review**

The literature review serves, among other purposes, to establish the significance of the research topic. It demonstrates why the research is important by linking it to previous

works in the same field. The literature review also clarifies how this research contributes new insights or offers a different perspective to the existing body of knowledge. This research will give deep insight into ethical management, sustainable development, and 4IR.

### **3.1 Ethical Management**

Ethical management is vital for the sustainable development of social enterprises. This integration emphasizes not only the importance of justice and benevolence but also the need to uphold rights and obligations, thereby fostering a culture of sustainability (Ismail, 2024). The ethical foundation of social enterprises is vital for ensuring responsible behaviour towards stakeholders, including employees, the community, and the environment. Furthermore, the ethical decision-making processes within social enterprises are increasingly recognized as important, highlighting the need for managers to consider ethical implications in their strategic choices (Zhang et al., 2010).

### **3.2 Ethical Management**

The emergence and continued existence of social companies in Malaysia have demonstrated the significance of maintaining this line of business, and consequently, the influence of 17 Sustainable Goals (17 SDGs), which the correlation between social enterprises and sustainable development has predominantly been investigated through the utilization of various techniques and instruments for measuring social impact. The Social Return on Investment (SROI) model is one example of this type of model. It establishes a ratio between an enterprise's return on investment and the value of its social good efforts. Additional cost models, such as cost-benefit, cost-effective, and cost-per-impact analyses, were recommended (Diaz-Sarachaga & Ariza-Montes, 2022).

### **3.3 Fourth Industrial Revolution (4IR)**

In every stage of economic development, people remain integral as factors of production in diverse business ventures. Human factors play a decisive role in the economy, influencing how businesses operate and succeed. In today's competitive landscape, understanding and applying principles of human behaviour is essential for sustained business performance. Research shows that when organizations promote work–life balance and a learning culture, they experience gains in innovation and organizational outcomes (Ferreira, Gomes & Borini, 2023).

## **4 Methodology**

In this research, the use of a qualitative research approach was proposed for data collection. Since the issue of social enterprises is not easy to be tested through existing theories, which are mainly interdisciplinary, in this study, the researcher tries to surface the way for future studies by using ethical management of social enterprises towards sustainability in the Era of the 4th Industrial Revolution.

The methods proposed in this article are an extensive literature review, document analysis from published materials, in-depth interviews, and content analysis from relevant sources. As part of the literature review, an extensive analysis has been done, particularly in reference articles, journal papers, and relevant books, in order to propose a preliminary framework to be proposed. Last but not least, the views of subject matter experts were also added to the proposed framework, along with the recommendations from them. To complete this research, the researcher proposes to use the Qualitative method with the implementation of personal interviews with the selected participants. According to Glaser (1978), theoretical sampling also includes purposive sampling, which is described by Patton (1990) as “the logic and power of purposeful sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research” (Patton, 1990, p. 169). Basically, grounded theory research always starts with purposive sampling to maximize the possibility of obtaining data, and thus leads to knowing where to go subsequently and then proceeds with theoretical sampling (Glaser, 1978).

The proposed population for this research consists of subject matter experts and social enterprises in Klang Valley that have various experiences and are involved with social entrepreneurship activities.

This study anticipates uncovering that social enterprises practicing ethical leadership and management amidst the Fourth Industrial Revolution (4IR) are more capable of achieving sustainable outcomes and competitive advantage. The expected findings include:

### **Theme 1: Ethical Leadership Enhances Trust, Governance, and Sustainability**

Leaders who embed ethical values into decision-making are expected to build higher levels of stakeholder trust and stronger governance structures. Such leadership fosters accountability, resilience, and credibility, which are essential for long-term sustainability. Brown and Treviño (2006) emphasize that ethical leadership improves organizational integrity and stakeholder loyalty, while Maak et al. (2021) argue that responsible leadership enhances resilience in times of rapid technological change.

### **Theme 2: Technology Adoption Requires Inclusive and Human-Centric Practices**

The adoption of 4IR technologies will be most effective when guided by inclusive, human-centered values. Ethical approaches ensure that digital transformation does not exacerbate social inequalities. Floridi (2019) stresses the importance of trustworthy AI, and George et al. (2021) highlight that organizations prioritizing inclusivity in digital adoption sustain innovation and performance. Thus, social enterprises that balance efficiency with inclusivity are expected to achieve stronger social impact.

### **Theme 3: Integration of Sustainability Frameworks Strengthens Long-Term Impact**

Social enterprises that align their practices with the UN Sustainable Development Goals (SDGs) and adopt robust impact measurement frameworks, such as Social Return on

Investment (SROI), will demonstrate stronger legitimacy and accountability. Diaz-Sarachaga and Ariza-Montes (2022) show how SROI provides measurable evidence of social value. This alignment is expected to enhance credibility, attract multi-stakeholder support, and reinforce sustainable growth.

#### **Theme 4: Collaborative Ecosystems Enhance Ethical Innovation**

The creation of collaborative networks among government, academia, private industry, and civil society will support ethical innovation in social enterprises. Partnerships provide resources, regulatory alignment, and shared expertise that enable ethical use of technologies. Schwab (2016) highlights the importance of multi-stakeholder collaboration in shaping the future of 4IR, while Brix-Asala et al. (2023) demonstrate that cross-sector partnerships strengthen innovation capacity. Social enterprises that embrace collaborative ecosystems are expected to scale their impact more effectively.

## **5 Conclusions**

The main objective of this research is to explore ethical management for sustainability purposes, particularly for selected social enterprises, by providing a framework for understanding the interconnectedness of all people and the environment, especially in the era of 4IR. It emphasizes that each individual is responsible for their actions and that these actions should be in line with God's will. The elements of ethical management help to sustain social enterprises by encouraging collaboration between individuals, organizations, and communities, promoting ethical values such as justice, fairness, respect for human rights, and environmental stewardship, emphasizing collective responsibility for achieving shared goals, supporting economic systems that are rooted in sustainability, advocating for equitable access to resources; and encouraging the use of innovative solutions to address social and environmental challenges.

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## References

- Brix-Asala, C., Stephan, U., & Overhage, M. (2023). Collaborative ecosystems for sustainability-oriented innovation. *Business Strategy and the Environment*, 32(3), 1145–1159
- Brown, M. E., & Treviño, L. K. (2006). Ethical leadership: A review and future directions. *The Leadership Quarterly*, 17(6), 595–616.
- Diaz-Sarachaga, J. M., & Ariza-Montes, A. (2022). Measuring social impact in social enterprises: A review of the SROI methodology. *Sustainability*, 14(1), 101–115. <https://doi.org/10.3390/su14010101>.
- Ferreira, V. C., Gomes, G., & Borini, F. M. (2023). Importance of Human Factors to Innovation and Organizational Performance. *Technology Analysis & Strategic Management*, 37(6), 662–676. <https://doi.org/10.1080/09537325.2023.2293855>
- Floridi, L. (2019). Establishing the rules for building trustworthy AI. *Nature Machine Intelligence*, 1(6), 261–262.
- George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. (2021). Understanding the future of work and organizational sustainability. *Academy of Management Journal*, 64(1), 1–17.
- Glaser, B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory*. Mill Valley, CA: Sociology Press.
- Huang, H., Li, M., & Li, X. (2021). Ethical leadership, trust, and employee citizenship behavior: Evidence from high-tech firms. *Journal of Business Ethics*, 174(4), 713–728. <https://doi.org/10.1007/s10551-020-04636-w>
- Ismail, N. (2024). Integrating ethical values for sustainable social enterprises. *Asian Journal of Business and Ethics*, 18(1), 22–39.
- Maak, T., Pless, N. M., & Voegtlin, C. (2021). Business statesmanship and the role of responsible leadership. *Journal of Business Ethics*, 174(1), 9–23.
- Nguyen Hai, T., & Nguyen Van, Q. (2021). The impact of the Fourth Industrial Revolution on ethical leadership. *Universal Journal of Social Sciences and Humanities*, 1(1), 1–8. <https://doi.org/10.28991/HEF-2021-02-03-05>
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage Publications.
- Schwab, K. (2016). *The Fourth Industrial Revolution*. Geneva: World Economic Forum.
- Van Beers, C., Knobens, J., & Zwanenburg, M. (2022). Transformational leadership in digital transformation processes: Evidence from manufacturing industries. *International Journal of Operations & Production Management*, 42(13), 92–115. <https://doi.org/10.1108/IJOPM-06-2022-0370>
- Zhang, Y., Huang, M., & Hao, D. (2010). The four-level valuation model of ethical decision-making. 2010 2nd IEEE International Conference on Information and Financial Engineering.

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