

## **GREEN LEADERSHIP AND SUSTAINABLE BUSINESS PERFORMANCE: EVIDENCE FROM SOUTHEAST ASIAN SMEs**

**Abu Siri**

Universitas Bakti Indonesia, Indonesia  
Email: abusirinuriyani@gmail.com

### **Abstract**

This study aims to explore the relationship between green leadership and sustainable business performance in small and medium-sized enterprises (SMEs) in Southeast Asia through a literature review. In the context of increasing global pressure on environmental sustainability and social responsibility, SMEs are required to adopt a leadership model that is oriented not only toward economic profit but also toward environmental protection and social welfare. This study analyzes various relevant academic literature and empirical reports from the past decade to identify the strategic role of green leaders in driving sustainable innovation, resource efficiency, and improving corporate reputation. The findings indicate that green leadership is positively correlated with sustainable business performance through strengthening an environmentally friendly organizational culture, employee engagement in green initiatives, and increasing SME competitiveness in the regional market. This study also highlights the structural and cultural challenges faced by SMEs in Southeast Asia in consistently implementing green leadership principles. The implications of this research provide a conceptual basis for developing managerial strategies and public policies that support SMEs' transition to greener and more sustainable business practices.

**Keywords:** Green Leadership, Sustainable Business Performance, SMEs, Southeast Asia, Green Innovation, Sustainability.

### **INTRODUCTION**

In an era of increasingly real climate crisis and global pressure on sustainability, the role of businesses in creating a positive environmental impact has become increasingly crucial. Climate change, environmental degradation, pollution, and natural resource scarcity have driven the international community to demand transformation in business practices worldwide. Amidst this dynamic, the concept of green leadership has emerged as a managerial approach that places sustainability at the core of an organization's vision, strategy, and behavior. Green leadership focuses not only on achieving short-term economic targets but also on social and

ecological responsibility. In this context, green leadership is a crucial catalyst for companies' transformation toward sustainable business models, particularly in regions experiencing rapid economic growth such as Southeast Asia (Lusiani et al., n.d.-a).

Southeast Asia is one of the most dynamic regions in today's global economic landscape. With a significant contribution to regional gross domestic product, small and medium enterprises (SMEs) play a vital role in the region's economic structure (Iqbal et al., 2020). SMEs in Southeast Asia account for over 90% of total business units and provide employment for a significant portion of the workforce, making them a strategic sector for sustainable development efforts. However, despite these strengths, SMEs also face significant challenges in responding to sustainability issues. Limited resources, limited access to environmentally friendly technologies, and a lack of understanding and capacity to implement green principles make the transformation to a sustainable business a complex process. Therefore, a leadership approach is crucial in encouraging SMEs not only to survive the competition but also to grow sustainably amidst global environmental challenges.

Green leadership in the SME context has unique characteristics that distinguish it from practices in large companies. SME leaders often serve as key decision-makers, shape organizational culture, and directly implement business strategies. Therefore, leaders' personal values, such as environmental concern, ethical awareness, and a long-term vision for sustainability, have a significant influence on the direction of the organization. Green leadership in SMEs can encourage the implementation of green innovation, energy efficiency, waste reduction, and the development of more environmentally friendly products and processes. Furthermore, such leadership practices also impact business reputation, customer loyalty, and attractiveness to investors and strategic partners concerned with sustainability (Hossain et al., 2023a). Thus, a study on the relationship between green leadership and sustainable business performance in SMEs is very relevant and urgent to be carried out.

Although the concept of green leadership has been extensively researched in the context of large corporations and developed countries, research on its implementation and impact on SMEs in Southeast Asia remains relatively limited. This limitation creates a significant knowledge gap, particularly given the structural, cultural, and institutional capacity differences between SMEs in developing countries and large corporations in developed

countries. As a multicultural and economically diverse region, Southeast Asia also presents its own complexities. Green leadership practices in Malaysia, for example, can differ significantly from those in Indonesia or Thailand due to differences in regulatory frameworks, levels of public environmental awareness, and government support for green initiatives (Iqbal et al., 2021). Therefore, it is important to explore empirical evidence from various countries in Southeast Asia to understand the regional dynamics of green leadership adoption and how this approach can improve sustainable business performance.

Furthermore, sustainable business performance in the SME context is measured not only financially but also by its environmental and social impact (Chowdhury et al., 2022). The triple bottom line approach, encompassing profit, planet, and people, is becoming an increasingly popular evaluation framework for assessing business success holistically. Within this framework, business success is reflected not only in profits but also in its contribution to environmental sustainability and social well-being. Effective green leadership is believed to facilitate the achievement of a balance between these economic and non-economic goals. However, SMEs often face a dilemma between the need for economic survival and a commitment to sustainability principles. Therefore, a deeper understanding of how SME leaders formulate and implement green strategies is crucial for identifying adaptive and contextual leadership models in the region.

This study aims to fill a gap in the literature by examining the relationship between green leadership and sustainable business performance in SMEs in Southeast Asia (Nasir et al., 2024). This research will not only reveal the extent to which green leadership has been integrated into SME business practices but also evaluate its impact on organizational sustainability across economic, environmental, and social contexts. Using a literature review approach, this study seeks to synthesize previous findings and identify patterns, challenges, and opportunities arising from the adoption of green leadership in the SME sector. The regional focus on Southeast Asia provides a significant contribution to the development of contextual knowledge, while also providing relevant policy and managerial implications for stakeholders in the region.

Practically, the results of this study are expected to provide insights for SME leaders in understanding the importance of leadership transformation in addressing increasingly complex environmental and social challenges. Furthermore, the study's findings can also serve as a basis for policymakers in

formulating more targeted regulations and support programs to encourage the adoption of green principles among SMEs. By creating a supportive ecosystem, SMEs in Southeast Asia have significant potential to become agents of change in realizing inclusive and sustainable economic development (Das et al., 2020a). Therefore, it is crucial for academics, practitioners, and the government to collaborate in promoting research and concrete actions that strengthen the role of green leadership in accelerating the transition to a green economy in the region.

By considering the urgency of global sustainability issues, the strategic role of SMEs in Southeast Asia, and the significance of leadership in driving organizational transformation, this research has a strong theoretical and practical foundation. The approach used in this study is expected to open new horizons in understanding the relationship between green leadership and sustainable business performance. This research also serves as a call to reformulate the paradigm of business success, one based not solely on profitability but also on contributions to environmental conservation and community empowerment. In the context of increasingly rapid and complex changes, green leadership is no longer an option but a necessity for creating a more equitable, resilient, and sustainable business future.

## **RESEARCH METHOD**

This study uses a literature review approach to explore the relationship between green leadership and sustainable business performance in small and medium enterprises (SMEs) in Southeast Asia. This approach was chosen to identify, critically review, and synthesize various previous research findings relevant to the topic, thereby providing an in-depth conceptual understanding of the strategic role of green leadership in promoting sustainable business practices in the SME sector. The primary focus of this study is empirical and theoretical studies published in reputable international journals, conference proceedings, and institutional reports that address aspects of environmental leadership, sustainability strategies, and business performance in the context of Southeast Asian countries.

The literature review procedure began with a systematic search using academic databases such as Scopus, Web of Science, and Google Scholar using keywords such as "green leadership," "sustainable business performance," "SMEs," and "Southeast Asia." Selected articles were then evaluated based on topical relevance, methodological strength, and their contribution to the development of the conceptual framework. This selection

process prioritized publications within the last decade to ensure topicality and contextual relevance. The collected literature was classified based on key themes, such as the role of leaders in sustainability initiatives, the influence of organizational culture, and the impact of implementing green practices on the economic, social, and environmental dimensions of SMEs.

The analysis was conducted using a thematic synthesis approach to identify common patterns, discrepancies in findings, and remaining research gaps in the literature. The results of this study not only describe the empirical conditions occurring in various Southeast Asian countries but also establish a conceptual foundation that can be used for further research and policy formulation. Therefore, the literature review method in this study aims to provide a strong theoretical contribution regarding the relationship between green leadership and sustainable business performance, while also providing a relevant knowledge map for academics, business practitioners, and policymakers in the Southeast Asian region.

## **RESULT AND DISCUSSION**

### **The Relevance of Green Leadership in the Context of SMEs in Southeast Asia**

The relevance of green leadership in the context of small and medium enterprises in Southeast Asia is becoming increasingly important in the modern era characterized by growing awareness of environmental sustainability and global pressure for environmentally friendly business practices. Green leadership, as a leadership style that emphasizes ecological values, continuous innovation, and social responsibility, has significant potential to shape the growth direction of SMEs toward a more ethical and environmentally sound approach (Hossain et al., 2023b). In Southeast Asia, SMEs play a crucial role in national economies, accounting for over 90% of the total number of businesses and contributing significantly to job creation and Gross Domestic Product in most countries in the region. However, despite their significant economic role, many SMEs still face limitations in integrating sustainability principles due to limited resources, knowledge, and available incentives.

The general characteristics of SMEs in Southeast Asian countries reflect these complex dynamics. Most SMEs operate on a local or regional scale, with a relatively informal organizational structure, owner- or family-centered management, and a pragmatic business approach based on short-term efficiency. Limited access to financing, environmentally friendly technology, and market information pose major challenges for SMEs in adopting green

practices. On the other hand, operational flexibility and close ties to local communities give SMEs an advantage in adapting a more environmentally responsible business approach, especially when supported by visionary leadership. Green leadership, in this case, can act as a catalyst for directing internal transformation toward more sustainable practices by creating an environmentally conscious organizational culture, innovating energy-efficient production processes, and collaborating with stakeholders to reduce ecological impacts (Bui, 2025).

In the context of implementing green leadership in the SME sector, various challenges and opportunities must be carefully considered. One key challenge is the perception that adopting environmentally friendly practices requires a high initial investment, even though many green approaches can actually improve operational efficiency and reduce long-term costs. Ignorance or lack of awareness of the strategic benefits of green leadership also hinders changes in managerial behavior. On the other hand, increasing pressure from consumers, business partners, and financial institutions for transparency and environmental responsibility is creating external pressure for SMEs to adapt their business strategies. Governments in several Southeast Asian countries have also begun introducing fiscal incentives, easier access to clean technology, and training programs to assist SMEs in transitioning to green practices. This opens up significant opportunities for green leadership to develop as a strategic approach that not only strengthens environmental sustainability but also enhances SME business competitiveness in both domestic and global markets.

Culture, regulations, and regional economic conditions also significantly influence green leadership practices in the Southeast Asian SME sector. The dominant collectivist cultures in countries such as Indonesia, the Philippines, and Thailand tend to reinforce social values and community solidarity, which can serve as a foundation for developing environmental values within organizations. However, in practice, these cultural values have not been fully integrated into business strategies, due to the continued dominance of short-term profit orientation. Environmental regulations in the region also vary, ranging from very strict, such as in Singapore, to lax and weakly enforced, such as in some rural areas of Indonesia or Laos. This regulatory imbalance creates disparities in the adoption of green practices and presents challenges in building collective awareness (Suriyankietkaew et al., 2022). On the other hand, rapid economic growth and increasing regional integration through the ASEAN Economic Community provide new opportunities for SMEs to access

broader markets and gain exposure to higher international standards in sustainability practices (Cecere & Bernardi, 2022).

Furthermore, the development of digital technology and increased connectivity in Southeast Asia are paving the way for SMEs to gain access to information, training, and collaborative networks that were previously difficult to access. Regional initiatives such as the ASEAN Green Initiative and cross-border cooperation on environmental issues are reinforcing the narrative that SMEs can no longer ignore the sustainability dimension (Das et al., 2020b). In this context, green leadership is a crucial tool for bridging the gap between environmental awareness and actual business practices. A green leader who is able to inspire, mobilize resources, and build a sustainability-oriented organizational culture will significantly contribute to the sustainable and inclusive growth of SME businesses. Thus, the relevance of green leadership in Southeast Asia lies not only in global trends or regulatory pressures, but rather in the fundamental need to build resilient, adaptive, and responsible business models for the future of the environment and society (Bakhshi et al., 2023).

### **The Influence of Green Leadership on Sustainable Innovation**

In an era of increasing pressure for sustainability, green leadership is becoming an increasingly relevant strategic approach to addressing environmental and social challenges. Green leadership, which emphasizes ecological values, sustainability, and social responsibility, has a significant impact on an organization's ability to generate sustainable innovation, both in products and processes. In this context, the role of leaders goes beyond strategic direction to serve as change agents, inspiring a transformation in organizational culture toward a more environmentally friendly and future-oriented one. Green leadership encourages creative and collaborative thinking that emphasizes innovative solutions to reduce environmental impact and increase resource efficiency (Shafait & Huang, 2024).

Leaders who apply green leadership principles tend to foster innovative ideas that support long-term sustainability goals (Arici & Uysal, 2022). In the realm of product innovation, they direct teams to design products with a more environmentally friendly life cycle, whether through the use of recycled materials, reduced carbon emissions, or energy efficiency. On the other hand, in process innovation, green leaders initiate changes in production and operational methods to be more energy efficient, minimize waste, and improve the quality of the work environment. This strategy directly

encourages companies to think more strategically in developing clean technologies and improving their supply chains to be greener. Green leaders also encourage employee capacity development in environmental knowledge and skills, so that innovation not only comes from the top but also becomes part of the collective culture of the organization.

Empirical evidence from various studies shows that green leadership plays a crucial role in accelerating sustainable innovation across various sectors (Tang et al., 2022). For example, a study conducted on manufacturing companies in China revealed that a green leadership style significantly improved the company's green innovation performance, both in developing environmentally friendly products and in developing energy-efficient production processes. A similar study in Indonesia found that SMEs led by green-oriented figures tended to have higher initiatives in adopting clean production technologies and implementing innovative waste management practices. One prominent case study is a Vietnamese textile joint venture, where the company's leadership transformed its production system with a recycled water and solar energy-based approach, which not only lowered operational costs but also increased the product's appeal in international markets due to its environmental added value.

The implementation of green innovation driven by green leadership has a significant positive impact on operational efficiency and organizational reputation. From an efficiency perspective, innovations in the use of renewable energy, waste reduction, and wiser resource management can reduce production costs and minimize environmental losses that lead to fines or regulatory pressure. This efficiency is also evident in reduced production process times, improved output quality, and increased workforce productivity by creating a healthy and supportive work environment (Su et al., 2020). Reputation-wise, companies that actively adopt green innovations gain a positive image among consumers, investors, and strategic partners. In many cases, this green reputation serves as a key differentiator in market competition, particularly among millennial and Generation Z consumers who are highly conscious of environmental issues.

Furthermore, the reputational impact generated by green innovation also opens broader access to global markets and green funding opportunities, which are increasingly being sought by financial institutions and institutional investors. Green leadership, with its ability to build strong values and a vision for sustainability, provides a crucial foundation for building external trust and internal loyalty. This makes companies more resilient in the face of market

changes and increasingly stringent environmental regulations. This type of leadership also fosters a culture of adaptive innovation, enabling organizations to continuously innovate and improve without losing sight of their strategic direction (Begum et al., 2021).

Thus, the influence of green leadership on sustainable innovation is a mutually reinforcing relationship. Visionary green leaders are able to create organizational conditions conducive to the growth of green innovation, while the success of green innovation itself strengthens the legitimacy and appeal of this leadership model. In the face of global challenges such as climate change, environmental degradation, and resource crises, the role of green leaders is increasingly crucial, not only as internal drivers of organizations but also as agents of broader social transformation. Therefore, developing green leadership capacity across various sectors, particularly in developing regions like Southeast Asia, is a strategic step in building an inclusive and globally competitive sustainable innovation ecosystem.

### **The Relationship Between Green Leadership and SME Financial Performance**

The relationship between green leadership and SME financial performance is an increasingly relevant topic amidst global pressure for more sustainable business practices. While green leadership has traditionally been associated with its environmental and social impacts, research and empirical experience show that this approach also has a significant correlation with company financial performance, including in the context of small and medium enterprises (Zhang & Wei, 2021). In Southeast Asia, where SMEs are the backbone of the economy, adopting green leadership is not only a response to regulations and global market pressures, but also part of an innovative business strategy to achieve efficiency, competitiveness, and long-term sustainability.

Green leadership encourages decision-making that considers environmental impacts throughout the business process, from raw material procurement and production to distribution and waste management. In practice, green leaders act as change agents, instilling sustainability values in employees, partners, and customers. This approach creates an efficient and innovative work culture, where energy savings, waste reduction, and resource optimization become part of the operational strategy. This efficiency ultimately has a direct impact on reducing operational costs, which is a key indicator of SME financial performance. Furthermore, the use of renewable energy and environmentally friendly production practices has the potential to

reduce dependence on volatile resources, thereby helping SMEs maintain cost stability and strengthen their financial resilience (Tian et al., 2023).

Beyond cost savings, green leadership can also strengthen customer loyalty and open up new, more environmentally conscious markets. Consumers today are increasingly concerned about sustainability values, and they tend to choose products or services from companies committed to environmental responsibility. SMEs that implement green leadership have a greater opportunity to attract loyal customers and even reach the premium market segment willing to pay more for environmentally friendly products. Empirical studies show that positive consumer perceptions of green business practices are directly proportional to increased sales and company reputation. In the long term, this customer loyalty not only supports sales growth but also lowers marketing costs because companies can rely on word-of-mouth promotion and strong community support (The Relationship among Green Human Capital, Green Logistics Practices, Green Competitiveness, Social Performance, and Financial Performance | Emerald Insight, n.d.).

However, adopting green leadership among SMEs is not without its challenges. One of the biggest dilemmas relates to the initial investment required to implement green practices. For example, adopting clean production technologies or efficient waste management systems often requires significant costs, placing a heavy burden on SMEs with limited access to funding. Furthermore, there is a risk that the results of green investments may not be immediately visible in the short term, creating stress for business owners focused on quick returns. In some cases, information gaps and a lack of technical support from governments and financial institutions exacerbate this situation, making SMEs hesitant to take strategic steps toward green transformation even though they recognize the potential long-term benefits (Aslam et al., 2023).

Furthermore, another dilemma arises in the form of a conflict between sustainability values and conventional business objectives. In certain situations, SMEs may face pressure to remain competitive on price, leading them to be tempted to reduce costs in ways that are not aligned with green principles, such as using cheap, non-environmentally friendly materials or ignoring fair labor standards. This challenge places green leaders in a complex position, where they must balance financial sustainability with environmental and social ethics (Lusiani et al., n.d.-b). Therefore, the effectiveness of green leadership in improving financial performance depends heavily on the leader's capacity to develop a long-term strategy, gain support from various

stakeholders, and create a business ecosystem conducive to sustainable innovation.

However, a growing body of empirical evidence supports that green leadership can be a strategic advantage for SMEs, not just an added burden. Research conducted in various Southeast Asian countries shows that SMEs that consistently apply green principles in their leadership tend to experience increased profitability, improved operational efficiency, and stronger brand growth in the public eye. Factors such as corporate reputation, employee retention, customer satisfaction, and supply chain efficiency are all interconnected within a green ecosystem that drives sustainable financial performance. Therefore, green leadership is not an optional choice, but rather a transformative strategy capable of bridging sustainability goals with competitive and adaptive SME business growth amidst global market dynamics.

### **Comparative Analysis Across Countries in Southeast Asia**

Green leadership has become a strategic approach to promoting business sustainability, particularly amidst the growing urgency of the climate crisis and consumer pressure for environmentally friendly practices. In Southeast Asia, known as a region with highly dynamic SME growth, the implementation of green leadership presents varying challenges and opportunities across countries. Indonesia, Malaysia, Vietnam, Thailand, and the Philippines exhibit variations in national policies, business culture, technological and human resource readiness, all of which contribute to shaping the characteristics and effectiveness of green leadership in the SME sector (Khan & Ullah, n.d.).

In Indonesia, the implementation of green leadership is still in its early stages, despite growing awareness of the importance of sustainability. Government support through programs such as the Green People's Business Credit (Kredit Usaha Rakyat) and fiscal incentives for businesses implementing environmentally friendly principles are positive. However, significant challenges remain, including limited access to information and training for SMEs to integrate green principles into their operational practices. Furthermore, the short-term oriented management culture of SMEs and the lack of regulations that enforce sustainability practices slow the transformation process. However, several local initiatives, such as green villages or sustainable SME clusters, demonstrate the potential for developing

community-based green leadership that is more adaptive to local conditions (Shen & Yahya, 2021).

Malaysia exhibits a more structured approach through national policies supporting green development, such as the Green Technology Master Plan and the National Policy on the Environment. The Malaysian government actively facilitates SMEs in accessing green financing and environmentally friendly technologies through institutions such as SME Corp and the Malaysian Green Technology and Climate Change Corporation (MGTC). Green leadership in the SME sector in Malaysia tends to be more established, thanks to systematic policy interventions and partnerships with the private sector and academia to foster green capabilities. In some regions, such as Selangor and Penang, green leadership practices that prioritize sustainable product innovation, energy efficiency, and environmental certification are evident, strengthening the competitiveness of SMEs in the global market (Bearak et al., 2022).

Vietnam has demonstrated a strong commitment to green development, driven by active government involvement within the Green Growth Strategy framework. The implementation of green leadership in Vietnam is supported by relatively progressive incentive policies, although they remain concentrated on large corporations. For SMEs, the biggest challenges are limited access to clean technology and low managerial literacy in sustainability practices. However, the emergence of green startups and the involvement of international organizations in supporting SME transformation are positive signals. Green leadership in Vietnam is largely driven by individual initiatives or young leaders of export-oriented SMEs, particularly in the organic agriculture, sustainable textiles, and small-scale renewable energy sectors (Chen et al., 2022).

Thailand exhibits a relatively progressive and culturally grounded approach to green leadership. The circular economy concept and "Sufficiency Economy" philosophy introduced by King Bhumibol have become the ethical foundation for many green initiatives, including in the SME sector. The Thai government supports SMEs through training, green innovation incubation, and eco-friendly financing schemes. In areas like Chiang Mai and Bangkok, many SMEs practice zero-waste principles, the use of local materials, and environmentally friendly production in the crafts, food, and fashion sectors. Green leadership in Thailand tends to be grounded in local cultural and spiritual values, creating an organic harmony between business and environmental interests. This makes Thailand one of the countries in

Southeast Asia with the strongest integration of traditional values and contemporary green management practices.

Meanwhile, the Philippines faces complex challenges in implementing green leadership in the SME sector. Despite policies such as the "Philippine Green Jobs Act" and other environmentally friendly programs, their implementation is often hampered by bureaucratic issues, limited resources, and disparities in access across regions. Nevertheless, there are prominent local initiatives, such as community-based green businesses in the recycling, plastic waste management, and organic farming sectors. Green leadership in the Philippines is predominantly grassroots, led by social entrepreneurs with a strong commitment to the environment and society. While small in scale, its impact is significant in building collective awareness and encouraging local community involvement in the green transition.

Through this cross-country analysis, it is clear that each country has unique strengths and challenges in shaping green leadership in the SME sector. Best practices from Malaysia demonstrate the importance of policy synergy, support from technical institutions, and integrated green financing. Thailand demonstrates how cultural values can provide a strong foundation for authentic green leadership. Indonesia and the Philippines stand out for their community strength and local potential, although they still face structural challenges. Meanwhile, Vietnam shows promise with the emergence of young leaders who are bringing a spirit of green innovation amidst systemic limitations.

Cross-country learning in the context of green SME development is crucial for building adaptive models that are suited to local characteristics while still adhering to global standards. Southeast Asian countries can share experiences on incentive mechanisms, green leadership training models, and strategies for building sustainable innovation ecosystems. Collaborative approaches between countries, such as through the ASEAN Green SMEs Forum or cross-border programs for fostering green businesses, can strengthen the region's capacity to create an inclusive and resilient green economy. Therefore, this comparison not only illustrates variation but also provides a basis for designing collective strategies that encourage the transformation of SMEs as the primary drivers of sustainable development in Southeast Asia (Gandra et al., 2020).

## CONCLUSION

This study concludes that green leadership plays a crucial role in driving sustainable business performance in the Small and Medium Enterprise sector in Southeast Asia. Leaders who prioritize sustainability values have been shown to be able to guide companies to adopt environmentally friendly strategies, manage resources efficiently, and build an organizational culture oriented towards social and environmental responsibility. This positively impacts the company's long-term performance, both financially and in terms of reputation.

The findings of this study also indicate that SMEs led by individuals with a green leadership vision tend to be more adaptive to changing environmental regulations and global market demands that increasingly emphasize the importance of sustainability. Furthermore, green leadership fosters stronger internal collaboration and creates innovations in environmentally friendly processes and products. Thus, green leadership not only improves operational efficiency but also strengthens SMEs' competitive advantage in regional and international markets.

Overall, this study emphasizes the urgency of integrating green leadership principles into the managerial strategies of SMEs in Southeast Asia to ensure business sustainability. Further support from public policy, access to sustainable leadership training, and a business ecosystem that encourages a green transition for SMEs are needed. With the synergy between visionary leadership and a conducive business environment, SMEs can contribute significantly to achieving sustainable development goals in the region.

## REFERENCES

- Arici, H. E., & Uysal, M. (2022). Leadership, green innovation, and green creativity: A systematic review. *The Service Industries Journal*, 42(5–6), 280–320. <https://doi.org/10.1080/02642069.2021.1964482>
- Aslam, R., Rehman, S., & Nasir, A. (2023). Investigating the relationship between government support and SMEs' sustainability through financial and green lenses. *Journal of Business & Industrial Marketing*, 38(11), 2379–2389. <https://doi.org/10.1108/JBIM-05-2022-0191>
- Bakhshi, P., Agrawal, R., Mendon, S., Birau, R., & Bărbăcioru, I. C. (2023). Framework of SDG leadership among SMEs in South Asian nations-using Interpretive Structural Modelling. *Cogent Business & Management*. <https://www.tandfonline.com/doi/abs/10.1080/23311975.2023.2253607>
- Bearak, J. M., Popinchalk, A., Beavin, C., Ganatra, B., Moller, A.-B., Tunçalp, Ö., & Alkema, L. (2022). Country-specific estimates of unintended

- pregnancy and abortion incidence: A global comparative analysis of levels in 2015–2019. *BMJ Global Health*, 7(3). <https://doi.org/10.1136/bmjgh-2021-007151>
- Begum, S., Xia, E., Ali, F., Awan, U., & Ashfaq, M. (2021). Achieving green product and process innovation through green leadership and creative engagement in manufacturing. *Journal of Manufacturing Technology Management*, 33(4), 656–674. <https://doi.org/10.1108/JMTM-01-2021-0003>
- Bui, T. K. (2025). THE MEDIATING ROLE OF ENVIRONMENTAL KNOWLEDGE SHARING ON THE IMPACT OF GREEN LEADERSHIP ON INNOVATION IN VIETNAMESE SMALL AND MEDIUM ENTERPRISES. *Dalat University Journal of Science*, 3–26. [https://doi.org/10.37569/DalatUniversity.15.1.1294\(2025\)](https://doi.org/10.37569/DalatUniversity.15.1.1294(2025))
- Cecere, R., & Bernardi, P. (2022). Cultural Entrepreneurship and Green Innovation in ASEAN: A Focus on SMEs and Vietnam Area. In V. Ratten (Ed.), *Cultural Entrepreneurship: New Societal Trends* (pp. 109–119). Springer Nature. [https://doi.org/10.1007/978-981-19-2771-3\\_10](https://doi.org/10.1007/978-981-19-2771-3_10)
- Chen, Y., Li, N., Lourenço, J., Wang, L., Cazelles, B., Dong, L., Li, B., Liu, Y., Jit, M., Bosse, N. I., Abbott, S., Velayudhan, R., Wilder-Smith, A., Tian, H., Brady, O. J., Procter, S. R., Wong, K. L., Hellewell, J., Davies, N. G., ... Tully, D. C. (2022). Measuring the effects of COVID-19-related disruption on dengue transmission in southeast Asia and Latin America: A statistical modelling study. *The Lancet Infectious Diseases*, 22(5), 657–667. [https://doi.org/10.1016/S1473-3099\(22\)00025-1](https://doi.org/10.1016/S1473-3099(22)00025-1)
- Chowdhury, S., Dey, P. K., Rodríguez-Espíndola, O., Parkes, G., Tuyet, N. T. A., Long, D. D., & Ha, T. P. (2022). Impact of Organisational Factors on the Circular Economy Practices and Sustainable Performance of Small and Medium-sized Enterprises in Vietnam. *Journal of Business Research*, 147, 362–378. <https://doi.org/10.1016/j.jbusres.2022.03.077>
- Das, M., Rangarajan, K., & Dutta, G. (2020a). Corporate sustainability in SMEs: An Asian perspective. *Journal of Asia Business Studies*, 14(1), 109–138. <https://doi.org/10.1108/JABS-10-2017-0176>
- Das, M., Rangarajan, K., & Dutta, G. (2020b). Corporate sustainability in SMEs: An Asian perspective. *Journal of Asia Business Studies*, 14(1), 109–138. <https://doi.org/10.1108/JABS-10-2017-0176>
- Gandra, S., Alvarez-Uria, G., Turner, P., Joshi, J., Limmathurotsakul, D., & Doorn, H. R. van. (2020). Antimicrobial Resistance Surveillance in Low- and Middle-Income Countries: Progress and Challenges in Eight South Asian and Southeast Asian Countries. *Clinical Microbiology Reviews*. <https://doi.org/10.1128/cmr.00048-19>
- Hossain, M. I., Teh, B. H., Dorasamy, M., Tabash, M. I., & Ong, T. S. (2023a). Ethical Leadership, Green HRM Practices and Environmental Performance of Manufacturing SMEs at Selangor, Malaysia:

- Moderating Role of Green Technology Adoption. In A. Bexheti, H. Abazi-Alili, L.-P. Dana, V. Ramadani, & A. Caputo (Eds.), *Economic Recovery, Consolidation, and Sustainable Growth* (pp. 85–104). Springer Nature Switzerland. [https://doi.org/10.1007/978-3-031-42511-0\\_6](https://doi.org/10.1007/978-3-031-42511-0_6)
- Hossain, M. I., Teh, B. H., Dorasamy, M., Tabash, M. I., & Ong, T. S. (2023b). Ethical Leadership, Green HRM Practices and Environmental Performance of Manufacturing SMEs at Selangor, Malaysia: Moderating Role of Green Technology Adoption. In A. Bexheti, H. Abazi-Alili, L.-P. Dana, V. Ramadani, & A. Caputo (Eds.), *Economic Recovery, Consolidation, and Sustainable Growth* (pp. 85–104). Springer Nature Switzerland. [https://doi.org/10.1007/978-3-031-42511-0\\_6](https://doi.org/10.1007/978-3-031-42511-0_6)
- Iqbal, Q., Ahmad, N. H., & Halim, H. A. (2020). How Does Sustainable Leadership Influence Sustainable Performance? Empirical Evidence From Selected ASEAN Countries. *SAGE Open*, 10(4), 2158244020969394. <https://doi.org/10.1177/2158244020969394>
- Iqbal, Q., Ahmad, N. H., & Li, Y. (2021). Sustainable Leadership in Frontier Asia Region: Managerial Discretion and Environmental Innovation. *Sustainability*, 13(9), Article 9. <https://doi.org/10.3390/su13095002>
- Khan, D., & Ullah, A. (n.d.). Comparative analysis of the technical and environmental efficiency of the agricultural sector: The case of Southeast Asia countries. . . ISSN, 16(3).
- Lusiani, M., Abidin, Z., Fitrianiingsih, D., Yusnita, E., Adiwinata, D., Rachmaniah, D., Fauzi, A., & Purwanto, A. (n.d.-a). *Effect of Servant, Digital and Green Leadership toward Business Performance: Evidence from Indonesian Manufacturing*.
- Lusiani, M., Abidin, Z., Fitrianiingsih, D., Yusnita, E., Adiwinata, D., Rachmaniah, D., Fauzi, A., & Purwanto, A. (n.d.-b). *Effect of Servant, Digital and Green Leadership toward Business Performance: Evidence from Indonesian Manufacturing*.
- Nasir, A., Zakaria, N., Do, N., & Velasquez, S. (2024). The impact of knowledge management on sustainable performance with mediation effect of green innovation in Malaysian SMEs. *VINE Journal of Information and Knowledge Management Systems*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/VJIKMS-02-2024-0066>
- Shafait, Z., & Huang, J. (2024). Examining the impact of sustainable leadership on green knowledge sharing and green learning: Understanding the roles of green innovation and green organisational performance. *Journal of Cleaner Production*, 457, 142402. <https://doi.org/10.1016/j.jclepro.2024.142402>
- Shen, C., & Yahya, Y. (2021). The impact of service quality and price on passengers' loyalty towards low-cost airlines: The Southeast Asia perspective. *Journal of Air Transport Management*, 91, 101966. <https://doi.org/10.1016/j.jairtraman.2020.101966>

- Su, X., Xu, A., Lin, W., Chen, Y., Liu, S., & Xu, W. (2020). Environmental Leadership, Green Innovation Practices, Environmental Knowledge Learning, and Firm Performance. *SAGE Open*, 10(2), 2158244020922909. <https://doi.org/10.1177/2158244020922909>
- Suriyankietkaew, S., Krittayarungroj, K., & Iamsawan, N. (2022). Sustainable Leadership Practices and Competencies of SMEs for Sustainability and Resilience: A Community-Based Social Enterprise Study. *Sustainability*, 14(10), Article 10. <https://doi.org/10.3390/su14105762>
- Tang, Y., Chen, Y.-J., Shao, Y.-F., & Cao, Q. (2022). The Impact of Sustainable Transformational Leadership on Sustainable Innovation Ambidexterity: Empirical Evidence From Green Building Industries of China. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.814690>
- The relationship among green human capital, green logistics practices, green competitiveness, social performance and financial performance | Emerald Insight.* (n.d.). Retrieved July 11, 2025, from <https://www.emerald.com/insight/content/doi/10.1108/jmtm-11-2020-0441/full/html>
- Tian, H., Siddik, A. B., Pertheban, T. R., & Rahman, M. N. (2023). Does fintech innovation and green transformational leadership improve green innovation and corporate environmental performance? A hybrid SEM–ANN approach. *Journal of Innovation & Knowledge*, 8(3), 100396. <https://doi.org/10.1016/j.jik.2023.100396>
- Zhang, Y., & Wei, F. (2021). SMEs' charismatic leadership, product life cycle, environmental performance, and financial performance: A mediated moderation model. *Journal of Cleaner Production*, 306, 127147. <https://doi.org/10.1016/j.jclepro.2021.127147>