

Environmental, Social and Governance (ESG) Implementation at a Malaysian Public University: An Exploratory Case Study

Arif Safiuddin Abu Samah¹, Musli Mohammad^{1*}

¹ Faculty of Mechanical and Manufacturing Engineering,
Universiti Tun Hussein Onn Malaysia, 86400, Batu Pahat, Johor, MALAYSIA

*Corresponding Author: mmusli@uthm.edu.my
DOI: <https://doi.org/10.30880/rpmme.2025.06.01.018>

Article Info

Received: 02 October 2024
Accepted: 23 June 2025
Available online: 31 July 2025

Keywords

Environmental, ESG, Governance,
Higher Education, Social and
Sustainable development

Abstract

The principles of Environmental, Social, and Governance (ESG) have become increasingly essential to higher education, particularly in Malaysian public universities. These organizations are essential to the advancement of research, shaping future leaders, and the progress of sustainable development. However, constraints include limited budget, fragmented strategy, limited stakeholder engagement, and a lack of execution frameworks that occasionally make implementing ESG initiatives in public universities challenging. The objectives of this study are to identify critical factors for ESG implementation, evaluate the readiness of ESG initiatives implementation, and suggest an ESG implementation framework. The research methodology is an exploratory case study conducted at Universiti Tun Hussein Onn Malaysia (UTHM). The data collection method involves the use of interviews, observations, and ESG readiness assessment surveys. The results reveal the critical factors that ESG initiatives implement are leadership commitments, clear ESG policies, funding, performance measurements, talent development and knowledge, and stakeholder engagement. The general understanding of ESG has scored a median readiness of 1 or low readiness. While, ESG criteria have a median readiness score of 2, or moderate readiness, according to the analysis, which shows that UTHM has made significant progress but still needs to improve considerably. Examples of ESG initiatives implementation such as solar panel installation for environmental practice, corporate social responsibility (CSR) for social practice, and energy efficiency management policy for governance practice. Additionally, the ESG implementation framework has been proposed for UTHM involving six critical factors.

1. Introduction

Environmental, social, and governance (ESG) principles have been becoming more common across several sectors in recent years due to the growing awareness of the importance of sustainable development and responsible management. Higher education institutions, particularly public universities, have a significant impact on the landscape by developing future leaders, advancing research, and encouraging sustainable practices. Public institutions in Malaysia, like Universiti Tun Hussein Onn Malaysia (UTHM), are essential in helping their operations and strategic planning including ESG concepts. However, these organizations frequently encounter many obstacles to successfully putting ESG efforts into practice, such as insufficient funding, fragmented

initiatives, limited involvement of stakeholders, and a lack of effective implementation frameworks. To overcome such challenges, an in-depth evaluation of the present condition of current ESG projects is required, and an understanding of the critical success factors that underpin successful implementation. The research by Qian & Yu (2024) emphasizes the importance of ESG as a framework for evaluating and improving an organization's effects on the environment, society, and governance [1].

The objectives of this research are: (1) To investigate critical factors for implementing the Environmental, Social, and Governance (ESG) initiative; (2) To evaluate the readiness of Environmental, Social, and Governance (ESG) initiatives implemented at UTHM; (3) To propose an Environmental, Social, and Governance (ESG) implementation framework at UTHM. This project focuses on Environmental, Social, and Governance implementation at UTHM. It aims to develop a comprehensive framework based on critical factors identified through thorough research. Data collection involves interviews, observation, and a readiness assessment survey. The respondents are selected based on their being well-versed and who are engaged in ESG implementation at UTHM.

Environmental, social, and governance (ESG) refers to a set of initiatives or strategies put in place by organizations to address environmental, social, and governance factors. With a thorough understanding of the effects on the environment, society, and corporate governance systems, these initiatives seek to promote sustainability, social responsibility, and ethical business practices. ESG was created to assess the way organizations and nations perform in terms of sustainability. At universities, environmental sustainability includes activities including decreasing energy use, managing waste materials, minimizing carbon emissions, and developing sustainable campus structures. According to research by Rodrigo Lozano (2011), it is crucial to integrate sustainability into the operations and curriculum of universities [2]. Social initiatives emphasize universities' efforts to uphold social responsibility and engage with local communities. Organizations that have comprehensive social responsibility frameworks and strong leadership commitment typically have more successful and significant activities [3]. For governance initiatives, it examines governance structures, codes of conduct, and compliance mechanisms designed to uphold institutional integrity and mitigate risks.

The integration of Environmental, Social, and Governance (ESG) principles within corporate strategies has emerged as a critical component of responsible business practices, driven by global imperatives such as the i-ESG Framework MITI Malaysia (2023) [4]. Successful implementation hinges on several critical factors: embedding ESG into long-term strategic plans and organizational culture, fostering stakeholder engagement through transparent communication [5], securing a commitment from top leadership [6], forging collaborations for shared learning, allocating resources effectively, and adhering to robust governance and reporting frameworks. These elements support sustainable business practices, ensuring alignment with broader societal and environmental goals while enhancing organizational resilience and credibility in the marketplace.

Research on Environmental, Social, and Governance (ESG) practices highlights their diverse impacts across sectors and regions. The literature on integrating Sustainable Development Goals (SDGs) with Environmental, Social, and Governance (ESG) principles in higher education institutions (HEIs) reveals diverse approaches and outcomes. Studies like Carla Finatto (2023) on UNISUL highlight institutional commitments to sustainability through ESG and SDG integration [7]. Forte et al. (2024) provide assessment tools for ESG incorporation in HEI internationalization efforts, emphasizing ethical global education [8]. PoTsang B. Huang (2022) focuses on Indonesian HEIs, developing tools to enhance ESG practices [9]. Meanwhile, a study on a Chinese university upgrade underscores social impacts from neglecting CSR and ESG responsibilities [10]. Lima et al. (2023) research highlights a lack of thorough studies on the critical importance of integrating Environmental, Social, and Governance (ESG) concepts in Latin American higher education [11].

2. Research Methodology

Fig. 1 shows the overall procedures of this research. It starts with identifying the case organization for the study. The critical factors of ESG implementation in the literature review inspired the development of the conceptual framework. A thorough analysis and data collection are important, which involve a combination of observations, surveys, and interviews. Following the completion of the data analysis, the features of the conceptual framework were enhanced, and a final version of the framework was created.

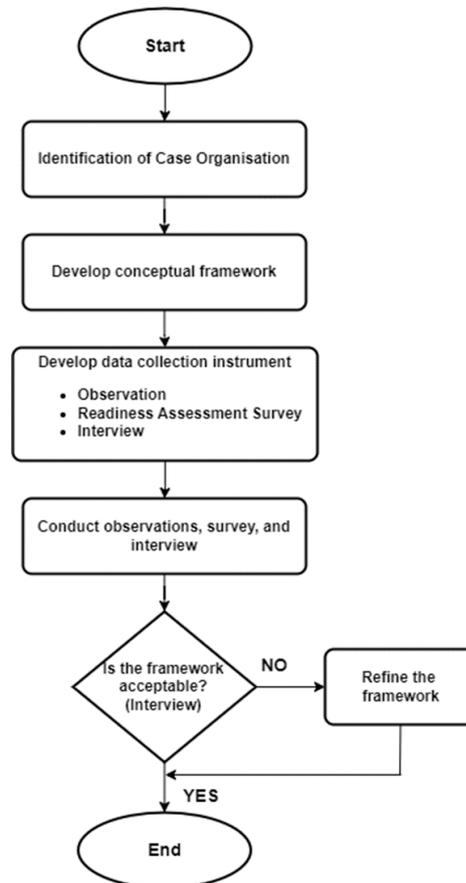


Fig. 1 Flow chart of the research procedures

Several methods for collecting data are used to improve validity, such as readiness assessment surveys, interviews with experts in the field and those involved in the university's ESG initiatives, and observations. A readiness assessment survey questionnaire modified for the university setting and based on the i-ESG Readiness Assessment Instrument helps to further improve the data-gathering process. Based on purposive sampling, the survey questionnaire was distributed to six experts. The respondents have been selected based on their well-versed and who are involved in ESG implementation. All the respondents were contacted through WhatsApp. Four respondents have completed the interviews and readiness assessment surveys. The observations were performed through physical observation and the organization's sustainability website.

3. Results and Discussion

This section examines the implementation of Environmental, Social, and Governance (ESG) strategies at Universiti Tun Hussein Onn Malaysia (UTHM), identifying critical factors such as leadership commitment, policy scope, funding, data collection, talent development, and stakeholder engagement. A readiness assessment survey and observational findings provide quantitative and qualitative analyses of UTHM's current ESG efforts, highlighting areas for improvement and demonstrating the university's commitment to sustainability. Finally, a comparison of the initial and final ESG conceptual frameworks reveals a shift towards a more integrated, data-driven approach with a focus on detailed policies, financial planning, and comprehensive talent development.

The integration of critical factors from both the interviews and the literature review highlights several key insights for implementing the Environmental, Social, and Governance (ESG) initiative. The UTHM leadership needs to establish organizational alignment and set the vision for ESG goals. In order to motivate the university community to actively engage in sustainability initiatives, committed leadership is essential for implementing sustainability into strategic planning and operational procedures. To provide a uniform framework for ESG initiatives across all university operations, clearly defined policies are required. To ensure thorough implementation of ESG, these guidelines should include a range of subjects, including community involvement, developing curriculum, procurement, and campus management. For sustainable initiatives and programs to be implemented successfully, there must be sufficient financial resources. The value of financial investments in

sectors like environmental conservation research, sustainable infrastructure, and renewable energy is emphasized by cost analysis and data collection methods.

Measuring performance is key to accountability and informed strategic decision-making. Data on metrics including energy use, waste disposal, greenhouse gas emissions, social effects, and governance processes must be gathered for the purpose. Gaining knowledge and education about ESG enables stakeholders to make valuable contributions to sustainability initiatives. Ensuring UTHM has competent and qualified staff to manage ESG implementation encourages creativity and leadership in sustainable tasks among academics. Building support and enhancing transparency and credibility are both benefits of engaging with a diverse variety of stakeholders, such as students, teachers, staff, local communities, and industry partners. Successful and long-lasting stakeholder involvement is essential to UTHM's ESG objectives.

Table 1 outlines critical factors essential for the successful implementation of ESG (Environmental, Social, and Governance) initiatives based on expert insights and scholarly references. Each factor is explained to highlight its importance in fostering sustainable practices and organizational alignment with ESG goals.

Table 1 Critical factors of implementation of ESG

| Critical factors | Explanations |
|---|--|
| Leadership commitments | <ul style="list-style-type: none"> - Leadership sets the vision and ensures organizational alignment with ESG goals. - The corporations must have effective communication and leadership practices to ensure the effective implementation of ESG strategies as communication helps stakeholders understand sustainability initiatives, their goals, and expected outcomes [6]. |
| Clear ESG Policies | <ul style="list-style-type: none"> - Policies provide a framework for action and ensure consistency across operations. - Transparently reporting ESG performance can enhance the credibility of the organization's sustainability efforts and build trust with stakeholders [5]. |
| Funding | <ul style="list-style-type: none"> - Resources are essential for implementing sustainable projects and initiatives. - The initiative includes cost analysis and data collection methods (Interviewee A2). Indicating that financial resources are a critical component of ESG initiatives. |
| Performance Measurement | <ul style="list-style-type: none"> - Measurement provides accountability and guides strategic decision-making. - The initiative includes data collection. (Interviewee A1 and A2) |
| Talent Development and Knowledge | <ul style="list-style-type: none"> - Expertise and education empower stakeholders to contribute effectively to sustainability efforts. - Have a good knowledge of ESG and have a competent person to guide in implementing ESG at UTHM. (Interviewee A3) |
| Stakeholder Engagement | <ul style="list-style-type: none"> - Engagement builds support and enhances transparency and credibility. - Jane K. Storero (2022) further emphasizes the importance of clear and consistent communication with investors and other stakeholders in implementing and maintaining successful ESG strategies [12]. |

The organization is, at a low readiness level in terms of ESG awareness and implementation, as indicated by the overall median score of 1. The median score indicates that the maturity and full integration of ESG practices are still at an early stage, even though there may have been some initial efforts or awareness. Table 2 presents the assessment results of the general understanding of ESG (Environmental, Social, and Governance) based on responses to specific questions.

Table 2 *General Understanding of ESG in the organization*

| Questions | Median | Min | Max |
|---|-------------------|-----|-----|
| A. General Understanding of ESG | | | |
| 1. How would you qualify the maturity of your organization’s sustainability strategy? | 2 | 2 | 2 |
| 3. Business case elements | 1.5 | 1 | 2 |
| 4. ESG Goals | 1.5 | 1 | 2 |
| 5. ESG Leadership Appointed | 1.5 | 0 | 3 |
| 6. ESG Reporting Standards | 1.5 | 1 | 2 |
| 7. Understanding of Data Required for External Reporting | 2 | 1 | 3 |
| 8. Contains all Required Elements of E, S, and G identified by the Organization Stakeholders | 1 | 0 | 2 |
| 9. Validation ESG Data Reported | 1 | 0 | 2 |
| Overall Median Score | 1 (Low Readiness) | | |

Table 3 summarizes the readiness levels for implementing ESG (Environmental, Social, and Governance) initiatives focusing on environmental factors. The result shows that there is a range of median values between 2 and 3 based on various environmental, social, and governance issues when it comes to the readiness levels for implementing ESG initiatives into practice. Within the environmental category, variables with median readiness levels of 2 or 2.5, signifying moderate readiness, include energy usage, waste-water management, and water efficiency. In contrast, the social category shows a moderate level of preparation with median readiness levels between 2 and 2.5 for elements such as equal job opportunities, health and safety, and national and international labour regulations.

The readiness of governance components varies; the data privacy system stands out with a median readiness level of 2.5, while board leadership and anti-corruption management systems are at a median level of 2.5. So, the overall median for environmental, social, and governance (ESG) readiness is at a moderate level of 2. This indicates that, while many parts are well-developed and some still require work, the organization is well-prepared to conduct environmental ESG initiatives.

UTHM is committed to promoting sustainability by implementing comprehensive initiatives that address environmental, social, and governance aspects. UTHM focuses a strong emphasis on resource conservation and the use of renewable energy sources. This covers the setting up of rainwater collecting systems, solar panel installation, and the creation of green buildings. Along with e-waste management initiatives, the institution also promotes recycling efforts with a dedicated centre and fabric recycling bins. Furthermore, UTHM has been granted the 2-Star Energy Management Gold Standard and recognized as the 132nd World's Most Sustainable University.

On the social side, UTHM hosts webinars and seminars like "Sessions on Low Carbon Construction Materials" to raise awareness and educate people about sustainability. The institution organizes a variety of events, such as Earth Month Awareness, to promote a diverse and inclusive society. As demonstrated by the availability of sustainable transportation options including shuttle bus services, UTHM also places a high priority on health and safety. The Yayasan UTHM and the Planeteeers Club were founded to further demonstrate the institution's dedication to community involvement and social responsibility.

Table 3 *Levels of readiness for implementing ESG initiatives*

| Questions | Median | Min | Max |
|--|--------|-----|-----|
| B. Environmental | | | |
| 12. Water Efficiency | 2 | 2 | 2 |
| 13. Material, waste, and effluent | 2.5 | 2 | 3 |
| 14. Waste-Water Management | 2 | 2 | 2 |
| 15. Energy Consumption | 2.5 | 2 | 3 |
| 16. Biodiversity | 2.5 | 2 | 3 |
| 18. Reforestation | 2.5 | 2 | 3 |
| C. Social | | | |
| 20. Domestic Labour Laws and Regulations | 2.5 | 2 | 3 |
| 21. International Labour Laws and Regulations | 2.5 | 2 | 3 |
| 22. Equal Employment and Promotion Opportunities | 2 | 1 | 3 |
| 23. Minimum Wage | 2 | 1 | 3 |
| 24. Health & Safety | 2 | 1 | 3 |
| 25. Formal Grievance Handling Procedure | 2 | 1 | 3 |
| 26. Upskilling Programmes | 2.5 | 2 | 3 |
| 27. Community | 2.5 | 2 | 3 |
| D. Governance | | | |
| 28. Board Leadership | 2 | 2 | 2 |
| 30. Organization Strategy | 2 | 1 | 3 |
| 31. Communication of Code of Conduct | 2 | 1 | 3 |
| 32. Anti-Corruption Management System | 2 | 1 | 3 |
| 33. Whistleblower Program | 2 | 1 | 3 |
| 34. Accounting System | 2.5 | 2 | 3 |
| 35. Data Privacy System | 2.5 | 2 | 3 |

Transparent reporting and strong policies define UTHM's governance. The university's operations are guided by a set of policies called the Sustainable Policy and the Management Policy. It keeps thorough records of monthly usage of water, electricity, and waste recycling in addition to conducting routine energy audits and evaluations. These initiatives are managed by the Sustainable Campus Office (SCO), which also makes sure that the institution's sustainability objectives are followed. UTHM's dedication to sustainability governance is demonstrated by the release of sustainable reports and the execution of research initiatives in precision agriculture, such as PACER. Table 4 presents a comprehensive overview of the implementation of Environmental, Social, and Governance (ESG) initiatives within an organization.

Table 4 Implementation of ESG initiatives at organization

| Environmental | Social | Governance |
|---|--|--|
| <ul style="list-style-type: none"> • Solar panels installation • Green buildings | <ul style="list-style-type: none"> • Webinar Low Carbon Construction Material Towards Sustainability • Energy Management Training Course | <ul style="list-style-type: none"> • Awarded 2-Star Energy Management Gold Standard • The 132nd World’s Most Sustainable University |
| <ul style="list-style-type: none"> • Recycling centre • E-waste management • Fabric Recycling Bin | <ul style="list-style-type: none"> • Corporate Social Responsibility (CSR) | <ul style="list-style-type: none"> • UTHM Sustainable Policy • Sustainable Energy Efficiency and Management Policy |
| <ul style="list-style-type: none"> • Precision Agriculture in Controlled Environment Research (PACER) • Mini-Forestry • Sustainable Transportation Initiatives (Shuttle bus service) | <ul style="list-style-type: none"> • Yayasan UTHM • Planeteers Club • Diverse races of staff and students (Local and International) | <ul style="list-style-type: none"> • Monthly water consumption info • Monthly energy consumption info • Monthly waste recycling info |
| <ul style="list-style-type: none"> • Rainwater Harvesting Systems | <ul style="list-style-type: none"> • Earth Month Awareness | <ul style="list-style-type: none"> • Energy audits and assessments • Sustainable Campus Office (SCO) |

The conceptual framework for implementing ESG (Environmental, Social, and Governance) initiatives has gone through significant changes in focus and emphasis across various essential factors, demonstrated by the differences between its initial and final versions. Currently, leadership is more about targeted promises than widespread support. The term "Clear ESG Policies and Guidelines" has been shortened to "Clear ESG policies," indicating an emphasis on preserving the guidelines' clarity without adding more detail. The guidelines themselves are mostly unchanged. The definition of funding changes to include both allocation and cost control. Measuring becomes more efficient and concentrates on performance indicators. Knowledge development is now given higher priority in talent development. The ESG framework does not explicitly contain infrastructure planning connected to environmental, social, and governance (ESG) considerations, which may indicate a change in approach or an expectation that ESG considerations are integrated with other variables. Stakeholder involvement is still essential, although it is put more briefly. Given the circumstances, the ESG framework's approach to implementing ESG is more focused and efficient.

Overall, the new ESG framework is more specific, integrated, and data-driven, focusing on essential elements for effective ESG implementation with detailed policies, financial planning, and comprehensive talent development. Table 5 compares key elements between the conceptual framework and the established ESG (Environmental, Social, and Governance) framework. It highlights similarities and differences in critical factors such as leadership commitment, ESG policies, funding allocation, performance measurement, talent development, and stakeholder engagement.

Table 5 Comparison between the conceptual framework and the ESG framework

| Items | Conceptual Framework | ESG Framework |
|------------------|---|--|
| Frameworks | | |
| Critical Factors | <p>Leadership Commitment and Support</p> <hr/> <p>Clear ESG Policies and Guidelines</p> <hr/> <p>Adequate Funding Allocation</p> <hr/> <p>Performance Measurement and Reporting</p> <hr/> <p>Talent Development and Engagement</p> <hr/> <p>Integrated ESG into Infrastructure Planning</p> <hr/> <p>Stakeholder Engagement and Collaboration</p> | <p>Leadership Commitments</p> <hr/> <p>Clear ESG policies</p> <hr/> <p>Cost and funding</p> <hr/> <p>Performance measurements</p> <hr/> <p>Talent Development and Knowledge</p> <hr/> <p>(Not directly included)</p> <hr/> <p>Stakeholder Engagement</p> |

4. Conclusion

The study has successfully achieved its objectives. The first objective of this study is to investigate critical factors for implementing Environmental, Social, and Governance (ESG) initiatives. Through an in-depth analysis, it was determined that leadership commitment, clear policies, cost and funding, accurate data collection, talent development, and stakeholder engagement are pivotal for effective ESG strategy implementation.

The second objective is to evaluate the readiness of Environmental, Social, and Governance (ESG) initiatives implemented at UTHM. The readiness assessment survey revealed that UTHM is at an early to moderate stage of preparedness across various ESG dimensions, with certain governance aspects showing relatively higher readiness. Observation findings highlighted ongoing environmental, social, and governance efforts at UTHM, highlighting initiatives such as energy efficiency, waste management, community engagement, and transparent governance practices.

The third objective is to suggest an Environmental, Social, and Governance (ESG) implementation framework. The refined ESG implementation framework, based on comparative analysis and conceptual framework insights, underscores the importance of detailed policies, financial planning, and comprehensive talent development. Thus, the study conclusively addresses the outlined objectives, providing a clear pathway for enhancing ESG initiatives at UTHM.

Acknowledgment

The authors would like to thank the Faculty of Mechanical and Manufacturing Engineering, Universiti Tun Hussein Onn Malaysia for its support.

Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

References

- [1] Qian, S., & Yu, W. (2024). Green finance and environmental, social, and governance performance. *International Review of Economics and Finance*, 89(PA), 1185–1202. <https://doi.org/10.1016/j.iref.2023.08.017>
- [2] Rodrigo Lozano, Rebeka Kovačič Lukman, Francisco J. Lozano, W. L. (2011). Declarations for sustainability in higher education: Becoming better leaders, through addressing the university system. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2011.10.006>
- [3] Tilbury, D. (2008). *Higher Education's Commitment to Sustainability: From Understanding to Action Part 1: The Context Higher Education for Sustainability: A Global Overview of Commitment and. January 2011*, 1–21.
- [4] Ministry of Investment, Trade and Industry (MITI). (2023). *National Industry Environmental, Social & Governance Framework*. Ministry of Investment, Trade and Industry
- [5] Eccles, Robert and Serafeim, G. (2013). The performance frontier: Innovating for a sustainable strategy. *Harvard Business Review*, 91, 50–56, 58, 60, 150.
- [6] Schneider, L., Wallenburg, C. M., & Fabel, S. (2014). Implementing sustainability on a corporate and functional level. *International Journal of Physical Distribution & Logistics Management*, 44(6), 464–493. <https://doi.org/https://doi.org/10.1108/ijpdlm-05-2012-0160>.
- [7] Carla Finatto, Paulo Guilherme Fuchs, Ana regina Dutra, José Baltazar, Salgueirinho, O. de A. G. (2023). Environmental, social, governance and sustainable development goals: promoting sustainability in universities. *International Journal of Sustainability in Higher Education*. <https://doi.org/10.1108/IJSHE-11-2022-0361>
- [8] Forte, S. H. A. C., e Silva Pinto, D., Ferreira, C. M. M., de Araújo Filho, J. A., de Araújo Nascimento, L., & Pompeu, R. M. (2024). Esg in the Internationalization of Higher Education Institutions. *Revista de Gestao Social e Ambiental*, 18(9), 1–21. <https://doi.org/10.24857/rgsa.v18n9-022>.
- [9] PoTsang B. Huang, Ching-Chow Yang, M. M. W. I. (2022). Using Modified Delphi Study to Develop Instrument for ESG Implementation: A Case Study at an Indonesian Higher Education Institution. *Sustainability*, 14(19), 1–21.
- [10] Chen, C., & Vanclay, F. (2020). University social responsibility in the context of economic displacement from the proposed upgrading of a higher education institution: The case of the University of Groningen Yantai campus. *International Journal of Educational Development*, 78. <https://doi.org/10.1016/j.ijedudev.2020.102268>
- [11] Lima, Clayton dos Santos; Kieling, Debora Londero; Veiga Ávila, Lucas; Paço, Arminda; Zonatto, V. C. da S. (2023). Towards Sustainable Development: A Systematic Review of the Past Decade's Literature on the Social, Environment and Governance and Universities in Latin America. *International Journal of Sustainability in Higher Education*, 24, 279–298. <https://doi.org/https://doi.org/10.1108/IJSHE-09-2021-0394>.
- [12] Jane K. Storero, Y. B. (2022). Creating a Sustainable Corporation for the Long Term: A Guide to Effectively Implementing ESG Initiatives for Boards. *Board Leadership*, 183, 2–7. <https://doi.org/https://doi.org/10.1002/bl.30224>