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Do Green Practices Influence Perceived Sustainable Performance? Empirical Evidence from Hotels and Resorts in the Philippines

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ABSTRACT

Sustainability has become a critical concern in the hospitality industry due to increasing environmental issues and heightened consumer awareness. Consequently, hotels and resorts are adopting green practices to enhance their sustainability. This study aims to assess the green practices of selected hotels and resorts in Panglao, Bohol, Philippines, and evaluate their impact on perceived sustainable performance. Data were collected from 114 managers and department heads using a questionnaire and analyzed with SmartPLS version 4. The findings indicate that respondents moderately engage in energy management, water management, waste management, and green purchasing. Additionally, the data demonstrate that green practices significantly and positively affect perceived economic ($c = 0.70$, $t = 12.53$, $p < 0.001$), environmental ($c = 0.84$, $t = 20.41$, $p < 0.001$), social ($c = 0.67$, $t = 11.84$, $p < 0.001$), and overall sustainable performance ($c = 0.75$, $t = 15.73$, $p < 0.001$). Implementing green practices is thus essential for achieving sustainability. Hoteliers should integrate these practices into their strategies to enhance sustainable performance. Furthermore, effective communication and comprehensive training on green practices for employees are recommended to ensure their successful implementation.

Keywords: Economic Performance; Environmental Performance; Green Practices; Perceived Sustainable Performance; Social Performance

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INTRODUCTION

Sustainability has become a major focus across various industries, including hospitality and tourism, driven by increasing environmental awareness among both internal and external stakeholders (Shen et al., 2020). Consequently, scholars have underscored the need for a shift in corporate perspectives, advocating for environmental sensitivity to be ingrained in corporate values rather than merely fulfilling regulatory requirements (Apriono et al., 2023). In Bohol, Philippines, tourism serves as a key driver of economic growth and has witnessed significant development over the years. This growth includes a notable increase in the number of tourism establishments, including hotels and resorts, in the Province, reflecting the industry's expansion and the rising demand for sustainable practices within this thriving sector.

With the growth of the hotel industry comes an increase in resource consumption. Abdou et al. (2020) highlight that the sector's extensive use of resources, such as energy and water, combined with its waste generation and greenhouse gas emissions, poses a significant threat to the environment. In response to these challenges, hotels are actively seeking solutions to mitigate their environmental impact. This has led to the rise of the "greening hotels" concept (Simpao, 2023), which is realized through the practice of green initiatives like energy, water, and waste management, as well as green purchasing. Barakagira and Paapa (2024) define green practices as environmentally friendly initiatives designed to help hoteliers reduce waste and operational costs, conserve water and energy, and protect and preserve the natural environment. Even though sustainability is becoming increasingly important, there is still limited research focused on green hotel practices in emerging markets, particularly in the Philippines. For instance, the studies of Dael & Saab (2023), Ofalla (2024), and Simpao (2023) respectively highlight hotels' adoption of cleaner production technologies, compliance with the ASEAN Green Hotel Standard, and the extent of hotel participation in the implementation of green practices within the Philippine context.

Abdou et al. (2020) highlighted that the adoption of green practices strengthens stakeholder relationships, which in turn contributes to an increased market share. Additionally, Barakagira and Paapa (2024) found that such practices offer considerable benefits to hoteliers, including improved profits, cost savings, a competitive edge, enhanced employee satisfaction, and stronger customer retention. Furthermore, Singjai et al. (2018) argued that green strategies result in positive environmental performance. However, despite these findings, the literature remains limited in providing empirical evidence regarding the influence of green practices on overall sustainable performance, measured using the triple bottom line approach – economic, social, and environmental performance, especially in the Philippines. While previous studies conducted in the Philippines have focused on the implementation of green practices, none have investigated their impact on the sustainable performance of hotels and resorts using the triple bottom line approach.

The concept of triple bottom line was introduced by Elkington (1998) as a framework for businesses to evaluate their overall performance not only through financial outcomes but also by considering social and environmental impacts. According to this concept, the three bottom lines that a company must account for are profit, people, and the planet. The profit bottom line measures the firm's financial success, representing the earnings generated from its operations. The people aspect assesses the social responsibility of a business, examining how it treats employees, supports communities, and contributes to overall societal well-being. Meanwhile, the planet's bottom line evaluates a company's environmental performance, including its efforts to minimize ecological harm and adopt sustainable practices. Scholars have closely associated the triple bottom line framework

with the three sustainability dimensions (Żak, 2015): economic, social, and environmental performance. Economic sustainability refers to profit, social sustainability for people, and environmental sustainability for the planet. For businesses, especially those in industries like hospitality, this means that green initiatives should not only deliver economic gains but also reduce environmental impact and promote social responsibility. Thus, achieving overall sustainable performance requires the active participation and collaboration of both internal and external stakeholders, including employees, management, suppliers, government, and the local community.

Therefore, this study aims to determine the extent of green practices implementation in selected hotels and resorts in Panglao, Bohol, Philippines, and examine their influence on perceived economic, social, environmental, and overall sustainable performance. The findings provide valuable insights into the green initiatives implemented by hotels and resorts in the Philippines. Moreover, the study offers empirical evidence on the significance of adopting green practices, emphasizing their potential to enhance sustainable performance in an emerging Southeast Asian market. It also addresses existing gaps in the literature, contributing to a deeper understanding of sustainability within the hospitality industry. Furthermore, the results highlight the role of the hotel industry in fulfilling the Sustainable Development Goals (SDGs) of the United Nations.

LITERATURE REVIEW

Green Practices

Green practices are defined by Rahman et al. (2012) as being environmentally friendly, that is, doing business in a way that reduces waste, conserves energy, and generally promotes environmental health. Moreover, previous studies defined green practices as a hotel's efforts and programs that are eco-friendly to reduce solid waste and operational costs, save water and energy, and protect the natural environment (Barakagira & Paapa, 2024).

In this study, building on the work of Barakagira and Paapa (2024), the researchers use energy management, water management, waste management, and green purchasing as indicators of green practices. Energy management includes using energy-saving lighting devices, solar panels to convert solar energy, heat pumps or heat recovery systems, energy-efficient refrigeration facilities, and measures, electronic key cards, automatic sensor lighting, adjusting air conditioning based on the temperature in different climates and seasons, and regular maintenance of HVAC (heating, ventilation, and air conditioning) equipment (Moise et al., 2021; Wang, 2012).

Water management includes utilizing low-flow fittings and low-water flush toilets; changing bed sheets and linens upon request; encouraging guests to reuse towels; posting water conservation signs in restrooms, restaurants, and kitchen areas; regularly checking for leaks and making repairs; and using rainwater for non-potable purposes (Barakagira & Paapa, 2024; Moise et al., 2021; Wang, 2012).

Waste management includes using reusable cloth napkins and glass cups, donating leftover food to those in need, selling or donating old but still serviceable pillows, pillowcases, blankets, bed foam, towels, and appliances at a low price, providing separate bins for recyclable items in the strategic areas of the hotel lobbies and guest rooms, using refillable soap and shampoo dispensers, and employing portion control to reduce food waste (Barakagira & Paapa, 2024; Moise et al., 2021).
Green purchasing includes training employees on environmental purchasing policies and procedures, purchasing recyclable products, informing vendors and suppliers about preferences for eco-friendly products, buying in bulk rather than individually packaged

items, and purchasing local, organic, and environmentally friendly food from vendors (Barakagira & Paapa, 2024; Wang, 2012).

In the Philippines, limited studies have explored the implementation of green practices in the hotel industry. For instance, Simpao (2023) examined the compliance of hotels in Olongapo City with the ASEAN Green Hotel Standard. The findings revealed that while the participating hotels always practiced energy and water utilization management, as well as indoor and outdoor air quality management, other green practices were less consistently implemented. Hotels sometimes practiced partnerships with community institutions and organizations, the use of environment-friendly products, waste disposal management, manpower development and management, toxic chemicals, and substance disposal and management, as well as environmental legislations and standards for hotel operations. Notably, noise pollution control and sewerage management were not practiced at all. Moreover, Ofalla (2024) evaluated the adoption of cleaner production technology in hotels located in the Western Visayas part of the Philippines and investigated its effect on water consumption, energy consumption, and waste management. The results identified the most practiced cleaner production technology, which includes proper control operations, modified facilities and equipment, improved facility/equipment layout, decreased energy use, training and incentive programs, improved waste segregation and storage, replacement of toxic materials with less harmful alternatives, promotion of sustainable buildings, the introduction of sustainable offerings and technologies, reduced water use, and reduction of harmful substances. Furthermore, Dael and Saab (2023) found that hotels in Cagayan de Oro City implemented green practices in the areas of green energy consumption, water and liquid waste management, solid waste disposal and management, air quality management, and noise pollution control.

Sustainable Performance

Sustainable performance encompasses the economic, social, and environmental performance of a business, aligning with the triple bottom line concept (Rehman et al., 2021). First, Rehman et al. (2021) argued that economic performance pertains to the company's overall monetary performance and is assessed through financial and operational indicators. Scholars such as Elshaer et al. (2023) and Asadi et al. (2020) indicated that the economic performance of hotels is measured by increased profit, improved marketplace position, and enhanced market share. Second, environmental performance addresses issues such as solid waste and water management, energy consumption, and similar concerns to minimize damage to the natural environment. Previous studies have stated that environmental performance is measured by reduced energy consumption, wastewater, solid waste, carbon emissions, and material usage, as well as improved compliance with environmental regulations (Elshaer et al., 2023; Asadi et al., 2020). Lastly, social performance encompasses the well-being of customers and employees (Rehman et al., 2021). Accordingly, social performance is measured by improved quality of life, relationships with stakeholders, workplace safety, customer satisfaction, and increased community services.

Green Practices and Sustainable Performance

Previous investigations have demonstrated that green practice initiatives have a positive and significant impact on sustainable performance. For instance, Elshaer et al. (2023) found that practicing green management significantly enhances economic, environmental, and social performance. Similarly, a previous study indicated that green innovation practices have a strong positive correlation with economic, environmental, and social dimensions (Asadi et al., 2020). Additionally, Pereira-Moliner et al. (2021) also concluded that sustainability practices positively influence cost advantage, perceptual performance, and differentiation advantage. The study of Barakagira and Paapa (2024)

also revealed that implementing green practices offers various benefits to hoteliers, including competitive advantage, cost savings, customer retention, increased profits, and employees' sense of fulfillment. Furthermore, Ofalla (2024) indicated that the adoption of cleaner production technology—a green initiative—led to reduced waste and decreased use of energy and water, ultimately lowering consumption costs.

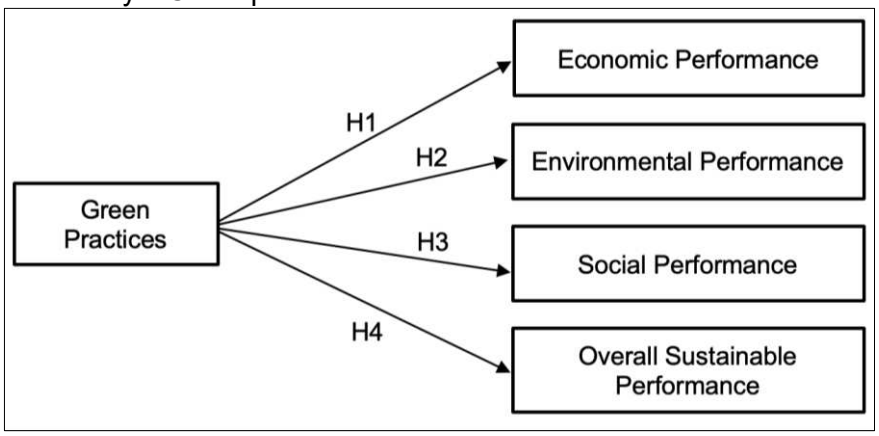
Drawing on the triple-bottom-line framework and the findings of these previous studies, this study proposes the following hypotheses:

H1: Green practices significantly and positively influence perceived economic performance.
H2: Green practices significantly and positively influence perceived environmental performance.
H3: Green practices significantly and positively influence perceived social performance.
H4: Green practices significantly and positively influence perceived overall sustainable performance.

Conceptual Model

Figure 1 presents the study's framework, illustrating the hypothesized relationships. The model highlights how green practices impact economic, environmental, social, and overall sustainable performance.

Figure 1. The Study's Conceptual Model



RESEARCH METHOD

This research employs a quantitative approach, with data analyzed using SmartPLS version 4. The software was utilized to test if the items and constructs are valid and reliable, evaluate the model, and address the study's hypotheses. Data were collected from thirty-eight hotels and resorts located in Panglao, Bohol, Philippines. According to the Department of Tourism, Bohol recorded 1,012,854 tourist arrivals in 2023, with foreign visitors comprising 32% of the total. In the first half of 2024, Panglao was ranked as the 8th best place to visit, highlighting its growing popularity. Widely regarded as the top beach destination in Bohol by both local and international tourists, Panglao has seen a surge in the establishment of new hotels and resorts to cater to increasing demand. This dynamic tourism growth underscores the significance of sustainable efforts in the hospitality industry, making Panglao an ideal setting for this study.

Additionally, this study utilized a researcher-made survey questionnaire as the primary tool for data gathering. A five-point Likert scale (5 – highly practiced to 1 – not practiced at all) was used for green practices items, and a four-point Likert scale (4 – very high

extent to 1 – no extent) was used for sustainable performance indicators. The green practices items were adopted from the previous studies of Barakagira & Paapa (2024), Moise et al. (2021), and Wang (2012). A sample item for energy management practices is: 'Our hotel performs regular maintenance on HVAC (heating, ventilation, and air conditioning) equipment.' A sample water management practice is: 'Our hotel regularly checks for water leaks and repairs them.' A sample waste management practice is: 'Our hotel provides recycling bins in kitchen/bar areas for glass, aluminum, and plastic containers.' A sample green purchasing practice is: 'Our hotel has an environmental purchasing policy in place.' The items used in the studies of Elshaer et al. (2023), Rehman et al. (2021), and Asadi et al. (2020) were adopted to measure sustainable performance. A sample economic performance item is: 'For the past five years of implementing green practices, our hotel's market share has improved.' A sample environmental performance item is: 'For the past five years of implementing green practices, our hotel's compliance with environmental regulations and standards (e.g., emissions, waste disposal) has improved.' A sample social performance item is: 'For the past five years of implementing green practices, our hotel's relationship with the community and stakeholders has improved.'

RESULTS

Table 1. Profile of the Selected Hotels and Resorts

Variables	Options	Frequency	Percentage (%)
No. of Years in Operation	More than 5 –10	29	76
	11 – 15	5	13
	16 and above	4	11
	Total	38	100
Room Capacity	30 and less	32	84
	31 – 99	5	13
	100 and above	1	3
	Total	38	100
Nature and Management	Independent	31	82
	Chain/franchise	3	8
	Others	4	10
	Total	38	100
Hotel Classification	3 stars	25	66
	4 stars	12	31
	5 stars	1	3
	Total	38	100

Table 1 presents the profile of the thirty-eight hotels and resorts included in the study. The majority of these establishments have been in operation for more than five years but less than eleven years, feature a room capacity of 30 or fewer, are independently owned, and are classified as 3- or 4-star accommodations. To ensure the collection of accurate and relevant data, participants were carefully selected based on their roles and responsibilities related to green practices implementation. Specifically, the manager, housekeeping head, and maintenance/engineering head from each hotel were chosen as respondents, given their expertise and involvement in the establishment's sustainability initiatives. This selection process yielded a total of 114 participants, providing a comprehensive perspective on the implementation of green practices across the sampled hotels and resorts.

Table 2. Descriptive Statistics and Correlations

Constructs	Mean		Correlations

		Standard Deviation	GP	ECPerf	ENPerf	SPerf	OSP
GP	3.73	0.75	1.00				
ECPerf	3.14	0.69	0.58**	1.00			
ENPerf	3.19	0.64	0.71**	0.85**	1.00		
SPerf	3.37	0.66	0.55**	0.71**	0.84**	1.00	
OSP	3.24	0.61	0.65**	0.92**	0.96**	0.91**	1.00

Note: **p–value<0.01, GP = Green Practices, ECPerf = Economic Performance, ENPerf = Environmental Performance, SPerf = Social Performance, OSP = Overall Sustainable Performance.

Table 2 shows that the selected hotels and resorts moderately to always practice green practices, including energy management, water management, waste management, and green purchasing, with a mean score of 3.73. The overall sustainable performance of the hotels and resorts is at a high extent. Specifically, the economic and environmental performances are at a high extent, while the social performance is at a very high extent. Moreover, Table 2 includes the correlation table, and the correlation coefficients are significant at a p-value of 0.01.

Table 3. Validity and Reliability Tests

Constructs	Factor loadings	VIF	t–values	Cronbach's alpha	CR	AVE
GP	0.78–0.86*	1.58–2.05	9.06–12.18*	0.84*	0.84*	0.56*
ECPerf	0.61–0.89*	1.53–3.80	3.04–10.68*	0.87*	0.89*	0.53*
ENPerf	0.72–0.84*	1.95–4.50	8.08–11.91*	0.87*	0.86*	0.52*
SPerf	0.81–0.92*	2.63–3.64	7.92–16.34*	0.90*	0.90*	0.70*
OSP	0.91–0.97*	3.40–6.29	14.89–23.58*	0.92*	0.93*	0.81*

Note: *p–value<0.05, VIF = Variance Inflation Factor, CR = Composite Reliability, AVE = Average Variance Extracted, GP = Green Practices, ECPerf = Economic Performance, ENPerf = Environmental Performance, SPerf = Social Performance, OSP = Overall Sustainable Performance.

The constructs' validity and reliability were tested prior to data analysis. Table 3 presents the results of the validity and reliability tests conducted, and it shows that the constructs' factor loadings are higher than 0.60, VIF scores are lower than 10, t-values are above 1.96, composite reliability and Cronbach's alpha scores are above 0.70, and the values of average variance extracted are more than 50. Therefore, the constructs and items used in the study are valid and reliable according to the thresholds used by previous studies employing structural equation modeling techniques (e.g., Saputra et al., 2024; Virador et al., 2023; Hair et al., 2017; Hair et al., 2011).

Table 4. Structural Model Evaluation

Constructs	R^2 Adjusted	p-values	Cohen's f^2	Effect size
Economic Performance	0.483	0.000	0.57	Large
Environmental Performance	0.697	0.000	1.06	Large
Social Performance	0.438	0.000	0.53	Large
Overall Sustainable Performance	0.555	0.000	0.80	Large

After establishing the validity and reliability of the constructs, the coefficient of determination (R^2), p-values, and Cohen's effect sizes (f^2) were used to evaluate the study's structural model (Virador et al., 2023; Cohen, 2013). Based on the results presented in Table 4, the R^2 and p-values indicate that the model is capable of prediction. Moreover, Cohen's f^2 indicates that implementing green practices has a large effect size

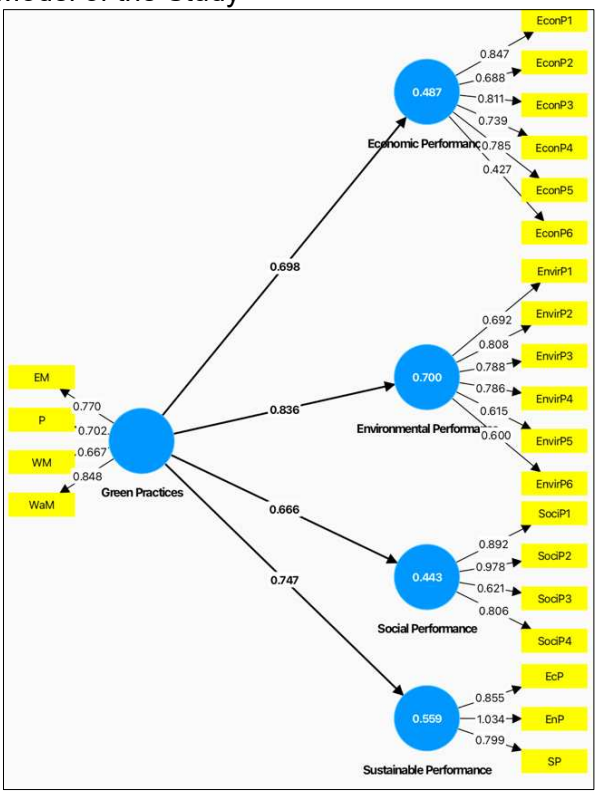
on the individual – economic, environmental, and social – and overall sustainable performance measures.

Table 5. Hypothesis Testing

Paths	Coefficient	t-values	p-values
Green Practices → Economic Performance	0.70	12.53	0.000
Green Practices → Environmental Performance	0.84	20.41	0.000
Green Practices → Social Performance	0.67	11.84	0.000
Green Practices → Overall Sustainable Performance	0.75	15.73	0.000

The structural equation modeling with 5,000 bootstrap samples in SmartPLS version 4 (Ringle et al., 2024) was used in testing the hypotheses of the study. Table 5 shows that green practices significantly and positively influence economic performance (c = 0.70, t-value = 12.53, p-value < 0.001); therefore, H1 is accepted. Green practices also significantly and positively influence environmental performance (c = 0.84, t-value = 20.41, p-value < 0.001); thus, H2 is accepted. Similarly, green practices significantly and positively influence social performance (c = 0.67, t-value = 11.84, p-value < 0.001); hence, H3 is accepted. Finally, green practices significantly and positively influence overall sustainable performance (c = 0.75, t-value = 15.73, p-value < 0.001); thus, H4 is accepted. Figure 2 illustrates the study's structural model.

Figure 2. Structural Model of the Study



DISCUSSION

This study aimed to determine the green practices, such as energy, water and waste management, and green purchasing of selected hotels and resorts in Panglao, Bohol, Philippines, and to investigate their influence on sustainable performance, specifically economic, environmental, and social dimensions.

Based on the data gathered, hotels and resorts in Panglao, Bohol, Philippines, are practicing green practices in the areas of energy management, water management, waste management, and green purchasing in general, similar to previous studies conducted in Olongapo City, Philippines, Colombia, Uganda, and Taiwan (Barakagira & Paapa, 2024; Simpao, 2023; Moise et al., 2021; Wang, 2012). First, respondents implement energy management practices such as conducting regular check-ups and maintenance on their heating, ventilation, and air-conditioning (HVAC) equipment; using automatic sensor lighting, electronic key cards, and solar panels to convert solar energy into usable electrical energy; implementing energy-efficient refrigeration measures and energy-saving devices; installing heat pumps and heat recovery systems; and adjusting the air conditioning based on the temperature. Second, the water management practices include performing regular checks for water leaks and repairs; changing bed sheets and linens only upon the guest's request; posting signage in restrooms and other areas about water conservation; encouraging guests to reuse their towels; utilizing low-flow fittings in showerheads and taps; and using dual-flush options for toilets. Third, the waste management practices involve providing recycling bins for glass, aluminum, and plastic containers in the kitchen/bar areas; employing refillable soap and shampoo dispensers; selling or donating old but still serviceable pillows, pillowcases, blankets, bed foam, towels, and appliances at a low price; using reusable cloth napkins and glass cups; and distributing any excess food as charity to those in need. Lastly, green purchasing practices include selecting and purchasing seasonal fruits and vegetables, implementing an environmental purchasing policy, choosing eco-friendly suppliers, purchasing products with minimal packaging, opting for bulk purchases over individually packaged items, and buying local, organic, and environmentally friendly food.

While most hotels and resorts implement green practices, some respondents reported that their hotel or resort does not adopt certain green practices in their operations, a finding similar to that of Simpao (2023), who also noted gaps in the green practices implementation. These practices include the use of electronic key cards in guestrooms, automatic sensor lighting on the property, solar panels, reusable cloth napkins, and harvested rainwater for laundry, irrigation, and other non-potable purposes. Additionally, some hotels do not encourage guests to reuse their towels, do not donate old but serviceable items, and do not distribute excess food as charity to those in need. The findings highlight the uneven implementation of green practices across different aspects of hotel operations. They underscore the need for more comprehensive efforts to promote sustainability in the Philippine hotel industry. While this study did not explore the barriers to the implementation of green practices, prior research highlights several implementation barriers that hinder hoteliers' adoption of green practices. For instance, Barakagira and Paapa (2024) identified key barriers such as high maintenance costs, a lack of sufficient knowledge among stakeholders, and inadequate resources. Additionally, they pointed to inadequate support from green suppliers, government enforcement, and insufficient resources, including trainers and environmental guidelines, as significant challenges. Another critical factor is the limited support from employers, which can further impede the effective implementation of green practices. Verma and Chandra (2018) and Eldemerdash and Mohamed (2013) also identified the cost of implementation and maintenance, employees' environmental concerns, human resource knowledge and skills, and guests' attitudes as factors affecting the implementation of environmental and green hotel practices.

After determining the green practices of the respondents, the next step was to analyze their influence on overall sustainable performance. Firstly, the findings revealed that green practices have a positive and significant influence on economic performance, as indicated by a path coefficient of 0.70 and a p-value less than 0.05. Cohen's f^2 suggests that green practices have a large effect on economic performance. This finding implies

that adopting high levels of green practices leads to substantial improvements in economic outcomes for hotels and resorts. Respondents reported that over the past five years of implementing green practices, their market position, market share, and profitability have improved. Simultaneously, costs related to penalties for environmental violations, waste treatment fees for landfill disposal, and energy consumption (e.g., electricity bills) have decreased. These findings align with Barakagira and Paapa (2024), who highlighted that green practices result in cost savings and increased profits. Similarly, Pereira-Moliner et al. (2021) found a positive correlation between hoteliers' sustainability initiatives—such as using eco-friendly products, conserving energy and water, and participating in community projects—and achieving cost advantages and enhanced performance. Furthermore, a study by Wisker and Kwiatek (2018) conducted in Malaysia supports these findings, showing that environmental orientation, often referred to as sustainability, positively impacts firm performance, including market share, profitability, and sales performance. These results suggest that integrating green practices into operations is not only environmentally responsible but also economically advantageous. Overall, the evidence strongly supports the conclusion that green practices significantly enhance economic performance, demonstrating their value as a key strategy for hotels and resorts seeking sustainable growth.

Secondly, green practices have a positive and significant influence on environmental performance, as indicated by a path coefficient of 0.84 and a p-value less than 0.05. Cohen's f^2 suggests that green practices have a large effect on environmental performance, demonstrating that hotels and resorts adopting such practices achieve higher environmental outcomes. According to the survey, participants reported significant improvements in compliance with environmental regulations and standards. Additionally, reductions were observed in solid waste sent to landfills, material usage, wastewater, energy consumption, and carbon emissions. These results highlight the role of green practices in minimizing environmental impact while enhancing operational sustainability. Supporting these findings, Asadi et al. (2020) revealed that innovative green practices positively and significantly influence environmental performance. Similarly, Elshaer et al. (2023) emphasized that green management practices reduce CO_2 emissions, wastewater, solid waste, energy consumption, and harmful substances while improving adherence to environmental standards. Overall, the results underline the critical role of green practices in driving superior environmental performance for hotels and resorts. By adopting sustainable measures, establishments can reduce their ecological footprint, align with regulatory requirements, and contribute to long-term environmental sustainability.

Thirdly, green practices positively and significantly influence social performance, with a path coefficient of 0.67 and a p-value less than 0.05. Cohen's f^2 reveals that green practices have a large effect on social performance, indicating that their implementation can substantially enhance social outcomes in hotels and resorts. Participants reported notable improvements in workplace safety, the quality of life within surrounding communities, customer satisfaction, and relationships with stakeholders after adopting green practices. These findings highlight the role of sustainability initiatives in fostering stronger connections between businesses and their social environment. Supporting these results, Zareh et al. (2023) noted that hotels adopting green practices can positively impact local communities, enhance employee well-being, and contribute to environmental protection. Similarly, Barakagira and Paapa (2024) found that such practices lead to greater customer retention and an increased sense of fulfillment among employees. Overall, the evidence underscores the significant role of green practices in driving social performance. By improving the well-being of employees, customers, and communities, hotels and resorts can achieve meaningful social benefits while reinforcing their commitment to sustainability and stakeholder engagement. These outcomes make

green practices a valuable strategy for achieving long-term success and social responsibility.

Lastly, the results show that green practices positively and significantly influence overall sustainable performance, with a path coefficient of 0.75 and a p-value less than 0.05. Cohen's f^2 indicates that green practices have a large effect on overall sustainable performance, suggesting that firms with higher levels of green practices achieve superior sustainability outcomes. The findings highlight that adopting green practices positively impacts economic, environmental, and social performance. This demonstrates the comprehensive benefits of integrating sustainability into business operations, with improvements across the triple bottom line. Elshaer et al. (2023) support these results, showing that green management practices significantly enhance overall sustainable performance in hotels, including economic, environmental, and social dimensions. Similarly, Asadi et al. (2020) found that green innovation practices lead to improved sustainable business performance by driving better outcomes in social, environmental, and economic areas. These findings reinforce the importance of green practices as a strategic approach to achieving sustainability. By implementing such practices, firms not only align with environmental and social goals but also improve their overall operational performance, positioning themselves for long-term success in a competitive market. This underscores the value of sustainability as a core component of modern business strategy.

CONCLUSION

Sustainability is becoming increasingly vital in the hotel industry, driven by the imperative for environmental conservation, improved financial performance, and enhanced reputation, among other factors. This study concludes that hotels and resorts in Panglao, Bohol, Philippines, are adopting green practices to a moderate extent. These practices provide numerous benefits, significantly and positively influencing economic, environmental, social, and overall sustainable performance, thereby supporting the triple bottom line theory. In particular, green practices have a more substantial influence on environmental performance than on social or economic performance, as indicated by the coefficient values. Green practices not only contribute to improved financial outcomes but also enhance environmental stewardship and social responsibility.

The study further concludes that the positive and significant impact of effective green practices on sustainable performance is not limited to developed countries or large hotels and resorts. By examining 3- and 4-star hotels and resorts in a developing Southeast Asian country, the findings provide valuable insights into the universal applicability of green practices. The results demonstrate that the effectiveness of green practices transcends geographical and economic boundaries, yielding similar benefits for sustainable performance when implemented effectively. This reinforces the notion that sustainability is achievable across different contexts, provided there is a commitment to adopting and maintaining green practices. The study contributes to the growing literature by emphasizing that the success of green initiatives is not dependent on the scale of the organization or the country's economic status. Instead, it highlights the critical role of effective implementation and stakeholders' support in driving sustainability outcomes.

As businesses increasingly recognize the value of sustainability, integrating green practices into core strategies will be crucial for achieving long-term success and sustainability. Therefore, hotel and resort management should prioritize the implementation of green practices such as water management, energy management, waste management, and green purchasing as integral business strategies to boost sustainable performance. Additionally, it is crucial for owners and managers to effectively

communicate their sustainability initiatives to all stakeholders and offer comprehensive training to employees, ensuring the effective application of these practices. While communication and training are essential, the active participation and collaboration of stakeholders are vital for the successful implementation of green initiatives and the enhancement of overall sustainable performance.

Moreover, addressing the barriers to green practices implementation, as cited by Barakagira and Paapa (2024), could improve hoteliers' extent of implementing green practices, thereby improving sustainable practices further. These barriers emphasize the complexity of adopting sustainable initiatives, particularly in industries where resources and support systems are constrained. Addressing these challenges requires a multi-faceted approach involving improved education and training, stronger government policies and enforcement, and enhanced collaboration between stakeholders. By identifying and addressing these barriers, organizations can create a more supportive environment for implementing green practices, ultimately contributing to sustainability goals. Further research on these barriers within specific contexts (e.g., the Philippine context) could provide more actionable insights to overcome them and promote broader adoption of sustainable practices.

LIMITATION

One of the study's limitations is its context—Panglao, Bohol, Philippines—meaning the results may differ in other countries or regions, especially those with different cultures and green practices level. Additionally, the findings are contingent on the truthfulness of the responses from the managers, housekeeping heads, and engineering heads of the selected hotels and resorts.

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DECLARATION OF CONFLICTING INTERESTS

The authors declare that they have no conflict of interest.

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