Eco-leadership and sustainable business outcomes

Abstract

Climate change is undoubtedly one of the most significant challenges the world is currently facing. Estimates suggest that it may impact nearly all countries if it is not urgently addressed. This study seeks to examine the role of eco-leadership in sustainable operations in relation to bolstering sustainable business outcomes, drawing on past studies on leadership and sustainable performance. Following a thematic review of over 50 studies, the study suggests that eco-leadership facilitates sustainable business outcomes through collaborative leadership with stakeholders and effective organisational and community resources management. Interestingly, the study indicates that eco-leadership not only bolsters environmental and social performance but also facilitates economic performance through environmental and social performance. This finding is important at a time when investment in sustainable practices could be more financially attractive for some organisations and their managers. The theoretical and policy implications of these findings are also discussed herein.

Keywords

Eco-leadership and sustainable business outcomes

1.0. Introduction

Climate change is regarded as one of the biggest challenges of this century (Ogbeibu et al., 2023). Organisations, especially those that contribute significantly to environmental pollution, have been urged by various stakeholders (including governments and multilateral organisations) to play a key role in solving this problem (Waini Chiboiwa et al., 2024). While existing literature has focused on how organisations respond to climate change-related challenges, there has been little research on the role of leadership in addressing these issues (Kaufman & Stedman, 2022). Studies indicate that the efforts to combat climate change are not solely organisation-centric but also involve various key stakeholders, including suppliers, governments, employees, and organisational leaders (Kaufman & Stedman, 2022).

Organisations, through their leaders, play a crucial role in addressing climate change. Thus, it is important to understand in what way leadership facilitates how organisations tackle sustainability challenges. Extant research focuses on individual leadership rather than team leadership in achieving organisational environmental goals (Zacher et al., 2024). Surprisingly, very few studies (e.g. Su et al., 2024; Yoo, 2024) examine the role of eco-leadership, which involves the ability to coordinate both external and internal stakeholders to achieve sustainable business outcomes. The term 'sustainable business outcomes' is defined as the results of a firm's strategies and actions towards achieving environmental, societal, and economic goals (Alonso-Martinez et al., 2021).

While Kaufman & Stedman (2024) examine the role of eco-leadership in a community context, Sue et al. (2024) consider its role within the organisation. There is, to date, no study that addresses eco-leadership in relation to external stakeholders, such as partners and suppliers, from an organisational perspective. Moreover, there is a limited understanding of the impact of eco-leadership on sustainable performance (Novita et al., 2022). Thus, the aim of the current study is to examine the role of eco-leadership in promoting sustainable business outcomes in the context of multiple stakeholders. It contributes to the extant literature by uncovering how eco-leadership helps mobilise both external and internal stakeholders to achieve sustainable performance. Additionally, the study illustrates how eco-leaders collaborate with these stakeholders to address systemic barriers and knowledge/technology gaps, facilitating sustainable business outcomes through practices such as the circular economy and reverse logistics (Inês et al., 2025).
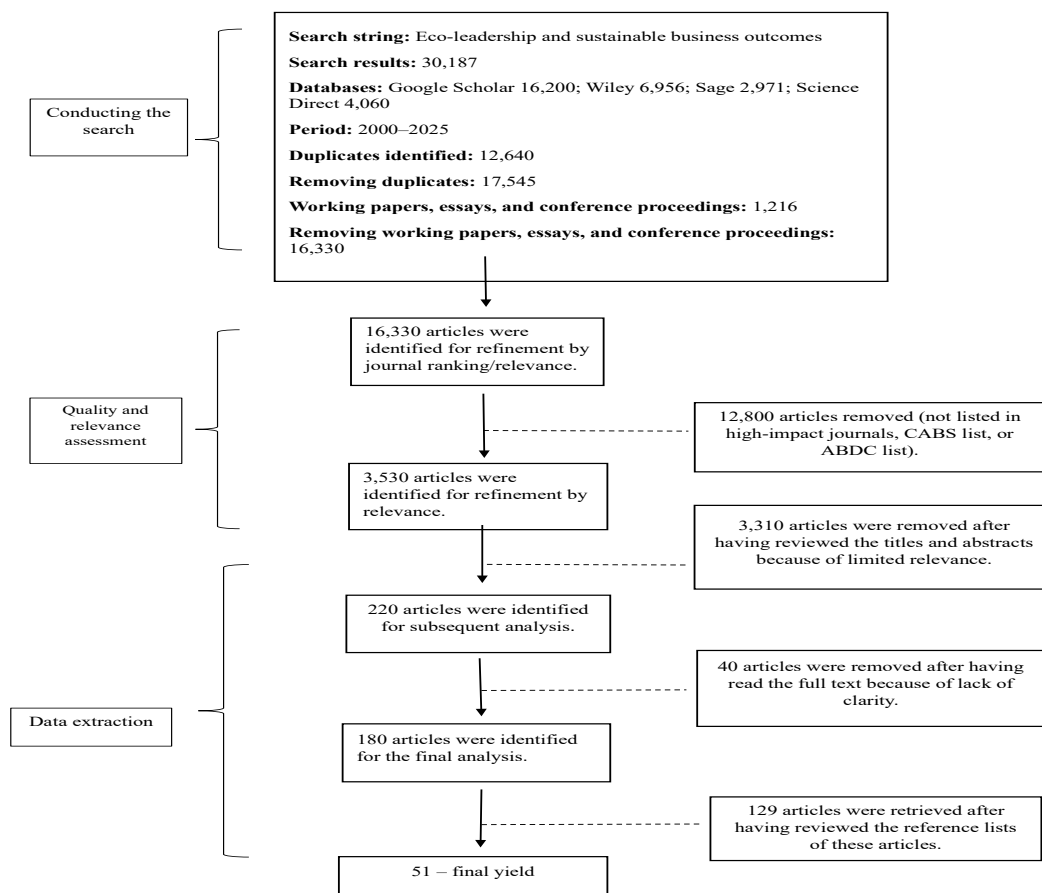
Eco-leadership and sustainable business outcomes

The following section is an outline of the study's methodology. Next, leadership, eco-leadership, and sustainable business outcomes are discussed in detail. The final section is a summary of the focal points of the study and concludes the chapter.

2.0. Methodology

This study employs an integrated literature methodology to explore the key features of eco-leadership and sustainable business outcomes. According to Haque et al. (2021), an integrative review approach has become prominent in leadership and human resources (HR) studies because of its effectiveness in developing new theoretical frameworks and insights. Furthermore, the integrated literature methodology is critical for investigating new or emerging topics, as it explores the various available literature sources to provide a detailed understanding of a phenomenon being studied to obtain new insights thereon (Waini Chiboiwa et al., 2024). A visual representation of the methodology is given below.

Figure 1. The literature search process.

Conducting the search

- **Search string:** Eco-leadership and sustainable business outcomes
- **Search results:** 30,187
- **Databases:** Google Scholar 16,200; Wiley 6,956; Sage 2,971; Science Direct 4,060
- **Period:** 2000–2025
- **Duplicates identified:** 12,640
- **Removing duplicates:** 17,545
- **Working papers, essays, and conference proceedings:** 1,216
- **Removing working papers, essays, and conference proceedings:** 16,330

Quality and relevance assessment

16,330 articles were identified for refinement by journal ranking/relevance.

12,800 articles removed (not listed in high-impact journals, CABS list, or ABDC list).

3,530 articles were identified for refinement by relevance.

3,310 articles were removed after having reviewed the titles and abstracts because of limited relevance.

Data extraction

220 articles were identified for subsequent analysis.

40 articles were removed after having read the full text because of lack of clarity.

180 articles were identified for the final analysis.

129 articles were retrieved after having reviewed the reference lists of these articles.

51 – final yield

Eco-leadership and sustainable business outcomes

The process commenced with the authors identifying key search words. As shown in **Figure 1**, once the keywords had been identified and agreed upon, multiple databases were searched for relevant articles in line with the established principles of the systematic literature review. The search string is also shown in **Figure 1** above. The databases explored in the study were ***Google Scholar, Wiley, Sage, and Science Direct.*** The study, however, analysed 51 (out of 16,330) (excluding 1 – the information of secondary data) published studies from 2020–2025 based on their relevance to the subject and the ranking or impact factor of the journals in which the papers were published as the inclusion criteria. Articles published in journals ranked between one and four stars in the Chartered Association of Business Schools (CABS) list and/or between A* and E in the Australian Business Deans Council (ABDC) list were identified, analysed, and reported on. Articles published in these journals are considered of good quality, since they have been peer-reviewed. The articles included in this analysis were carefully selected based on their trustworthiness, which was assessed through a critical examination of their titles, abstracts, methodologies, findings/discussions, and conclusions. One key criterion for inclusion was that the articles were required to have been published between 2020 and 2025. Arguably, although the concept of eco-leadership was first discussed in the late 1990s, it has gained prominence in recent years ideas because of the importance of pro-ecological behaviours in addressing environmental challenges in our society (McCarthy et al., 2022; Uddin et al., 2021). Thus, articles published before 2020 and those not found in CABS or ABDC journals were not included in the selection process. Additionally, relevant books and peer-reviewed chapters published in significant works related to the subject were also identified, analysed, and utilised in this study. However, books and chapters that were not available in full text were excluded. Essays, conference proceedings, and working papers were also not considered for inclusion.

The analysis process involved reading and coding the introduction, literature review, results, discussion, and conclusion of each of the examined studies. The codes developed were later compared, and the authors discussed the differences and similarities identified before reaching a consensus on what codes to select (Prikshat et al., 2023). The codes were documented to enhance the accuracy and rigour of the process. The authors also improved the interrater reliability of the analysis, as multiple coders participated in the process. Finally, the themes were developed from the codes and were interpreted in the study. Figure 1 above illustrates the article selection and retention process.

Eco-leadership and sustainable business outcomes

3.0. Leadership

This section is a discussion of the key findings identified, categorised, and analysed in the extant literature.

3.1. *Definition*

Research to date shows that leadership is critical to organisational outcomes, such as sustainable performance (Matshoba-Ramuedzisi et al., 2022). However, there are diverse perspectives on leadership in the literature, two of the most significant of which are social and human sciences. The social sciences perspective is more suitable for understanding the connection between leaders' consistent behaviours and followers' responses in management. Leadership scenarios or events are often examined through the lens of human sciences (Davidaviciene & Al Majzoub, 2022; Karakose et al., 2022).

Regardless of the viewpoint, it is generally argued that leadership is an equilateral triangle whose three points are the leader, the follower, and the context. Traditionally, leadership is defined as a situation in which leaders rely on authority or hierarchical structures to manage resources (Davidaviciene & Al Majzoub, 2022). However, modern leadership involves the use of collaboration and moral and strategic approaches (Davidaviciene & Al Majzoub, 2022). Despite the varying perspectives on leadership in different fields or industries, estimates suggest that key leadership approaches over the past 50 years have focused on identifying behavioural elements in terms of how a leader can enhance individual, team, and organisational performance (Gardner et al., 2020). Due to the significant focus on performance or outcomes, scholars have called for the examination of leadership in the context of health humanities (Karakose et al., 2022). Moreover, there have also been calls for studies to examine the concept of followership in order to understand how to capture followers' social values (Matshoba-Ramuedzisi et al., 2022).

To better understand sustainable performance, some analysts also emphasise the need to explore leadership approaches, mainly the ethical work climate, the eco-mindset, and wellbeing (Dey et al., 2022; Ganiyu & Oladejo, 2021). When considering recent trends in international business and management, such as digital transformation (DT) and green innovation for seeking cooperation, it is said that an emerging leadership style is required in both the private and public sectors (Farah et al., 2020; Marcos et al., 2023; Yoo et al., 2024). Building on this argument, the present research focuses on the eco-leadership style, which is considered helpful for prioritising social values and sustainable performance over profits (Novita et al., 2022).

In summary, while traditional leadership can be defined as leadership that relies on authority or control to 'get the job done', modern leadership refers to leadership that aims to achieve sustainable performance through collaboration as well as strategic and moral approaches.

3.2. *Theories*

The study now examines the different theoretical frameworks in the extant literature on leadership.

Traditional leadership theories include great man theory (1840–1910), trait theory (1910–1950), behavioural theory (1950–1970), and contingency/situational theory (1970–1990) (Gardner et al., 2020; Gottfredson & Reina, 2020). While the great man theory argues that leaders are born naturals, trait theory highlights the inborn characteristics or features of leaders. Behavioural theory emphasises a leader's behaviour paradigm, and this perspective later led to the evolution of the contingency model and other modern approaches, such as the transformational and transactional leadership styles (Abdullah et al., 2023). Contingency theory is a combination of leaders' traits, behaviours, and other situational elements. For instance, Fiedler's perspective argues that both situations and leadership styles should be considered simultaneously (Alajmi, 2022).

Modern leadership theories include transformational and transactional leadership styles (1985–2010) (Sarwar et al., 2022). While transformational leadership theoretically underlines the inspiration and motivation of followers, transactional leadership is grounded in a task-oriented approach and uses the concept of reward and punishment (Changar & Atan, 2021). Some scholars (Sarwar et al., 2022; Bakker et al., 2023) argue that transformational leadership may be more effective than transactional leadership in changing organisational cultures and securing employee trust, inspiration, creativity and growth. Compared to the traditional approach, both the transformational and transactional leadership styles involve stimulating employees or followers, which then accentuates synergies in the workplace (Bakker et al., 2023). This research builds on the list of theories provided by Sarwar et al. (2022), which include strategic leadership theory, a modern leadership theory. This inclusion is based on its emphasis on absorptive capacity and upper-echelon theories, which shed light on the decision-making processes that have driven profitability through strategic actions since the late 1990s (Kurzhals et al., 2020).

Moreover, because of the rapid shift to DT accelerated by the unprecedented situation of COVID-19 from 2020–2022, e-leadership, digital leadership, and artificial intelligence (AI)

leadership styles also deserve attention when exploring sustainable performance (McCarthy et al., 2022; Porfírio et al., 2021; Yoo et al., 2024). While e-leadership highlights the use of advanced technologies in the existing business models, digital leadership emphasises the use of technologies in facilitating digitally enabled business models (Yoo et al., 2024). Finally, AI leadership relates to leaders' understanding and/or utilisation of AI decisions (Peifer et al., 2022).

The present research focuses on eco-leadership, which facilitates connectivity, network building, and ethical practices. This theory is based on ecological principles for sustainable organisations (Davies et al., 2023; Western, 2023). Since the late 1990s (or early 2000s), eco-leadership has been discussed and studied because of increasing technological, social, and environmental disruptions. However, little is known about the impacts of eco-leadership on either sustainability or sustainable performance (Yoo, 2024). As eco-leadership is influenced by technological developments (e.g. DT), environmental emergencies, and social inequity, this research focuses on eco-leadership theory in the context of sustainable business outcomes.

Table 1 below provides insights into the development of leadership theories, including eco-leadership, which is the focus of this research.

Table 1. Leadership theories.

Evolution and coverage period	Key leadership theory	Feature	Category
1840–1910	Great man theory	Inborn characteristics.	Traditional
1910–1950	Trait theory	Personality as a key factor.	
1950–1970	Behavioural theory	Person-oriented leaders and task-oriented leaders (Michigan). Initiating structure and consideration behaviours (Ohio).	

Eco-leadership and sustainable business outcomes

1970–1990	Situational theory	Relationship with followers, task structure, and leaders' position power.	
1985–2010	Transactional leadership	Rewards for motivations.	
	Transformational leadership	Visions and inspirations.	
1990s onward	Strategic leadership	Upper-management team and business environments.	
From the late 1990s/early 2000s	Eco-leadership	Eco-leadership: connectivity, networks, and ethics. Ethical eco-leadership: a firm's purpose, ethics at the heart of leading firms, and connectivity. Commercial eco-leadership: adapting business models considering networked societies.	Modern
2000 onward	E-leadership	Using technologies for existing models.	
2010 onward	Digital leadership	Using advanced technologies for digitally enabled models.	Technology

2020 onward	AI leadership	Decisions related to the utilisation of AI.	

4.0. Eco-leadership

This section is an exploration of eco-leadership in line with the general discourse on the evolution of leadership.

4.1. *Background*

In the context of eco-leadership, an organisation is viewed as a network that is interconnected or interdependent within an ecosystem (Western, 2023). Therefore, ceaseless developments and changes are required as part of organisational change, either internally or externally. Eco-leadership is known as a key example of a collective process whereby both leaders and followers are actively engaged in the workplace to pursue sustainable outcomes (McKimm and McLean, 2020).

To comprehend eco-leadership in practice, consideration of the community leadership context is important (e.g. Western, 2023). For instance, due to organisations' limited budgets, community-based organisations can play a vital role in supporting businesses in the context of an ecosystem. As a result, there is a leadership shift from personal to collective processes to support local communities effectively. It is implied that the collective approach, which involves effectively distributing leadership roles, could enhance social support (Western, 2023). According to Western (2023), four discourses on leadership have been prevalent in extant research since 1990. The first leadership perspective is called 'the controller', and it focuses on how to enhance efficiency and production. The second leadership style is called 'the therapist', as it helps employees develop their growth and self-actualisation through job designs. The third leadership style is called 'the messiah', based on transformational leadership literature. 'Eco-leadership' is the fourth leadership style – a collective and interconnected approach.

4.2. *Definition*

The term 'eco-leadership' refers to a leadership approach that covers four different qualities: 1. connectivity and interdependence (connected world); 2. ethics (considering social and

environmental contexts); 3. leadership spirit (the humanitarian perspective); and 4. organisational belongings (connected to society and the environment). Therefore, it is implied that eco-leaders focus on distributing leadership across an organisation in order to make leaders more autonomous in tackling social, political, environmental, and economic challenges (Western, 2023).

In practice, eco-leadership begins with the management of internal stakeholders (e.g. team members), and it can help external stakeholders (e.g. partners and sponsors) comprehend the interconnection between technology, environmental, and social systems. By emphasising 1. internal/external connectivity, 2. ethics, 3. leadership spirit, and 4. a sense of belonging, eco-leadership can foster social purpose, inclusion (e.g. participative workplaces), and eco-conscious mindsets, ultimately driving more sustainable business outcomes both in the organisation and in society at large (Alonso-Martinez et al., 2021).

Eco-leadership can also strengthen the reciprocal relationship between leaders and their environment (McKimm & McLean, 2020). This can become apparent in diverse formats and unexpected places. Interestingly, eco-leadership not only emphasises environmental concerns but also facilitates the development of an ecosystem for enhancing distributive leadership (Yoo, 2024).

To tackle and meet diverse challenges and changes in today's networked society, it is argued that the utilisation of eco-leadership in an interconnected workplace should be examined and compared to leadership approaches based on a machine metaphor, with an emphasis on workforce effectiveness and profits (Western, 2023).

4.3. *The benefits of eco-leadership*

Several benefits are associated with eco-leadership. For example, by adopting the eco-leadership method by means of a networked approach, both internal and external stakeholders can be empowered, both at the organisational and individual levels. Notably, eco-leaders not only focus on internal stakeholders and business leaders to achieve sustainable outcomes but also manage external partners, suppliers, and even customers (Western, 2023). By introducing the eco-leadership approach, customer empowerment can be activated based on reviews in order to promote sustainable outcomes. Furthermore, eco-leadership can empower organisations to foster 1. innovative cultures; 2. external collaborations or partnerships; 3. learning; and 4. creative responses to challenges. For individuals, eco-leadership can help leaders and followers pursue ethical decision-making, wellbeing, and environmental/social

issues in their business models (Davies et al., 2023). Interestingly, as external collaborations or partnerships are regarded as a crucial element in facilitating sustainable business performance, the use of eco-leadership is not only recommended but required in firms pursuing business innovations and sustainable outcomes (Novita et al., 2022).

Since the use of control by a leader is often ineffective in the workplace, the use of eco-leadership is highly recommended for group unity, which in turn can lead to better work performance. In addition, as eco-leadership goes beyond personal leadership approaches, employee voice could be strengthened. For example, Su et al. (2024) concludes that environmental empowerment can facilitate employee voice (i.e. opinions and ideas) at different levels. Moreover, eco-leaders can facilitate 1. shared value with stakeholders, 2. participation (by covering individual, team, and organisational potential), and 3. eco-mindsets – all to engage with voice behaviours and sustainable business.

Additionally, a follower-centric approach to leadership can also be achieved through eco-leadership. Here, eco-leaders can offer followers more autonomous roles. This approach is unlike the leader-centric method, which is typical of traditional approaches to leadership (Bakker et al., 2023). Thus, eco-leadership can enhance certain benefits of followership; for example, it can improve trust within the leadership team and foster social cohesion in organisations in which individual cognitive, attributional, and social identities are considered.

4.4. The challenges involved in employing eco-leadership

However, while eco-leadership has these advantages, it is not without limitations. Organisations and their eco-leaders face challenges such as resource constraints and resistance to change in pursuing sustainable outcomes. Sustainable outcomes are only achieved when these challenges are addressed effectively, as explained in detail below.

4.5. *Resource constraints and eco-leadership*

The term 'resource constraints' in this context refers to the limited availability of resources when working on business projects (AlNuaimi et al., 2021). In relation to sustainable business context, it can be understood as the limited availability of critical materials or energies when attempting to achieve sustainable business outcomes (AlNuaimi et al., 2021). Organisations and their eco-leaders may struggle to achieve sustainable business outcomes with limited resources. However, as eco-leadership emphasises the empowerment of stakeholders (e.g. collaborations with suppliers for sustainable outcomes), adopting eco-leadership can help

overcome critical resource limitations to achieve sustainable business outcomes. According to Lam (2020), non-profit leaders (including eco-leaders) have attempted to establish key stakeholder relationships and partnerships for shared resources in order to overcome resource constraints in the US. Moreover, Franken et al. (2020) state that it is important for organisations (through eco-leaders) to seek collaborative ways or solutions to overcome resource constraints related to employee resilience. In order to spread eco-leadership among stakeholders, the government can support collaborative initiatives and training for firms and promote the importance of eco-leadership in modern business contexts (Inês et al., 2025; Novita et al., 2022).

4.6. *Resistance to change and eco-leadership*

Due to a lack of communication and a fear of failure, employees may resist organisational change (Jung et al., 2020; Olafsen et al., 2021). For instance, employees may fear they can't get used to the new system or business models when adopting new business processes or structures based on DT and sustainable business models. Moreover, employees are likely to resist change in organisations if they are unsure what such change will mean for them (Men et al., 2020). The current study argues that although eco-leadership can empower employees, resistance to change can occur. To reduce employee resistance to such change, leaders should address perceived uncertainty in organisations (Zhu et al., 2023). As such, facilitating collaboration or partnerships based on eco-leadership theory is key (Faulks et al., 2021). Hence, through their HR function, eco-leaders can play a vital role in empowering employees, investors, and partners to help access the right information and skills to enable all stakeholders to embrace change. Moreover, eco-leaders can work with HR teams to develop and implement performance-based reward systems to encourage employees to embrace such change (Oseghale et al., 2022; Waini Chiboiwa et al., 2024).

4.6. Eco-leadership and sustainable business outcomes

Consistent with the findings of Alonso-Martinez et al. (2021), this paper considers sustainable business outcomes as the result of a firm's strategy and action to deal with the close relationships between the environment, societal, and current economic systems. This is in alignment with the position of the United Nations on three dimensions of sustainable development. According to United Nations, sustainable development outcomes should target economic, environmental, and social developments. These three pillars underpin sustainable business innovations with the aim of achieving the UN's sustainability goals. In terms of international business, actionable strategies for various industries can be developed based on

positive and negative externalities contributing to sustainable development goals (Montiel et al., 2021). Therefore, value chains and internal or external investments can be established relating to economic, environmental, and social business outcomes (Montiel et al., 2021). The current study argues that eco-leadership is one such organisational strategy or action (Yoo, 2024). With eco-leadership, the current study argues that the environmental, social, and economic dimensions of sustainability can be achieved, as suggested by Alonso-Martinez et al. (2021).

Yoo (2024), for example, finds that the strategic perspective of eco-leadership can bolster organisational citizenship behaviour, which is related to sustainable outcomes. McKimm and McLean (2020) agree, stressing the significance of eco-leadership in firms in that it can integrate sustainability with core social values (e.g. fairness and collaboration). In relation to the business model viewpoints that focus on value propositions, the present study posits that economic outcomes can be achieved through environmental and social business outcomes that align with an organisation's value. Similarly, Bassetti et al. (2021) empirically demonstrates that environmental performance or outcomes can influence economic outcomes such as increased assets.

4.7. *Eco-leadership and environmental outcomes*

This study now investigates how eco-leaders can drive performance in these three dimensions of sustainable business outcomes.

Traditional views about sustainable business performance focus on environmental outcomes. When seeking environmentally sustainable outcomes, eco-leadership is critical. In terms of sustainable business outcomes, environmental outcomes can relate to: 1. energy efficiency, 2. closing resource loops, and 3. Implementing renewable procedures (Alonso-Martinez et al., 2021). Notably, eco-leaders provide resources and manage such resources in order to ensure the realisation of these ideas (Yoo, 2024). Regarding energy efficiency, firms, through eco-leaders, can reduce their CO_2 emissions and reduce waste by working with supply chain partners. For example, Christian et al. (2024) concludes that effective collaboration with supply chain partners can facilitate resource optimisation. Such partnerships are deployed to drive innovative processes, such as reverse supply chains, to drive energy efficiency and reduction of waste in the production process. Inês et al. (2025) points out that Jaguar was able to engage in partnerships with members of its supply chain to facilitate closed-loop recycling so as to reduce waste and achieve environmental goals.

Eco-leadership and sustainable business outcomes

In terms of resource generation and management, the current study suggests that eco-leaders can develop environmental policies and programmes relevant to developing and managing the green workforce (an internal stakeholder) required for working in environmentally friendly ways by using environmentally friendly resources in the production process, especially by means of circular economy approaches (Yoo, 2024). Ogbeibu et al. (2023) concludes that environmental goals can be achieved through the development of green skills and the enhancement of leaders' green and digital knowledge. Eco-leadership can thus act as a catalyst for policy innovation, empowerment, learning, and the generation of diverse ideas that lead to environmental business outcomes. While closing resource loops through recycling for a circular flow of resources, renewable procedures focus on utilising environmentally friendly resources and energy solutions. With fewer resources, organisations save costs, and society is less polluted, leading to the realisation of organisations' environmental goals.

4.8. *Eco-leadership and social outcomes*

Advancing environmental goals in organisations through eco-leadership influences social outcomes, which the study now examines in detail.

Social outcomes are a critical dimension of sustainable business success and include dimensions such as 1. functionality, 2. stewardship, 3. sufficiency, and 4. product durability (Alonso-Martinez et al., 2021). Regarding functionality, instead of product ownership, eco-leaders can encourage functionality through pay-per-use policies for customers. To this end, firms should make pay-per-use policies clear and transparent. The term 'pay-per-use policies' refers to the metered use of a service or business product, which in turn lowers consumption or dissipation. Firms can measure the frequency of functionality through pay-per-use as a social outcome. The stewardship role encompasses the wellbeing of all stakeholders in that it addresses sustainability in the context of networked communities, supply chains, and employee welfare. Ogbeibu et al. (2023) adds that firms can enhance the wellbeing of employees and members of society through the promotion and achievement of environmental goals. Finally, sufficiency and product durability can promote second-hand consumption and enhance product longevity. Jensen et al. (2021) conclude that product longevity is vital to the circular economy, wherein refurbishment and recycling are accentuated.

Additionally, eco-leadership can impact social outcomes because of its emphasis on global customers' benefits and social value perspectives (Western, 2023). Car-sharing services can be deployed to empower customers by fully involving them in the decision-making process on

how to use car-sharing services (Yun et al., 2020). Although the impacts of eco-leadership were not discussed in relation to sustainable social outcomes in the context of car-sharing services, it is noteworthy that eco-leadership may enhance customer empowerment (Zacher et al., 2024). In the context of today's hyper-globalisation, this study argues that customers, suppliers, business partners, and others can establish eco-systems driven by their eco-leader for the good of all. Eco-leadership can help both leaders and followers in firms (relying on green workforce development relevant to the sustainable production process), supply chain partners (partnership for development), and society (outreach services) improve their wellbeing and satisfy customers' preferences for longevity. Thus, eco-leaders are effective in community-based resource management, fostering organisational and societal good (Western, 2023).

4.9. *Eco-leadership and economic outcomes*

The current study argues that social and environmental outcomes can bolster economic outcomes, with this section examining the impact of eco-leadership on these economic results.

Some sustainability analysts argue that a sustainability agenda could directly affect economic outcomes or benefits (Ogbeibu et al., 2023). Hence, social and environmental benefits may be fulfilled in advance of the achievement of economic outcomes. Moreover, eco-leadership can be a catalyst for high economic performance (Faulks et al., 2021). For example, Halme et al. (2020) conclude that efforts to achieve environmental and social goals can lead to positive economic outcomes.

In exploring social outcomes, this study focuses on three key aspects related to economic outcomes: 1. social and environmental benefits; 2. scaling solutions; and 3. value creation (Alonso-Martinez et al., 2021). Social and environmental benefits come from the complete integration of all stakeholders; for example, when a firm gains new market opportunities because of its sustainability. Scaling solutions encompass strategies for working with stakeholders for the good of all, such as franchising, licensing, and other collaborative models. Value creation involves generating inclusive value for an organisation and its customers (e.g. products or services with reasonable prices, accessible to a wide range of people) (Alonso-Martinez et al., 2021). From an economic perspective (in that production and consumption depend on social procedures), economic outcomes can be determined by social factors (e.g. the wellbeing of stakeholders) and environmental considerations (e.g. energy efficiency and the protection of natural resources). As a result, social and environmental benefits can lead to economic outcomes (Faulks et al., 2021).

Eco-leadership and sustainable business outcomes

Organisations can secure green finance, save costs, and attract more customers at all levels by focusing on environmental and social outcomes (Ogbeibu et al., 2023). In the case of the automobile industry, for example, increasing production boosted by eco-leadership can be achieved by both environmental considerations and social factors. Producing electric vehicles using eco-friendly methods can capture a larger green market share and create jobs compared to traditional manufacturing approaches (Moslehpour et al., 2022). It is implied that by implementing effective eco-systems or leadership strategies, companies are likely to achieve environmental or social outcomes first, which then improves eco-performance and business growth (Bassetti et al., 2021; Kim & Stepchenkova, 2018). In the automobile industry, for example, a green workforce and sustainable manufacturing practices, such as the use of recycled metals, have been shown to influence economic profitability through environmental performance, particularly in India (Kumar et al., 2020).

Based on the above discussion of extant literature on this topic and the authors' insights, a conceptual framework emphasising the link between eco-leadership and sustainable business outcomes is presented below in Figure 2.

Figure 2. The conceptual framework.
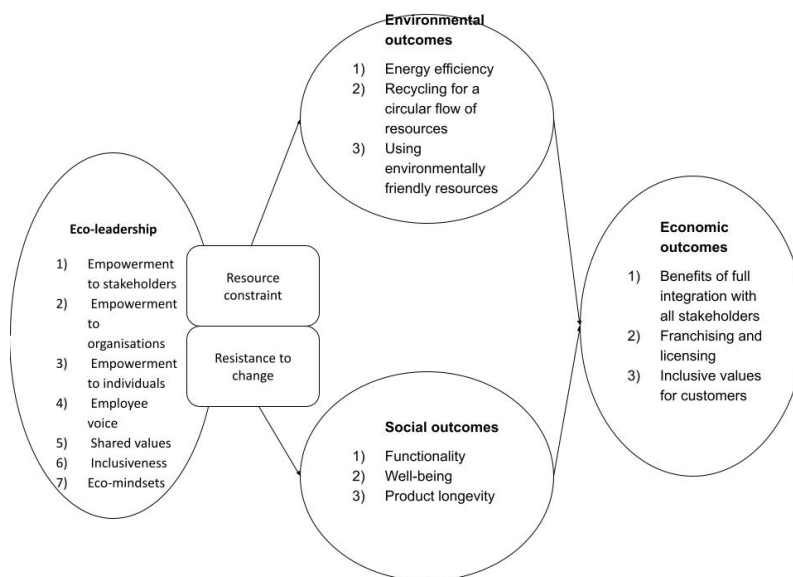
5.0. Discussion and conclusion

By means of a multi-stakeholder perspective, the current study has examined the role of eco-leadership in driving sustainable business outcomes. According to extant studies on this topic (e.g. Yoo, 2024), little is known about the impacts of eco-leadership on sustainable business success. The study revealed that eco-leadership can bolster environmental and social outcomes.

It also emerged that through the achievement of social and environmental outcomes, organisations can also achieve economic outcomes. However, the study concludes that this is only realisable if eco-leaders can manage any resistance to change or resource constraints through collaborations and/or partnerships with internal and external stakeholders, such as the government and HR, as agents for change.

At one level, by developing a workforce with green competencies through stakeholders' collaboration, eco-leaders facilitate energy efficiency and waste reduction as employees deploy their green skills effectively during the production process. This finding is consistent with those of existing studies, such as that of Ogbeibu et al. (2023), who concludes that the development of green skills leads to the effective use of firm resources for environmental performance. With this, eco-leaders achieve environmental goals. At another level, eco-leaders draw on their employees' green skills and collaborations with customers through service-sharing schemes to add value to both organisations and customers. Moreover, eco-leaders can draw on in-house HR programmes to enhance employees' wellbeing while relying on outreach programmes and green operations to enhance communities' wellbeing.

While some analysts argue that an organisation's sustainability agenda does not often drive economic outcomes, the current study suggests that investment in sustainable goals can indeed bolster economic outcomes. By focusing on the stakeholder perspective, the present study argues that more stakeholders (banks, communities, and governments) will be eager to do business with sustainability-minded organisations achieving environmental and social goals. Such investment and patronage can lead to profit maximisation, as such organisations do not pay fines for violating environmental laws. Moreover, such organisations could obtain investment funds at a cheaper rate through green finance. They also have good access to partnerships with stakeholders in the supply chain. This is usually done at a reduced cost and for the benefit of all involved. Finally, satisfied employees engage in the organisational citizenship behaviour required for driving productivity. According to Inês et al. (2025), eco-leaders are effective in community-based resources management, creating value for all.

5.2. Theoretical contribution

From a theoretical standpoint, the current study suggests that there is an opportunity to extend leadership theory and environmental performance by exploring the relationships between eco-leadership and sustainable business performance. However, this can only be achieved through empirical study (Waini Chiboiwa et al., 2024). The present research has been an initial attempt

to extend the literature on this topic by highlighting that eco-leadership can drive economic outcomes through social and environmental pursuits, contrary to findings in the existing literature. The study has also shed light on how eco-leaders can collaborate with stakeholders such as government and supply chain partners to address the challenges to the achievement of sustainable business outcomes of resource limitations and employees' resistance to change.

5.3. Managerial implications

The study's findings have practical implications in that firms seeking economic outcomes can leverage eco-leadership in order to achieve economic, social, and environmental outcomes. Most organisations and their leaders find it difficult to invest in green goals and environmental performance because of their fear of not being able to make a profit. Some analysts believe that the business of business is profit maximisation, consistent with Friedman's views. The current study found otherwise: Organisations can address this issue through eco-leadership. In particular, managers can draw on the study's findings by collaborating with internal and external stakeholders to address resource constraints and employees' resistance to change in order to facilitate environmental and social outcomes through closed-loop recycling, reverse supply chain, and circular economy to pursue economic outcomes.

5.4. Policy implications

The study findings also have policy implications. The government should enhance policies designed to encourage a circular economy, which involves the reuse of resources; for example, subsidies can be provided for businesses to address resource constraints in the form of a technology gap, as most businesses cannot afford the cost of some of the machines required to produce in sustainable ways. Additionally, policies for encouraging the development of green skills in organisations should be implemented; for example, organisations involved in developing green competencies and the capabilities for driving a circular economy (and thus environmental outcomes) should be compensated at the end of such an exercise in order to encourage such activities. The present study acknowledges the challenges associated with enforcing such policies. Thus, the government could design these programmes and encourage businesses to send their employees to participate. The design and execution of such programmes will encourage more organisations to respond to stakeholders' pressure for a responsible production process in order to address climate change-related issues.

6.0. Limitations and recommendations for research

While the current study provides excellent insights into how eco-leadership can bolster sustainable business performance, it has some limitations. According to Waini Chiboiwa et al. (2024), empirical research is required for a valuable contribution to theory and practice. One limitation of the current study, therefore, is that it did not collect any data from which to draw conclusions. Thus, future empirical studies should be conducted to examine the outcome of the current study on the relationship between eco-leadership and sustainable business performance.

7.0. References

Abdullah, H. O., Atshan, N., Al-Abrrow, H., Alnoor, A., Valeri, M., & Erkol Bayram, G. (2023). Leadership styles and sustainable organizational energy in family business: Modeling non-compensatory and nonlinear relationships. *Journal of Family Business Management*, *13*(4), 1104–1131.

Alajmi, M. (2022). Leadership theories: Application in the university setting. *Technium Social Sciences Journal*, *30*, 194.

AlNuaimi, B. K., Singh, S. K., & Harney, B. (2021). Unpacking the role of innovation capability: Exploring the impact of leadership style on green procurement via a natural resource-based perspective. *Journal of Business Research*, *134*, 78-88.

Alonso-Martinez, D., De Marchi, V., & Di Maria, E. (2021). The sustainability performances of sustainable business models. *Journal of Cleaner Production*, *323*, 129145.

Bakker, A. B., Hetland, J., Olsen, O. K., & Espevik, R. (2023). Daily transformational leadership: A source of inspiration for follower performance? *European Management Journal*, *41*(5), 700–708.

Bassetti, T., Blasi, S., & Sedita, S. R. (2021). The management of sustainable development: A longitudinal analysis of the effects of environmental performance on economic performance. *Business Strategy and the Environment, 30*(1), 21–37.

Changar, M., & Atan, T. (2021). The role of transformational and transactional leadership approaches on environmental and ethical aspects of CSR. *Sustainability*, *13*(3), 1411.

Christian, K. T. R., Philippe, C. A. B., Gero, A., Abraham, L. C., Félicien, A., & Dominique, B. G. C. K. (2024) Recent Climate-Smart Innovations in Agrifood to Enhance Producers' Incomes with Sustainable Solutions. *Journal of Agriculture and Food Research*.

Davidaviciene, V., & Al Majzoub, K. (2022). The effect of cultural intelligence, conflict, and transformational leadership on decision-making processes in virtual teams. *Social Sciences*, *11*(2), 64.

Davies, J. F., Seglenieks, R., Cameron, R., Kuruvilla, N. A., Grove, E. M., Shrivathsa, A., & Grobler, S. (2023). Operation clean up: A model for eco-leadership and sustainability implementation. *Anaesthesia and Intensive Care*, *51*(2), 88–95.

Farah, B., Elias, R., De Clercy, C., & Rowe, G. (2020). Leadership succession in different types of organizations: What business and political successions may learn from each other. *The Leadership Quarterly*, *31*(1), 101289.

Faulks, B., Song, Y., Waiganjo, M., Obrenovic, B., & Godinic, D. (2021). Impact of empowering leadership, innovative work, and organizational learning readiness on sustainable economic performance: An empirical study of companies in Russia during the COVID-19 pandemic. *Sustainability*, *13*(22), 12465.

Franken, E., Plimmer, G., & Malinen, S. (2020). Paradoxical leadership in public sector organisations: Its role in fostering employee resilience. *Australian Journal of Public Administration*, *79*(1), 93–110.

Ganiyu, I. O., & Oladejo, O. M. (2021). Green work-life balance and global leadership in Industry 4.0. In *Future of Work, Work-Family Satisfaction, and Employee Well-Being in the Fourth Industrial Revolution* (pp. 200–216). IGI Global.

Gardner, W. L., Lowe, K. B., Meuser, J. D., Noghani, F., Gullifor, D. P., & Cogliser, C. C. (2020). The leadership trilogy: A review of the third decade of the leadership quarterly. *The Leadership Quarterly*, *31*(1), 101379.

Gottfredson, R. K., & Reina, C. S. (2020). Exploring why leaders do what they do: An integrative review of the situation-trait approach and situation-encoding schemas. *The Leadership Quarterly*, *31*(1), 101373.

Halme, M., Rintamäki, J., Knudsen, J. S., Lankoski, L., & Kuisma, M. (2020). When is there a sustainability case for CSR? Pathways to environmental and social performance improvements. *Business & Society*, *59*(6), 1181–1227.

Haque, A., Fernando, M., & Caputi, P. (2021). Responsible leadership and employee outcomes: a systematic literature review, integration and propositions. *Asia-Pacific Journal of Business Administration*, *13*(3), 383–408.

Inês, A., Diniz, A., & Moreira, A. C. (2025). Driving eco-innovation in supply chains through multi-stakeholder collaboration: A review and research agenda. *Journal of Open Innovation: Technology, Market, and Complexity*, 100472.

Jensen, P. B., Laursen, L. N., & Haase, L. M. (2021). Barriers to product longevity: A review of business, product development and user perspectives. *Journal of Cleaner Production*, *313*, 127951.

Jung, K. B., Kang, S. W., & Choi, S. B. (2020). Empowering leadership, risk-taking behavior, and employees' commitment to organizational change: The mediated moderating role of task complexity. *Sustainability*, *12*(6), 2340.

Kaufman, E. K., & Stedman, N. L. (2022). Moving graduate and professional education forward to develop leaders equipped to effectively address wicked problems. *New Directions for Student Leadership*, *2022*(176), 9-18.

Karakose, T., Kocabas, I., Yirci, R., Papadakis, S., Ozdemir, T. Y., & Demirkol, M. (2022). The development and evolution of digital leadership: A bibliometric mapping approach-based study. *Sustainability*, *14*(23), 16171.

Kim, M., & Stepchenkova, S. (2018). Does environmental leadership affect market and eco performance? Evidence from Korean franchise firms. *Journal of Business & Industrial Marketing*, *33*(4), 417–428.

Kumar, N., Mathiyazhagan, K., & Mathivathanan, D. (2020). Modelling the interrelationship between factors for adoption of sustainable lean manufacturing: A business case from the Indian automobile industry. *International Journal of Sustainable Engineering*, *13*(2), 93–107.

Kurzhals, C., Graf-Vlachy, L., & König, A. (2020). Strategic leadership and technological innovation: A comprehensive review and research agenda. *Corporate Governance: An International Review*, *28*(6), 437–464.

Lam, M. (2020). Public leadership under resource constraints: An examination of the US nonprofit sector. *Journal of Leadership Studies*, *14*(1), 89–95.

leadership for better sustainable performance: Role of employee values, behaviour and ethical climate. *Journal of Cleaner Production*, *337*, 130527.

Marcos, A., Barrutia, J. M., & Hartmann, P. (2023). Moral licensing, identity and eco-leadership: Can public managers' support for a green recovery be undermined? *Public Money & Management*, *43*(4), 321–330.

Matshoba-Ramuedzisi, T., De Jongh, D., & Fourie, W. (2022). Followership: A review of current and emerging research. *Leadership & Organization Development Journal*, *43*(4), 653–668.

McCarthy, P., Sammon, D., & Alhassan, I. (2022). Digital transformation leadership characteristics: A literature analysis. *Journal of Decision Systems*, *32*(1), 79–109.

McKimm, J., & McLean, M. (2020). Rethinking health professions' education leadership: Developing 'eco-ethical' leaders for a more sustainable world and future. *Medical Teacher*, *42*(8), 855–860.

Men, L. R., Yue, C. A., & Liu, Y. (2020). 'Vision, passion, and care': The impact of charismatic executive leadership communication on employee trust and support for organizational change. *Public Relations Review*, *46*(3), 101927.

Montiel, I., Cuervo-Cazurra, A., Park, J., Antolín-López, R., & Husted, B. W. (2021). Implementing the United Nations' sustainable development goals in international business. *Journal of International Business Studies*, *52*(5), 999.

Novita, D., Hidayatulloh, A. N., Renwarin, J. M., Santoso, R., & Mardikaningsih, R. (2022). Relationship between eco transformational leadership, eco training, and employee eco behavior on sustainable corporate performance of SMEs. *Frontiers in Psychology*, *13*, 900787.

Ogbeibu, S., Emelifeonwu, J., Pereira, V., Oseghale, R., Gaskin, J., Sivarajah, U., Gunasekaran, A. (2023). Demystifying the roles of organisational smart technology, artificial intelligence, robotics and algorithms capability: A strategy for green human resource management and environmental sustainability. *Business Strategy and the Environment*, *33*, 369–388.

Olafsen, A. H., Nilsen, E. R., Smedsrud, S., & Kamaric, D. (2021). Sustainable development through commitment to organisational change: The implications of organisational

culture and individual readiness for change. *Journal of Workplace Learning*, *33*(3), 180–196.

Oseghale, R., Ochie, C., Dang, M., Nyuur, R., & Debrah, Y. (2022). Human resource management reconfiguration post-COVID crisis. In C. Machado & J. P. Davim (Eds.), *Organisational management in post-pandemic crisis* (pp. 139–158). Springer Nature.

Peifer, Y., Jeske, T., & Hille, S. (2022). Artificial intelligence and its impact on leaders and leadership. *Procedia Computer Science*, *200*, 1024-1030.

Prikshat, V., Islam, M., Patel, P., Malik, A., Budhwar, P., & Gupta, S. (2023). AI-Augmented HRM: Literature review and a proposed multilevel framework for future research. *Technological forecasting and social change*, *193*, 122645.

Porfírio, J. A., Carrilho, T., Felício, J. A., & Jardim, J. (2021). Leadership characteristics and digital transformation. *Journal of Business Research*, *124*, 610–619.

Sarwar, U., Zamir, S., Fazal, K., Hong, Y., & Yong, Q. Z. (2022). Impact of leadership styles on innovative performance of female leaders in Pakistani Universities. *Plos One*, *17*(5), e0266956.

Uddin, M. A., Biswas, S. R., Bhattacharjee, S., Dey, M., & Mahmood, M. (2021). Inspiring employees' ecological behaviours: The roles of corporate environmental strategy, biospheric values, and eco-centric leadership. *Business Strategy and the Environment*, *30*(5), 2367–2381

Waini Chiboiwa, M., Babafemi, O., Oseghale, F., & Oseghale, R. (2024). Green Human Resource Management and Sustainable Performance Management. In I. Ganiyu, O. M. Olarewaju, A. Ige-Olaobaju, & S. O. Atiku (Eds.), Waste Management and Life Cycle Assessment for Sustainable Business Practice (pp. 131-158). IGI Global Publishing

Western, S. (2023). From paternalism to mutualism: Eco-leadership: the cultural transformation of healthcare. In *Research Handbook on Leadership in Healthcare* (pp. 793–817). Edited by Chambers, N.: Edward Elgar Publishing

Yoo, D. Y. (2024). Eco-leadership in action: Integrating green HRM and the new ecological paradigm to foster organizational commitment and environmental citizenship in the hospitality industry. *Sustainability (2071-1050)*, *16*(20):9044.

Yoo, J. W., Roh, S., Tripathi, S., & Jang, H. (2024). Digital leadership within large South Korean firms. *Asia Pacific Business Review*, 31(1), 15-37

Yun, J. J., Zhao, X., Wu, J., Yi, J. C., Park, K., & Jung, W. (2020). Business model, open innovation, and sustainability in car sharing industry—Comparing three economies. *Sustainability*, *12*(5), 1883.

Zacher, H., Kühner, C., Katz, I. M., & Rudolph, C. W. (2024). Leadership and environmental sustainability: An integrative conceptual model of multilevel antecedents and consequences of leader green behaviour. *Group and Organisation Management*, *49*(2), 365–394.

Zhu, Y., Long, L., Liu, W., Shu, P., & Chen, S. (2023). How and when does authentic leadership reduce employee resistance to change? An explanation from uncertainty management theory. *Leadership & Organisation Development Journal*, *44*(8), 969–993.

Eco-leadership and sustainable business outcomes

Key terms and definitions

Eco-leadership: a leadership approach that combines four different qualities: 1. connectivity and interdependence (connected world); 2. ethics (considering social and environmental contexts); 3. leadership spirit (humanitarian perspective); and 4. organisational belongings (connected to society and the environment).

Sustainable outcomes: sustainable performance in the form of economic, social, and environmental performance.