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### Green Marketing Practices and Sustainable Hotel Performance: An Empirical Study in Luxor and Aswan

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#### Abstract

#### Keywords:

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This research aims to examine the green marketing practices and sustainable hotel performance, through an empirical study of hotels in Luxor and Aswan. The research problem stems from the weak adoption of green marketing practices in Egyptian hotels, despite increasing environmental pressures and global changes that supporting sustainable tourism. The conceptual foundation of this research is based on the Core Theory: Green Consumer Behavior Theory and Value-Belief-Norm (VBN) theory.

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The study adopts a quantitative approach, and a closed-ended questionnaire was used to collect data. The tool was administered to a simple random sample of valid 400 questionnaires from 450 respondents from guests in five-star hotels and their affiliated tourism companies Luxor and Aswan during the period from December 2024 to April 2025. The collected data was analyzed using SPSS version 25.

The study highlights a research gap represented by the scarcity of recent applied studies examining the relationship between green marketing and sustainability in cultural tourism in Upper Egypt.

The most important unique contributions of this research are: It is one of the first studies to empirically examine the relationship between green marketing practices and sustainable hotel performance, and it takes a closer look at how green marketing practices relate to sustainable hotel performance in heritage destinations such as Luxor and Aswan. The study's findings provide some practical insights for hotel managers. They can use it to integrate green practices into their daily operations, which may enhance competitiveness, customer satisfaction, and accountability. This study enriches academic discussions and paves the way for future comparative research across diverse destinations that can compare different destinations.

## Introduction

Tourism and hospitality play a pivotal role in shaping our economy, promoting cultural exchange, and creating jobs. Unfortunately, they also have a negative impact on the environment (Gössling and Hall, 2013). In light of these issues, green marketing has emerged as a smart way to integrate environmental concerns into business practices (Al-Aomar and Hussain, 2017). For the hospitality and tourism industry, green marketing not only protects the environment but can also build customer loyalty by raising awareness of sustainable habits and encouraging guest to make more environmentally friendly choices (Rahman et al., 2015; Biswas, 2017; Al-Humaid, 2024).

These days, travelers are more aware than ever of the environmental and social impacts of their travels (Chan et al., 2019). For this reason, various destinations and hotels are seeking to rebrand themselves as sustainable, sustainable destinations. They adopt sustainable practices such as energy and water conservation, better waste management, and research into renewable energy options (Cadena and Sanchez-Ramos, 2016; Abd-Elhamead et al., 2024).

However, it should be noted that there is insufficient evidence to prove the effectiveness of sustainability initiatives in developing countries, and Egypt is a prime example. In places like Luxor and Aswan, where tourism constitutes a significant portion of the economy, hospitality companies feel significant pressure to maintain competitiveness while reducing their environmental impact and implementing sustainability (Kang et al., 2012; Saarinen, 2020). However, the effectiveness of these green marketing strategies in these cities remains somewhat unclear (Dangelico and Vocalelli, 2017; Sun and Zhang, 2023).

**The research gap:** This is where this study comes in. This research addresses a fundamental gap in research by exploring how green marketing impacts sustainability in the Egyptian hospitality sector, specifically focusing on Luxor and Aswan (Sharma, 2021). Although some hotels have begun adopting environmentally friendly practices, there is a significant lack of reliable research on how these measures improve customer satisfaction, loyalty, the overall image of the destination, and the sustainability of the hospitality and tourism sector (Al-Aomar and Hussain, 2017; Zhang and Yin, 2025).

Furthermore, the research examines the moderating effects of government support and tourism environmental awareness, recognizing that policy interventions and consumer education are critical to the successful adoption of green marketing (Dangelico, and Vocalelli, 2017). Previous studies have largely focused on developed markets, leaving a knowledge gap regarding the effectiveness of sustainable marketing in emerging tourism economies (Al-Humaid, 2024). The scarcity of empirical studies in Upper Egypt underscores the need for contextualized research that evaluates how environmental marketing contributes to long-term competitiveness, particularly in historically and culturally rich cities.

**The conceptual research theory:** The conceptual foundation of this research is based on Core Theory: Green Consumer Behavior Theory (Biswas, 2017) and Value-Belief-Norm (VBN) theory (Stern et al., 1999). Sustainability marketing theory (Belz and Peattie, 2012), the triple bottom line model (Elkington, 1997), and perceived value theory (Ottman, 2011). Together, these theories explain how organizations can balance environmental, social, and economic priorities while shaping customer perceptions through sustainable practices. The study hypothesizes that green marketing (as an independent variable) positively influences environmentally friendly practices (as a mediator), which in turn enhances sustainability outcomes such as customer loyalty, guest satisfaction, sustainable hotel performance and destination attractiveness (Font and McCabe, 2017; Kumar and Christodouloupoulou, 2014).

**Research variables:** The research examines the relationship between green marketing (independent variable), the adoption of environmentally sustainable practices (mediating variable), and sustainability outcomes in tourism and hospitality; It also considers mediating variables such as consumer Perceptions and government support (dependent variable), with consumer Perceptions and government policies as moderating factors (Green, 2024).

**Study methodology :** This study adopts a quantitative methodology and uses a **quantitative research design**, utilizing a **survey-based approach** to collect data from customers in the tourism and hospitality industry. A structured questionnaire was used to measure perceptions of green marketing strategies, customer satisfaction, brand loyalty, and financial performance. A structured questionnaire distributed to a simple random sample of valid 400 questionnaires from 450 respondents from guests in five-star hotels and their affiliated tourism companies Luxor and Aswan during the period from December 2024 to April 2025. An exploratory survey conducted during October and November 2024 validated the research instrument and refined the sample framework.

**The collected data** was analyzed using SPSS (Statistical Package for the Social Sciences) version 25, employing descriptive statistical methods to interpret the results and assess customer perceptions regarding green marketing practices and sustainability in the tourism and hospitality sectors in Egypt.

**By addressing these gaps**, this study contributes theoretically and practically to the understanding of sustainability in tourism. This guide provides insights for hotel managers and policymakers on how to design and implement effective green marketing strategies that align with global sustainability goals and local market dynamics (Calisto et al., 2021; Sharma, 2021). It also aims to provide data-driven recommendations to help transform the Egyptian hospitality sector into a more environmentally responsible and economically resilient one, ultimately fostering more sustainable tourism in heritage destinations such as Luxor and Aswan.

**Limitations :** This study faced some limitations. First, the study focused only on Luxor and Aswan. While these two cities have a rich tourism heritage, this particular focus may limit the generalizability of the findings to other destinations (Chou et al., 2012). The sample size was also very limited, which may limit the statistical power of our analysis (Hair et al., 2019). The study collected data using self-administered questionnaires, which may be subject to biases, such as participants' desire to provide socially acceptable answers (Podsakoff et al., 2003). Furthermore, because this study relied on a momentary analysis, it adopted a cross-sectional design, which may prevent establishing long-term causal relationships between green marketing practices and sustainability performance (Rindfleisch et al., 2008). The study did not consider external influences, such as political situation and policies or economic shifts, which certainly merit further study due to their impact on sustainability outcomes (Gössling and Hall, 2013).

**Unique Study Contributions :** This research is particularly noteworthy. It is one of the first studies to empirically examine the relationship between green marketing practices and sustainable hotel performance, and it examines how green marketing practices relate to sustainable hotel performance in heritage destinations such as Luxor and Aswan. The study developed an integrated framework that links specific green marketing strategies to measurable sustainability indicators. This contributes to filling a gap in previous studies in the Arab and international hospitality literature (Leonidou et al., 2013; Calisto et al., 2021).

Furthermore, our findings provide some practical insights for hotel managers. They can use them to integrate green practices into their daily operations, potentially enhancing competitiveness, customer satisfaction, and environmental responsibility (Chen, 2010; Chan et al., 2019). For policymakers, the findings provide compelling evidence for formulating targeted strategies to promote sustainable tourism, particularly in culturally and environmentally sensitive locations (Bramwell and Lane, 2013). By shedding light on a less studied context, this study enriches academic debates and paves the way for future comparative research across diverse destinations that can compare different destinations (Graci and Dodds, 2008; Sun and Zhang, 2023). It provides practical recommendations for integrating green marketing practices into daily hotel operations to improve sustainable performance, such as enhancing resource efficiency, reducing waste, and increasing guest satisfaction. This guide guides policymakers in the tourism and hotel sector towards developing incentive programs and regulatory frameworks that encourage investment in environmentally responsible practices, particularly in destinations that rely heavily on cultural and natural heritage.

### **Analysis and Synthesis of Key Findings from the Most Relevant Studies**

Recent studies on green marketing in the hotel sector highlight the importance of adopting environmentally friendly practices. Research shows that it not only enhances sustainable performance, but also strengthens brand image and increases customer satisfaction and loyalty (Han et al., 2019; Kumar et al., 2021).

Take, for example, a study by Cantele and Zardini (2018). They noted that hotels incorporating sustainability into their brand identity gives them a real competitive advantage, especially in highly competitive markets. Not only that, but Font et al. (2017) found that small tourism businesses that adhere to green practices, such as energy conservation and efficient waste management, enjoy a better reputation and are more likely to remain in the market (Akhtar and Najar 2020).

Now, looking at the hospitality sector, Geng and Maimaituerxun, (2022); agreed with Rassiah et al., (2024) on those obtaining environmental certifications, such as Green Key and LEED, significantly boosts customer confidence. Greater confidence is more bookings and the better the financial results. Veselovská et al., (2020) agreed with Helmy and Zaki (2018) on noted that hotels' adoption of environmental practices enhances their positive image among local and international visitors. This is especially true if they launch transparent and engaging awareness campaigns.

Suleman et al., (2025) agreed with Dangelico and Vocalelli, (2017) on that went further, highlighting the importance of green marketing as a key communication tool for attracting environmentally conscious travelers. Nowadays, online booking platforms and social media have become highly influential, guiding customers toward choosing sustainable hotels. However, there is an important point: Moreover, Veselovská et al., (2020) warned that the success of these green strategies depends largely on the level of customer awareness and trustworthiness of hotels. If a hotel engages in "eco-faking," it could damage its reputation in the long term (Abd-Elhamead et al., 2024).

Despite the wealth of available information and this growing body of knowledge, studies directly linking green marketing to the performance of sustainable hotels in Egypt are still scarce, especially in areas such as Luxor and Aswan. These regions have their own unique environmental and cultural characteristics, and must design our research to focus on attracting environmentally conscious tourists while preserving these precious natural and cultural resources.

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## Literature Review

**Green marketing:** Green marketing is gaining significant momentum as a means of addressing growing concerns about our planet, particularly in the tourism and hospitality sector. It's all about promoting sustainable practices that not only reduce environmental damage but also enhance the performance of hotels and tourism companies and their offerings to customers. Recent research supports this view: sustainable initiatives not only help reduce the carbon footprint of hotels, restaurants, and tourism companies, but also make them look better in the eyes of consumers (Kang et al., 2012; Han and Hyun, 2019).

**Green marketing strategies:** In the hospitality world, you'll find all kinds of green marketing strategies being implemented, such as energy-efficient operations, sustainable supply chains, and sustainable branding. More and more hotels are joining this trend to meet the demands of environmentally conscious consumers (Al-Aomar and Hussain, 2017; Font et al., 2017; Sadiq, 2021; Al-Harbi, 2023).

Research by Geng and Maimaituerxun (2022) shows that; when hotels embrace green marketing they actually enhance their brand equity and build customer loyalty, especially if they have established and verifiable environmental practices to support it. Speaking of customer loyalty, it's crucial to the success of sustainability initiatives in this sector.

**Sustainability as a Driver of Guest Loyalty :**Recent studies reveal that guests often view practices such as waste reduction, energy-saving technologies, and sustainability practices as signs of service quality and ethical responsibility (Helmy and Zaki, 2018). This mindset can lead to higher satisfaction levels and encourage guest to return (Jaiswal and Kant 2018). Additionally, Han and Hyun (2019) found that green marketing emotionally connects with guests, a significant factor in enhancing satisfaction and loyalty.

**Building Loyalty through Green marketing:** Recent findings confirm that for green marketing should be effective it must be rooted in transparency and supported by third party certifications. In this way, hotels can dispel consumer skepticism and build long-term trust (Leonidou et al., 2013<sup>B</sup>). Furthermore, brand loyalty is a major reward for effective green marketing. Customers who perceive hotels to be genuinely committed to sustainability are more likely to stay with them and even share their positive experiences (Han et al., 2020). Eco labels and sustainability certifications such as Green Key and LEED have been shown to boost customer trust and enhance a hotel's competitive advantage (Suleman et al., 2025).

**Green marketing as a Competitive Edge:** When looking at competitive advantages, green marketing truly sets hotels apart in the global tourism landscape. Companies that actively embrace sustainable brands tend to have a greater visibility online and on social media, boasting about their sustainability (Cantele & Zardini, 2018). Travel websites increasingly highlight sustainable options, which can influence consumer choices and help hotels, connect with eco-conscious travelers (Dangelico and Vocalelli, 2017).

**Green marketing Practices and Sustainable challenges:** However, not everything is going well. The hospitality and tourism sector still faces significant challenges in implementing green marketing. Financial and physical barriers, especially in developing regions, can make it difficult to invest in eco-technologies and sustainable infrastructure (Leonidou et al., 2013<sup>B</sup>; Baker, 2015; Gössling and Hall, 2019). Furthermore, if hotel staff and customers are not well-informed or trained in green initiatives, this can significantly slow progress (Kumar et al., 2021).

**Combating Eco-Misinformation in Green Hotel Marketing :**There's something called "eco-misinformation" that should be wary of when companies exaggerate or distort their environmental efforts and make claims or promises that are greater than they actually are, this can severely damage consumer trust and tarnish their brand image (Leonidou et al., 2013<sup>A</sup>; Rahman et al., 2015).

**Strategies for Practices in Sustainable Hotel Performance:** To address these issues, experts suggest enhancing management skills, increasing knowledge of sustainability, spreading environmental awareness and establishing partnerships with environmental organizations to help achieve certification and compliance sustainable hotel performance (Baumgartner and Rauter, 2017; Veselovská et al., 2020).

These recent studies highlight the dual role of green marketing: it simultaneously promotes environmental sustainability and improves organizational performance. When implemented correctly, authentically, and strategically, it not only increases guest happiness and loyalty but also aligns with sustainability goals. This is particularly important in developing countries like Egypt, where the push toward sustainable tourism practices still in its infancy and little research exists in this area (Yadav and Sondhi, 2023).

**Core Theory: Green Consumer Behavior Theory:** Recently, green marketing in the hospitality and tourism sector has witnessed a remarkable boom (Biswas, 2017). This comes in response to the growing push for environmental awareness and the broader sustainable development goals (Abdou et al., 2020). Therefore, a concept called the Green Consumer Behavior Theory shows that an increasing number of guest are choosing brands that align with their environmentally friendly values, i.e., hotels that practice sustainability (Han et al., 2010; Baker, 2015; Yadav and Sondhi, 2023).

**The Value-Belief-Norm (VBN)** theory suggests that our personal values and concerns about the environment actually drive hotels to make more environmentally and sustainable choices, especially when it comes to choosing accommodations (Stern et al., 1999).

**How Sustainability Builds Loyalty in Hotels:** Recent studies confirm this view. Tourists choose hotels that embrace green practices, such as energy conservation, water conservation, and responsible waste management (Save-Reuse-Recycle). These practices make sense to them and align with their values (Akhtar and Najar 2020; Geng and Maimaituerxun 2022). The study finds that the veracity of these marketing claims makes a huge difference. If a hotel is exposed for practicing "eco-faking," i.e., pretending to be environmentally friendly without actually doing anything, or making false promises, it can severely damage customer trust and loyalty (Rahman et al., 2015). This truly demonstrates the importance of transparency and effective sustainability marketing efforts in Luxor and Aswan hotels.

**Green Practices and Loyalty in Hotel:** On the other hand, when hotels prioritize environmental and sustainability initiatives, this often leads to increased customer satisfaction. Guests tend to view things like using renewable energy or purchasing local organic products as signs of service quality, social responsibility, and sustainability (Leonidou et al., 2013<sup>A</sup>). Furthermore, when hotels promote their environmental efforts and emphasize green marketing, customers are more likely to return and receive positive reviews, which contribute to building a strong brand image (Dangelico and Vocalelli, 2017).

**Brand Loyalty through Shared Sustainability Values in hotels:** Regarding brand loyalty, researchers indicate that if a hotel's brand aligns with environmental and sustainability values, it strengthens its emotional connection with its guests (Han et al., 2019; Kumar et al., 2021). There is a theory called commitment and consistency, which essentially suggests that guest

more likely to commit to brands that align with their own values and concern for sustainability (Dolnicar et al., 2017; Abd-Elhamead et al., 2024). Therefore, loyalty is not limited to service quality alone, but also includes a shared ethical perspective between the customer and the hotel (Tsai et al., 2020).

**Green Marketing as a Competitive Advantage in Heritage hotels:** The study believes that green marketing has become a key competitive advantage. Hotels that adopt sustainable brands can stand out in a crowded market, especially in locations like Luxor and Aswan, where environmental conservation is of paramount importance (Font et al., 2017; Cantele and Zardini, 2018; Al-Harbi, 2023). These practices attract environmentally conscious travelers and also enhance their online presence through positive reviews and engagement on social media (Kumar et al., 2021).

**The important of Awareness in Green Marketing:** for green marketing to truly pay off, consumers must be aware of it. Many hospitality brands don't do a good job of promoting their environmental efforts, which means they miss out on opportunities to stand out (Ottman, 2011; Sadiq, 2021). Perception and awareness theory suggests that if guest aren't aware of a hotel's green initiatives, it won't influence their choices (Fishbein and Ajzen, 2015; Helmy and Zaki, 2018). Therefore, it's crucial for hotels to have effective communication strategies, and perhaps even third-party certifications, to enhance their credibility and influence in the marketplace.

**Sustainability Meets Heritage Drives Success in Luxor and Aswan Hotels:** Ultimately, research shows a clear link between green marketing strategies and sustainability and positive customer outcomes, including improved impressions, increased satisfaction, loyalty, and enhanced competitive positioning in the hospitality industry (Veselovská et al., 2020). This is particularly true for heritage tourism sites such as Luxor and Aswan, where maintaining sustainability is crucial to protecting cultural and natural treasures, while attracting environmentally conscious tourists (Baumgartner and Rutter, 2017; Gössling and Hall, 2019).

**For the hospitality sector in Egypt,** green marketing has become a smart way for hotels to balance environmental conservation with maintaining competitiveness. Luxor and Aswan, two of Egypt's most prominent tourist destinations, are witnessing significant development in their hotel sectors. Rising operating costs, environmental concerns, and tourists' growing interest in sustainability are driving this trend (Ahmed et al., 2025; Farghaly et al., 2025).

Green marketing refers to an integrated set of environmentally friendly strategies that include green products, pricing, distribution, and promotion, all aimed at attracting travelers who want to make a positive impact. Studies from Upper Egypt show that hotels adopting these green marketing strategies make a real difference. They experience increased tourist purchases, brand loyalty, and even long-term success (Daher, 2007; Sharma, 2021; Ahmed et al., 2022).

Research highlights a strong link between these green practices and the growth of sustainable tourism in Egyptian hotels (Abdou et al., 2020). The focus here is on key areas such as energy conservation, waste reduction, improved water management, and the use of renewable energy sources (**United Nations Development Programme "UNDP", 2022**).

In locations such as Luxor and Aswan tourism and hospitality dominated by rich culture and stunning natural beauty hotels are launching innovative initiatives. These include installing solar panels, using sustainable cleaning methods, and launching campaigns to encourage guests to adopt sustainable behaviors (El Dessouky, 2023; Ahmed et al., 2025).

Evidence supports the idea that aligning hotels' marketing with environmental responsibility significantly enhances their brand image. Furthermore, this helps them meet international sustainability standards and contribute to Egypt's broader tourism objectives, as set out in the

national strategy (Egyptian Ministry of Tourism and Antiquities, 2023; Abd-Elhamead et al., 2024).

**The research gap:** There has been growing global interest in green marketing in the hospitality sector (Han et al., 2019; Ardito et al., 2021). However, limited research has examined its impact on the performance of sustainable hotels in Egypt, particularly in heritage tourism destinations. When it comes to its impact on the performance of sustainable hotels in Egypt, particularly in locations such as Luxor and Aswan, which are rich in heritage tourism, there is insufficient research. Most studies appear to have focused on international or regional markets (Font, Garay and Jones, 2012; Font et al., 2017; Cantele and Zardini, 2018), ignoring the unique cultural and environmental characteristics of Upper Egypt.

Therefore, there is a gap in evidence linking specific green marketing practices such as energy conservation, waste reduction, and environmental certification to important outcomes such as customer loyalty, competitive advantage, and sustainable hotel performance (Cheng, 2016; Geng and Maimaituerxun, 2022).

Moreover, do not fully understand how tourists' awareness and perceptions influence all of this regarding green marketing and hotel performance in heritage tourism sites (Veselovská et al., 2020; Sikveland et al., 2022). This study, therefore, aims to fill these gaps by providing real-world evidence from Luxor and Aswan, examining heritage tourism from a deeper perspective, and delving into how consumer awareness and environmental certifications impact hotel sustainability (Tsai et al., 2020).

### **Proposed Research Model**

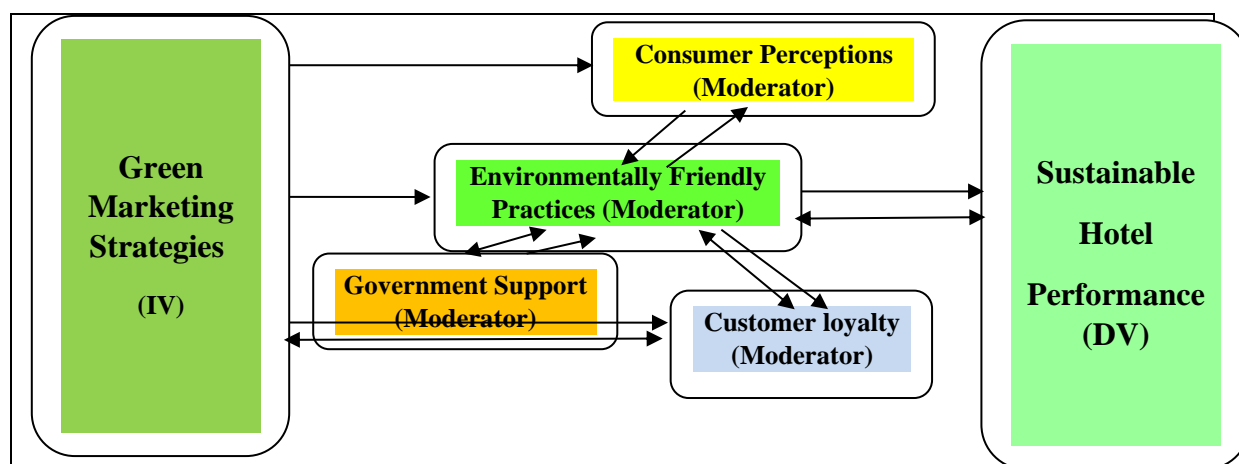
This section constructs a conceptual framework to explore the impacts Green Marketing Practices and Sustainable Hotel Performance. The research examines the relationship between green marketing (independent variable), the adoption of environmentally sustainable practices; consumer Perceptions and government support (mediating variable), and sustainability outcomes in tourism and hospitality (dependent variable); It also considers mediating variables such as consumer Perceptions and government policies as moderating factors (Green, 2024).

### **Research Conceptual Framework, visually showing:**

**Main causal path:** Green Marketing Strategies → Environmentally Friendly Practices → Sustainable Hotel Performance.

**Moderators:** Consumer Perceptions and Government Support (-----➔) influence the link between Green Marketing and Environmentally Friendly Practices.

The main idea here is to develop a conceptual framework that visually represents how green marketing strategies lead to environmentally friendly practices, which in turn enhances sustainable hotel performance. It serves as a roadmap showing how these concepts are interconnected. Two important factors can influence this trajectory: consumer Perceptions and government support illustrated by dashed arrows, indicating their role in linking green marketing to environmentally friendly practices. Note: The measurement notes I shared are identical to each part of the figure.



**Figure.1. Research Conceptual Framework**

### Research Hypotheses

Based on the research problem, the following hypotheses are proposed:

#### Hypotheses:

1. Hypothesis H1: There is an impact of green marketing strategies on environmentally friendly practices.
2. Hypothesis H2: There is an impact of green marketing strategies on positive customer perceptions.
3. Hypothesis H3: There is an impact of green marketing strategies on customer loyalty (repeat visit).
4. Hypothesis H4: There is an impact of environmentally friendly practices on positive customer perceptions.
5. Hypothesis H5: There is an impact of environmentally friendly practices on customer loyalty (repeat visit).
6. Hypothesis H6: There is a significant positive relationship between green marketing strategies, customer loyalty, and environmentally friendly practices.
7. Hypothesis H7: There is a significant positive relationship between government support, environmentally friendly practices, and customer loyalty.
8. Hypothesis H8: There is an impact of environmentally friendly practices on sustainability of a Hotel Performance.

#### Notes on Measurement

First, the study will address green marketing strategies; will use a five-point Likert-type scale questionnaire one in which the participant's agreement or disagreement is assessed inspired by the work of Chen (2010) and Leonidou et al. (2013). Moreover, the conceptual foundation of this research is based on sustainability marketing theory (Belz and Peattie, 2012), the triple bottom line model (Elkington, 1997), and perceived value theory (Ottman, 2011). Also, regarding environmentally friendly practices, the study will assess them through operational and managerial indicators. The study will use the Green Hotel Association's guidelines, which are intended to provide a solid framework. Currently, for sustainable hotel performance, will delve into a more comprehensive approach. Will address economic, environmental, and social performance indicators, all based on the "triple bottom line" model. It is a comprehensive method for measuring hotel performance in these areas.

## Methodology

**Methods:** This study adopts a quantitative approach to explore the impact of green marketing practices on sustainable hotel performance, an empirical study in Luxor and Aswan.

**Research Design:** This study adopts a quantitative design, using a questionnaire-based approach to collect data from guests in the tourism and hospitality sector. The study aims to measure and analyze guests' perceptions of service quality and sustainability practices in hotels and tourism companies identify challenges and recommendations, evaluate service quality improvements, and assess how government policies can better support sustainable tourism. A structured questionnaire was used to measure customers' perceptions of green marketing strategies, their satisfaction, brand loyalty, and financial performance. The study follows a cross-sectional design, collecting data at a single point in time to assess current green marketing practices and their impact.

This study adopts a quantitative approach to explore the impact of green marketing practices and sustainable hotel performance with a particular focus on Luxor and Aswan. The research follows a **cross-sectional design**, collecting data at a single point in time to assess current green marketing practices and their impact.

**Sampling Technique:** Primary Data, Surveys and structured questionnaire adopted from Tourists and guests who have stayed at certified sustainable hotel guests and tourism companies' customers in Luxor and Aswan. A stratified random sampling method is applied to select participants from different segments of the hospitality and tourism industry, ensuring a diverse and representative sample.

### Sampled Hotels and Tourism Companies in Luxor and Aswan

The research sample includes **10 hotels** and **10 tourism companies** in Luxor and Aswan, selected based on their impact on **sustainable tourism, service quality, and customer experience**. These establishments represent different categories, including **luxury, mid-range, and budget hotels**, along with **leading tourism companies** operating in the region. As shown in table 1, 2.

**Table (1): Sampled Hotels in Luxor and Aswan**

Hotel Name	Location	Category	Sustainability Certification / Initiatives
Sofitel Winter Palace Luxor	Luxor	Luxury	Green Key Certified
Hilton Luxor Resort and Spa	Luxor	Luxury	ISO 14001 Certified
Mövenpick Resort Aswan	Aswan	Luxury	Travelife Gold
Steigenberger Nile Palace	Luxor	Mid-Range	Green Star
Pyramisa Island Hotel	Aswan	Mid-Range	Eco-Friendly Practices
Sonesta St. George Hotel	Luxor	Mid-Range	Energy and Water Conservation
Basma Hotel Aswan	Aswan	Mid-Range	Local Eco-Sustainability Efforts
Nefertiti Hotel Luxor	Luxor	Budget	Sustainable Community Engagement
Keylany Hotel	Aswan	Budget	Green Star
Jolie Ville Kings Island Luxor	Luxor	Luxury	Biodiversity Protection Program

**Table (2): Sampled Tourism Companies in Luxor and Aswan**

<b>Tourism Company Name</b>	<b>Location</b>	<b>Specialization</b>	<b>Sustainability Efforts</b>
Misr Travel	Luxor and Aswan	Cultural and Heritage Tours	Sustainable Tourism Initiatives
Memphis Tours	Luxor and Aswan	Eco-Tourism and Adventure Travel	Eco-Friendly Packages
Egypt Uncovered	Luxor and Aswan	Cultural and Historical Tours	Community-Based Tourism
Ramses Tours	Luxor and Aswan	Nile Cruises and Excursions	Waste Management in Cruises
Nile Holiday	Luxor and Aswan	Custom Luxury and Group Tours	Renewable Energy Usage
Osiris Tours	Luxor and Aswan	Luxury and Small-Group Tours	Supporting Local Communities
Luxor and Aswan Travel	Luxor and Aswan	Private Guided Tours	Energy-Efficient Transportation
World Tour Advice	Luxor and Aswan	Tailor-Made Egypt Tours	Carbon Offset Programs
Egypt Magic Travel	Luxor and Aswan	Budget-Friendly and Small-Group Tours	Eco-Conscious Practices
Aswan Individual	Aswan	Local and Sustainable Tourism	Promoting Local Handicrafts

**Selection Criteria:** Hotels and tourism companies were selected based on: Their contribution to sustainable tourism development; environmentally friendly policies and practices; their economic and social impact on local communities; their role in enhancing the quality of hospitality and cultural tourism in Upper Egypt. This model provides a balanced representation of hospitality and tourism providers in Luxor and Aswan, ensuring a comprehensive analysis of sustainability practices, guest satisfaction, and service excellence.

### **Data Collection**

**Primary Data Collection:** Surveys provide an effective means of collecting large amounts of data from a broad demographic segment, using green marketing as a tool to increase guest satisfaction and promote the sustainability of the tourism and hospitality sectors. Therefore, a structured questionnaire was designed and distributed to two main stakeholders: guests of certified sustainable hotels, and customers of tourism companies implementing green marketing practices. The survey consists of four parts or dimensions: Section 1: Demographic Information; Section 2: Service Quality Impressions; Section 3: Sustainability Practices in Hotels and Tourism Companies; Section 4: Challenges and Recommendations.

A pilot study was conducted for this research during September 2024 to explore the role of green marketing and environmentally friendly practices as a tool to enhance the sustainability of the tourism and hospitality sectors. The pilot study had several key objectives. First, it aimed to ensure the clarity of the research framework and process. The team wanted to ensure the questionnaire was organized and easy to read by potential participants. They also investigated

the reliability and validity of the research tools. They also aimed to improve the questionnaire by identifying any problems with the wording and formatting of the questions.

To achieve this, a group of academic researchers and field experts carefully reviewed the questionnaire. They provided feedback, which greatly helped determine its effectiveness. They ensured that the questionnaire items were appropriate, clear, and easy to understand. Based on the suggestions they received, the team made some necessary adjustments to enhance the accuracy and effectiveness of the research tool. Ultimately, this pilot study significantly improved the questionnaire, ensuring accurate data collection while avoiding bias and misinterpretation. The final version, which incorporated all the recommended changes, was then released during the main data collection phase of the study, serving as a useful resource for the study.

**Survey Methodology:** So, to ensure the accuracy of our research tool and the correct information, the study decided to conduct a preliminary test of the questionnaire. This was to see if participants truly understood the scale items and to identify any questions that were a bit complex or confusing. The main idea was to improve and refine these scale items so they could measure the impact of green marketing and sustainable practices on sustainability in the tourism and hospitality sector at hotels in Luxor and Aswan.

To do this, the study sent the questionnaire to a sample of guest who was guests at hotels in Luxor and Aswan. The study distributed 40 questionnaires and asked them to complete them. The feedback received was very useful; it allowed us to further refine the questionnaire before embarking on the full study. It's all about making sure answer the questions correctly, to ensure understanding and achieve the study's objective.

**Data Collection and Target Audience:** The main field study was conducted using a survey approach, with participants contacted via phone calls, social media, and emails. The target audience consisted of hotel and tourism company customers in Egypt. The data collection process included a combination of self-administered questionnaires, in-person visits, phone calls, emails, and faxes to ensure comprehensive access. The survey was conducted online and in person at selected hotels in major tourist destinations, including Luxor and Aswan. Participants were informed of the study objectives, and responses were collected anonymously.

The survey focused on assessing customer expectations and perceptions of green marketing and environmentally friendly practices, and their impact on promoting sustainability in the tourism and hospitality sectors. Specifically, the study aimed to assess the extent to which green marketing initiatives contribute to guest satisfaction and improving sustainability in the Egyptian hospitality sector.

### **Sampling Method**

Here's a brief overview of how the survey data was collected. The study relied on a stratified random sampling method. This method ensured, for example, a good mix of different categories: the first category: hotel guests, and the second: customers of travel companies. A survey was conducted on 10 Egyptian hotels and 10 travel companies in Luxor and Aswan to determine which of them implement or utilize environmentally friendly practices and green marketing. Within each of these two categories, a convenience sampling method was used, where available and willing participants were selected from among guests (Egyptians, Arabs, and foreigners).

Approximately 450 tourists from the hotel and tourism sector participated in the survey. Participants were contacted via phone calls, social media, and email to ensure comprehensive access. The target audience consisted of customers of hotels and travel companies in Egypt. The survey was conducted online and in person at selected hotels in major tourist destinations, including Luxor and Aswan. Participants were informed of the study objectives, and responses were collected anonymously.

The survey focused on assessing customer expectations and perceptions of green marketing and environmentally friendly practices, and their impact on promoting sustainability in the tourism and hospitality sectors. The study relied on the Cochran formula to determine the appropriate sample size, which helps determine the number of responses needed to ensure statistical reliability. Specifically, the study aimed to assess the extent to which green marketing initiatives contribute to guest satisfaction and improving sustainability in the Egyptian hospitality sector.

The entire study spanned approximately five months, starting in October 2024 and ending in February 2025. Ultimately received 450 questionnaires, and the study found that 400 of them were valid and suitable for statistical analysis. This gave us a strong response rate of 89%. This is certainly a good and appropriate rate for a study.

**Data Analysis:** Data collection targeted hotel and tourism company customers and was conducted through a combination of in-person visits, electronic surveys, and online communication. The collected data was analyzed using SPSS (Statistical Package for the Social Sciences) version 25, employing descriptive statistical methods to interpret the results and assess customer perceptions regarding green marketing practices and sustainability in the tourism and hospitality sectors in Egypt.

**Questionnaire Design and Response Scale:** The questionnaire consisted of (68) items in two sections. The first section included personal data. The second section included objective data. Responses were formulated according to a five-point Likert scale, which included five options: (strongly disagree, disagree, neutral, agree, and strongly agree). Table (3) shows the classification of the scale scores used.

**Table (3) Questions Answered Scale**

Code	1	2	3	4	5
Range	$1 \geq 1.8$	$1.8 \geq 2.6$	$2.6 \geq 3.4$	$3.4 \geq 4.2$	$4.2 \geq 5$
level of agreement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

#### **Questionnaire Reliability Measurement:**

**Table (4) Cronbach's Alpha reliability coefficient and Shapiro-Wilk normality test**

Sections	No.	Reliability Coefficient	Reliability Ratio	Shapiro-Wilk (sig.)	Self-reliability coefficient
Section One	5	0.881	88%	0.000	0.939
Section Two	10	0.850	85%	0.000	0.921
Section Three	7	0.880	88%	0.000	0.938
Section Four	12	0.890	89%	0.000	0.943
Section Five	10	0.805	80%	0.000	0.897
Section Six	10	0.830	83%	0.000	0.911
Section Seven	9	0.880	88%	0.000	0.938
All questionnaire	63	0.857	85%	0.000	0.925

Cronbach's alpha value reliability coefficient was very high across all sections of the questionnaire that's a reliability rate of 83%. That's excellent! Looking at the mean Cronbach's alpha for the entire test, it's 0.857. This is definitely within an acceptable range, indicating that the questionnaire items are performing well.

The Shapiro-Wilk (SW) test is a regression-based statistical method for normal distribution. This test is one of the most powerful tests for normal distribution and is used to verify whether a sample belongs to a normally distributed population. Essentially, start with two hypotheses. The null hypothesis, denoted by  $H_0$ , states that "the data are normally distributed." The alternative hypothesis,  $H_1$ , states that "the data are not normally distributed." The SW test is known to be one of the most effective tests for detecting deviations from a normal distribution, especially when working with small to medium-sized samples. It was first introduced by Shapiro and Wilk in 1965, and has since been modified and improved to handle larger data sets as well (Shapiro and Wilk, 1965; Royston, 1988; Royston, 1995; Razali and Waugh, 2011; Hernandez, 2021).

The Shapiro-Wilk normal distribution test across all sections and showed a statistical significance level of less than 0.05. It indicates that the distribution of answers is not normal. So, the study has a slightly odd distribution.

The self-reliability coefficient for the total questionnaire is 0.925, which indicates a high level of consistency between the questionnaire items.

### **Descriptive Statistics:**

#### **Part One: Personal data:**

**Table (5) descriptive statistics for Personal data**

	<b>Answer</b>	<b>Frequency</b>	<b>percent</b>	<b>Rank</b>
Age	Less than 25	21	5.3%	5
	From 25 to 35 years	161	40.4%	1
	From 36 to 45 years	100	25.0%	2
	From 46 to 55 years	79	19.8%	3
	More than 55	39	9.8%	4
Gender	Male	205	51.3%	1
	Female	195	48.8%	2
many times have you visited Luxor and Aswan	First time	13	3.3%	4
	Once every two years	66	16.5%	3
	Once a year	222	55.4%	1
	More than once a year	99	24.8%	2
Nationality	Egyptian	140	35.0%	2
	Arab	66	16.5%	3
	Foreigner	194	48.5%	1

#### **1 – Age:**

Notes from the table (5), which shows descriptive statistics for study sample according to age, it represented the highest percentage in the answer is from 25 to 35 years the percentage of 40.4%, this indicate that majority of participants are still youth and have the ability to visit and move many places; they are in early adulthood, an age group typically characterized by high mobility, adaptability, and an active lifestyle, which increases their ability and willingness to visit and explore different destinations. moreover, was the most frequently reported category in the answer from 36 to 45 years the percentage of 25.0%, This group generally combines

occupational stability with disposable income, which may allow for increased participation in leisure activities and travel, although movement patterns may be somewhat moderate due to family and professional responsibilities. came in third rank to answer from 46 to 55 years the percentage of 19.8%, came in fourth rank to answer more than 55 years the percentage of 9.8% and less than 25 years the percentage of 5.3% this low percentage may reflect limited financial resources or fewer opportunities for independent travel among younger individuals, especially students.

## **2 – Gender:**

Notes from the table (5), which shows descriptive statistics for study sample according to gender, it represented the highest percentage in the answer is male the percentage of 51.3%, and was the most frequently reported category in the answer is female the percentage of 48.8%. This indicates that both man and women are visiting Egypt nearly equally this is a good sign, as it demonstrates that the destination has broad appeal to both genders.

For marketing, it suggests that when developing strategies, especially those focused on sustainable hospitality and green practices, must consider the desires of both genders. It is important not to lean too heavily toward one side or the other.

From a tourism management perspective, this balance can actually work to our advantage. It opens up opportunities to create promotional campaigns and services that cater to the needs of both men and women. Frankly, this is a win-win situation, as it can improve market access and enhance overall customer satisfaction.

## **3 – Many times have you visited Luxor and Aswan?**

Notes from the table (5), which shows descriptive statistics for study sample according to many times have you visited Luxor and Aswan, it represented the highest percentage in the answer is once a year the percentage of 55.4%, This truly demonstrates that Luxor and Aswan continue to attract returning visitors. Most of the guest want to experience the rich culture, fascinating history, and seasonal events these places offer; And majority of participants answer is more than once a year the percentage of 24.8%, These guest likely have a close connection to the region, whether personal, professional, or just for fun. They may be local tourists or perhaps international travelers who can't get enough of Upper Egypt. and was ranked third answer is once every two years the percentage of 16.5%, came in fourth rank to answer first time the percentage of 3.3%, This low number really highlights the number of repeat visitors to these places. It's somewhat reassuring, as it suggests that tourism here is built on loyalty rather than simply trying to constantly attract new tourists. This is an opportunity to focus on targeted, eco-friendly marketing strategies that can help build lasting relationships with these travelers. Promoting sustainable tourism can encourage guest to keep returning to enjoy all that Luxor and Aswan have to offer.

## **4 – Nationality:**

Notes from the table (5), which shows descriptive statistics for study sample according to nationality, it represented the highest percentage in the answer is foreigner the percentage of 48.5%, This high percentage highlights the global appeal of Luxor and Aswan, both renowned for their rich cultural heritage and archaeological treasures. The presence of a strong international visitor base underscores the importance of maintaining high-quality services and multilingual marketing strategies, along with sustainable tourism practices that align with global environmental expectations. and was ranked second answer is Egyptian the percentage of 35 %, This indicates that nearly half of the visitors to Luxor and Aswan in the study were domestic tourists, reflecting the importance of domestic tourism to the sustainability of the

hospitality sector in Upper Egypt. Domestic tourism often provides a stable and consistent market base, less affected by international travel restrictions or seasonal fluctuations. and was ranked third answer is Arab, the percentage of 16.5% This group represents a valuable regional market, attracted by cultural similarities, geographical proximity, and shared historical interests. Targeted marketing campaigns that meet the preferences and expectations of Arab travelers will enhance this segment's contribution to the local tourism economy. Overall, the nationality distribution indicates a balanced mix of local, regional, and international visitors. This diversity enhances the resilience of the tourism sector in Luxor and Aswan and provides a broad base for implementing green marketing practices that suit different cultural backgrounds while enhancing sustainable hotel performance.

## Part Two: Objective data:

### Section One: Green Marketing Strategies:

Table (6) respondents' answers regarding Green Marketing Strategies

Statement		1	2	3	4	5	Mean	Std. Dev.	Rank
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
The organization's strategy includes providing services that ensure the achievement of environmentally friendly practices.	F.	8	15	62	159	156	4.10	0.93	1
	%	2.0	2.8	15.5	39.8	39.0			
The organization transparently announces its environmentally friendly practices.	F.	18	25	145	131	81	3.58	1.02	4
	%	4.5	6.3	36.3	32.8	20.3			
The organization's promotional strategy targets green tourism customers.	F.	41	128	72	115	44	2.98	1.20	5
	%	10.3	32.0	18.0	28.8	11.0			
By applying environmentally friendly practices, the organization seeks to achieve a competitive advantage.	F.	14	41	101	176	68	3.60	0.99	3
	%	3.5	10.3	25.3	44.0	17.0			
By implementing environmentally friendly practices, the organization seeks to gain customers loyalty.	F.	6	25	87	202	80	3.81	0.88	2
	%	1.5	6.3	21.8	50.5	20.0			
Mean of respondents' answers							3.61	1.00	

From the data illustrated in Table (6), it can be illustrated in the following findings:

In first statement " The organization's strategy includes providing services that ensure the achievement of environmentally friendly practices", the mean is 4.10, suggesting agreeing response, that falls in the range (3.40-4.20), This shows that many guest believe that the

organization has made sustainability a core part of its activities; Similarly, in the second statement " By implementing environmentally friendly practices, the organization seeks to gain customers loyalty" the mean is 3.81, suggesting agreeing response, This indicates that participants recognize the importance of sustainability initiatives in building long-term relationships with customers; Likewise, in the third statement " By applying environmentally friendly practices, the organization seeks to achieve a competitive advantage ", the mean is 3.60, suggesting agreeing response, It seems that guest don't consider sustainability just a nice thing to do, but a smart business strategy that sets an organization apart from its competitors; Correspondingly, the fourth statement " The organization transparently announces its environmentally friendly practices ", the mean is 3.58, suggesting agreeing response, This may indicate some gaps in how well the organization promotes its efforts or how visible these practices are to the public; results indicate that that all the privies results falls in the range (3.40-4.20); In contrast , the fifth statement " The organization's promotional strategy targets green tourism customers " the mean is 2.98, suggesting neutral response, This suggests some ambiguity or perhaps inconsistency in how the organization reaches environmentally conscious customers through its promotional efforts.

From the data several insights can be drawn. The first four statements—covering the organization's strategy for environmentally friendly services ( $M = 4.10$ ), customer loyalty ( $M = 3.81$ ), competitive advantage ( $M = 3.60$ ), and transparency ( $M = 3.58$ )—all fall within the "agree" range (3.40-4.20). Together, these results indicate that participants believe the organization is conceptually committed to green marketing and that it establishes its strategic position through environmentally responsible practices.

In contrast, the statement related to the promotional strategy targeting green tourism customers scored lower ( $M = 2.98$ ), falling within the "neutral" range (2.60-3.40). This indicates weak support for the idea that the organization is effectively reaching sustainability-minded customer segments, suggesting a potential gap in its marketing efforts.

The Std. Deviation is 0.93, 0.88, 0.99, 1.02 and 1.20 respectively, suggesting dispersion answers; Standard deviation values provide further details. Low deviations (e.g., 0.88, 0.93) show high consistency in responses to items related to strategy, reflecting broad consensus. In contrast, a higher deviation (1.20) for the promotional strategy indicates significant variability: while some participants supported it, others expressed skepticism, revealing a division of opinion on this aspect. For example, while some participants strongly supported the scale, others may have been more skeptical, resulting in wide variation in responses. Thus, standard deviation values not only complement the average scores but also highlight areas of heterogeneity in stakeholders' perceptions.

Overall, the average Mean score of 3.61 indicates moderate agreement with the organization's environmentally conscious stance. That is, survey participants generally support these practices. However, on some points, such as specific promotional methods, there were differences of opinion. This demonstrates that not everyone agrees on everything, as if everyone has their own point of view.

**Section Two: Perceptions of Service Quality:****Table (7) respondents' answers regarding Perceptions of Service Quality**

Statement		1	2	3	4	5	Mean	Std. Dev.	Rank
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
The hotel/tourism company provides high-quality services as promised.	F.	14	29	98	170	89	3.72	1.00	2
	%	3.5	7.3	24.5	42.5	22.3			
The staff is professional, friendly, helpful, and respond quickly to requests.	F.	10	35	103	184	68	3.66	0.94	3
	%	2.5	8.8	25.8	46.0	17.0			
Cleanliness and overall hygiene standards at the facility were excellent.	F.	52	68	142	102	36	3.00	1.14	9
	%	13.0	17.0	35.5	25.5	9.0			
I was satisfied with the booking and check-in process.	F.	20	40	117	146	77	3.55	1.06	4
	%	5.0	10.0	29.3	36.5	19.3			
Customer service support was quick and efficient.	F.	26	68	115	144	47	3.29	1.08	7
	%	6.5	17.0	28.8	36.0	11.8			
Overall, I would recommend this hotel/tourism service to others.	F.	24	64	146	120	46	3.25	1.04	8
	%	6.0	16.0	36.5	30.0	11.5			
I feel comfortable and confident when interacting with the staff.	F.	26	54	92	172	56	3.44	1.09	6
	%	6.5	13.5	23.0	43.0	14.0			
I am treated with respect and my needs are valued.	F.	8	28	80	186	98	3.84	0.93	1
	%	2.0	7.0	20.0	46.5	24.5			
The facilities are clean and designed for comfort.	F.	51	97	117	91	44	2.95	1.19	10
	%	12.8	24.2	29.2	22.8	11.0			
Information is provided clearly and easily.	F.	25	53	89	168	65	3.48	1.10	5
	%	6.4	13.2	22.2	42.0	16.2			
<b>Mean of respondents' answers</b>							<b>3.42</b>	<b>1.05</b>	

From the data illustrated in Table (7), it can be illustrated in the following findings:

**1. Axis 1: Human Interaction and Customer Service. (Statements 1-6: all within the range of 3.40-4.20):**

In first statement "I am treated with respect and my needs are valued ", the mean is 3.84, suggesting agreeing response; similarly. in the second statement " The hotel/tourism company provides high-quality services as promised " the mean is 3.72, suggesting agreeing response; Likewise, in the third statement " The staff are professional, friendly, helpful, and respond quickly to requests ", the mean is 3.66, suggesting agreeing response; Correspondingly, the fourth statement " I was satisfied with the booking and check-in process ", the mean is 3.55, suggesting agreeing response; Alike, the fifth statement " Information is provided clearly and easily " the mean is 3.48, suggesting agreeing response; And in the sixth statement " I feel comfortable and confident when interacting with the staff ", the mean is 3.44, suggesting agreeing response, that all the privies results falls in the range (3.40-4.20);

The results show that customers valued the respect and care they received, as they were highly satisfied with the quality of service, the friendliness of the staff, and the smoothness of the booking and check-in procedures. The results show that participants found information clear and interaction with staff easy. This demonstrates that the hotel's strengths lie in its human touch and service skills. This can be a great perspective for their green marketing, as portraying the hotel as caring and respectful can enhance customer loyalty and increase the likelihood of their return. Also relevant in the field of green marketing, these results confirm that sustainability is not just about the environment; it also includes building positive relationships with customers (this is social sustainability).

## **2. Axis 2: Support Responsiveness and Overall Customer Experience: (Statements 7-8: Relative Neutrality, 3.29 and 3.25)**

Moreover, in the seventh statement "Customer service support was quick and efficient ", the mean is 3.29, suggesting neutral response; correspondingly, in the eighth statement "Overall, I would recommend this hotel/tourism service to others ", the mean is 3.25, suggesting neutral response, that falls in the range (2.60-3.40).

Now, support responsiveness and overall customer experience. The scores here were fairly neutral, neither too high nor too low. Customers felt that the speed and efficiency of support was acceptable, and this was also reflected in their willingness to recommend the service. This indicates a gap. Although daily interactions were strong, there is room for improvement in terms of prompt support and the overall experience. If they don't intensify their efforts, this could negatively impact any future green marketing efforts. They urgently need to link clear communication about their green initiatives with excellent follow-up service to turn this satisfaction into a positive reputation. Within the framework of sustainable hotel performance, providing prompt and effective customer support is essential. It helps improve overall service quality and enhances the credibility of their environmental claims.

## **3. The third dimension: Cleanliness and physical facilities (Figures 9-10: Low neutrality, 3.00 and 2.95):**

Moreover, in the ninth statement " Cleanliness and overall hygiene standards at the facility were excellent " the mean is 3.00, suggesting neutral response, that falls in the range (2.60-3.40), and in the tenth statement "The facilities are clean and designed for comfort ", the mean is 2.95, suggesting neutral response;

Regarding cleanliness and physical facilities, guests were not completely satisfied with the cleanliness or comfort of the facilities. This indicates a weak environmental performance of the hotel, especially since cleanliness and health are critical factors in the hospitality sector, as they contribute to a sense of safety and comfort. This gap could harm the hotel's image as a place committed to environmental practices; Guest typically associate sustainability with cleanliness and quality of facilities, so it urgently needs to be addressed.

**Regarding the Std. Deviation** is 0.93, 1.00, 0.94, 1.06, 1.10, 1.09, 1.08, 1.04, 1.14 and 1.19 respectively, suggesting dispersion answers, when results show a lower value closer to zero, for example it indicates that everyone is more in agreement. On the other hand, if you're looking at higher numbers, it's a sign of a wider range of opinions. In this case, values around 1.00 indicate a moderate mix of opinions. Interestingly, this means that while most guest seem to hold similar ideas, there are still some notable differences in investigators' opinions on some statements; Especially the ones that stand out clearly, like those with skewers scores of 1.14 and 1.19.

**The average rating**, at 3.42, indicates a general trend toward agreement with the statements. Guest generally seems to agree with these statements. Reflects greater variability in customer experiences for this product. However, targeted improvements are needed in environmental aspects and service delivery infrastructure. Addressing these weak dimensions is essential to enhancing sustainable hotel performance and strengthening the credibility of green marketing initiatives in the region. This suggests there is good support for what the organization seeks to achieve. There are certainly some areas that could be improved. Some work may be required in some areas, but more improvement may still be needed to achieve stronger consensus the results show that the Luxor and Aswan hotels excel in the human aspect of customer service.

However, they still have some work to do regarding tangible environmental aspects such as cleanliness and facilities, as well as some aspects of the overall customer experience. What are these gaps? These gaps represent strategic opportunities, not just problems. By strengthening their green marketing and linking it to better environmental and service performance, they can enhance their customers' trust and credibility. It will also strengthen their sustainability efforts in the long term.

### Section Three: Sustainability Practices in Hotels and Tourism Companies:

**Table (8) respondents' answers regarding Sustainability Practices in Hotels and Tourism Companies**

Statement		1	2	3	4	5	Mean	Std. Dev.	Rank
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
The establishment follows sustainable policies	F.	47	89	119	96	49	3.02	1.19	6
	%	11.8	22.3	29.8	24.0	12.3			
The establishment encourages sustainable practices in hotels and tourism companies.	F.	32	56	116	136	60	3.43	1.13	3
	%	8.0	14.0	29.0	34.0	15.0			
Energy-saving initiatives (e.g., LED lighting, solar panels) are implemented.	F.	6	25	87	202	80	3.81	0.88	2
	%	1.5	6.3	21.8	50.5	20.0			
Clear water conservation measures are in place (e.g., towel reuse program).	F.	39	94	99	117	51	3.11	1.19	5
	%	9.8	23.5	24.8	29.3	12.8			
The company promotes local culture and community engagement.	F.	35	58	109	142	56	3.31	1.14	4
	%	8.8	14.5	27.3	35.5	14.0			
Waste management and recycling systems are implemented.	F.	36	109	113	109	33	2.98	1.11	7
	%	9.0	27.3	28.3	27.3	8.3			
Developing sustainable tourism is a priority for this establishment.	F.	7	28	76	203	86	3.83	0.90	1
	%	1.8	7.0	19.0	50.8	21.5			
Mean of respondents' answers							<b>3.45</b>	<b>1.07</b>	

**From the data illustrated in Table (8), it can be illustrated in the following findings:**

In first statement " Developing sustainable tourism is a priority for this establishment ", the mean is 3.83, suggesting agreeing response, that falls in the range (3.40-4.20), Similarly, in the second statement " Energy-saving initiatives (e.g., LED lighting, solar panels) are implemented " the mean is 3.81, suggesting agreeing response; Likewise, in the third statement "The establishment encourages sustainable practices in hotels and tourism companies ", the mean is 3.43, suggesting agreeing response; Correspondingly, the fourth statement " The company promotes local culture and community engagement ", the mean is 3.31, suggesting neutral response, that falls in the range (2.60-3.40); Alike, the fifth statement " Clear water conservation measures are in place (e.g., towel reuse program)" the mean is 3.11, suggesting neutral response, that falls in the range (2.60-3.40), and in the sixth statement The establishment follows sustainable policies ", the mean is 3.02, suggesting neutral response, that falls in the range (2.60-3.40), and in the seventh statement " Waste management and recycling systems are implemented ", the mean is 2.98, suggesting neutral response, that falls in the range (2.60-3.40).

**Looking at the data in Table (8), we can draw some important insights.**

First, let's talk about the conceptual commitment to sustainability (statements 1 to 3). The numbers indicate a firm commitment to the idea of sustainability. For example, when participants were asked about the importance of developing sustainable tourism, the score was 3.83. Not far behind, energy-saving initiatives, such as LED lighting and solar panels, scored 3.81. Then there's the promotion of sustainable practices in hotels and tourism, which scored 3.43. All of these scores fall within the "agree" range (between 3.40 and 4.20). Thus, it's clear that the organization is committed to sustainability in terms of its goals and priorities. Simply put its vision and policies appear to align with global trends in sustainability.

Practical implementation of sustainability: When we talk about how these ideas are applied on the ground (statements 4 to 7) in terms of concrete actions, the picture is less optimistic. The statement on promoting local culture and community engagement scored only 3.31, placing it in the neutral category. Then there are water conservation measures, which scored 3.11, adopting sustainable policies, which scored 3.02, and waste management and recycling systems, which scored 2.98. These results highlight a significant gap between what the organization claims to be committed to and what it actually does in practice.

So, what's the bottom line? The difference between these two sets of scores highlights a key point: while the organization praises sustainability and prioritizes it, the results fall short when it comes to implementing these claims, as their translation into operational practices remains limited. This "implementation gap" can seriously undermine the credibility of sustainability claims and potentially limit the long-term benefits they can reap, such as improved environmental performance, cost savings, and building customer trust. To truly close this gap, governments need to go beyond just talking about policies and focus on measurable actions – things like structured recycling programs, solid waste management plans, and enhanced community engagement.

The Std. Deviation is 0.90, 0.88, 1.13, 1.14, 1.19, 1.19 and 1.11 respectively, suggesting dispersion answers; the results show the variability of participants' responses. When see values below 1.00, such as 0.90 or 0.88, this indicates a relatively high level of agreement among participants. But when the numbers rise above 1.00, say between 1.13 and 1.19, this indicates greater dispersion. In these cases, have a wider range of opinions, meaning that guest is not in agreement on these statements. Interestingly, it really shows how diverse the views are on these particular statements.

Overall, the average score of 3.45 reflects a good level of agreement with the data. This indicates that guest; in general, agree to some extent with what the organization is doing. However, there is also room for improvement. Ways to strengthen agreement and increase everyone's participation can be seriously explored; generally, the overall average of 3.45 indicates a positive orientation toward sustainability. However, a little closer inspection reveals significant variation. Conceptual commitments, such as prioritizing and focusing on sustainable tourism and implementing energy-saving initiatives, received higher ratings. Practical issues, such as recycling and water conservation, were less well-received and received lower ratings.

This pattern demonstrates that while the organization's vision for sustainability is clear and well-publicized, its translation into consistent operational practices remains limited, and its implementation in practice is not as robust. This means greater consistency between established policies and practical implementation is essential to increasing the credibility and impact of sustainability efforts.

#### Section Four: Challenges and Recommendations:

**Table (9) respondents' answers regarding Challenges and Recommendations**

Statement		1	2	3	4	5	Mean	Std. Dev.	Rank
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
The high cost of implementing sustainability practices.	F.	13	40	96	171	80	3.66	1.01	2
	%	3.3	10.0	24.0	42.8	20.0			
Lack of awareness or training on sustainability practices.	F.	34	72	106	140	48	3.24	1.13	10
	%	8.5	18.0	26.5	35.0	12.0			
Difficulty in sourcing sustainable materials or products.	F.	26	68	115	144	47	3.29	1.07	9
	%	6.5	17.0	28.8	36.0	11.8			
Resistance from employees or management to change.	F.	32	56	116	136	60	3.34	1.13	8
	%	8.0	14.0	29.0	34.0	15.0			
Lack of support from top management or decision-makers.	F.	35	65	88	142	70	3.36	1.19	7
	%	8.8	16.3	22.0	35.5	17.5			
Unclear or unsupportive regulations and legislation.	F.	16	51	132	150	51	3.42	0.99	6
	%	4.0	12.8	33.0	37.5	12.8			
Limited technology or tools available for sustainability implementation.	F.	14	41	101	176	68	3.61	1.00	3
	%	3.5	10.3	25.3	44.0	17.0			
Insufficient time to implement sustainable initiatives.	F.	41	128	72	115	44	2.99	1.21	11
	%	10.3	32.0	18.0	28.8	11.0			
Challenges in measuring the impact of sustainability practices.	F.	27	33	90	171	79	3.60	1.09	4
	%	6.8	8.3	22.5	42.8	19.8			
Lack of cooperation from suppliers or external partners in adopting sustainable practices.	F.	11	44	100	187	58	3.59	0.95	5
	%	2.8	11.0	25.0	46.8	14.4			
Overconsumption of natural resources.	F.	8	27	107	194	64	3.69	0.88	1
	%	2.0	6.8	26.8	48.4	16.0			
Negative impact on local communities.	F.	51	97	117	91	44	2.95	1.20	12
	%	12.8	24.2	29.2	22.8	11.0			
Mean of respondents' answers							3.40	1.07	

From the data illustrated in Table (9), it can be illustrated in the following findings:

**The overall average score here is 3.40**, representing a balance between agreement and neutrality. When looking at the barriers that guest generally agreed upon (ranging from 3.40 to 4.20), we find that most of them relate to external, structural, or technical issues. On the other hand, the barriers that received more neutral scores (between 2.60 and 3.40) tended toward internal or behavioral aspects.

The study found the most significant barriers in the main categories. (A) Financial: The most significant of these barriers is the cost of implementing sustainability practices, which received a score of 3.66. Many view cost as a significant barrier, making it difficult to adopt sustainability practices; (B) Technical: There is also the issue of a lack of available technology or tools (3.61). Furthermore, knowing how to measure the impact of these practices is also complex (3.60). These technical challenges hinder real progress in the field of sustainability; (C) Legislative and Regulatory Aspects: Another concern is the ambiguity of regulations and legislation (3.42). It became clear that without clear legal support, organizations struggle to operate in a way that promotes sustainability; (D) External and Structural Aspects: Then there is the overconsumption of natural resources (3.69) and the lack of supplier cooperation (3.59). These issues highlight how organizations are often at the mercy of their environment, dealing with factors they cannot control, such as reliance on unsustainable suppliers or resource pressures; (E) Internal and Behavioral/Managerial Aspects: Internally, challenges such as the lack of senior management support (3.36), employee resistance to change (3.34), and the difficulty of sourcing sustainable materials (3.29) received more neutral ratings. This suggests that organizations have either begun to address these issues internally, or that employees do not see them as urgent compared to external or financial challenges.

Regarding the results, it becomes clear that the biggest obstacles are external factors such as resources and supplier relationships, along with financial and technical barriers. Internal issues, such as employee resistance or training gaps, did not appear to be as significant from the participants' perspective.

In conclusion, sustainability appears to be more influenced by external factors—such as resources, costs, laws, and partners than by internal factors such as employee awareness or resistance. The mean score of 3.40 indicates a moderate level of agreement, but the varying scores across categories suggest we urgently need to focus on addressing these structural and organizational issues first before delving into internal behavioral aspects.

The Std. Deviation is 0.88, 1.01, 1.00, 1.09, 0.99, 0.95, 1.19, 1.13, 1.07, 1.13, 1.21 and 1.20 respectively; Standard deviation values indicate the degree of variability in respondents' answers. Lower values, such as 0.88, 0.95, and 0.99, reflect relatively high agreement among respondents, while higher values, particularly those above 1.10 (such as 1.13, 1.19, 1.20, and 1.21), indicate greater dispersion, meaning that respondents expressed more diverse opinions on those particular statements. The average score of 3.40 indicates that guest support sustainability practices in the tourism and hospitality sectors. This is a good level of support, reflecting a generally positive atmosphere toward environmentally friendly operations. However, this assessment also points to some ongoing challenges and difficulties, such as inconsistent implementation, poor stakeholder awareness, or a lack of awareness among stakeholders. Additionally, there may be a sense that sustainability and profitability don't always go hand in hand. These are issues that need to be addressed to achieve stronger consensus and more impactful and effective outcomes in the future.

**Section fifth: Evaluation of Service Quality Improvements:****Table (10) respondents' answers regarding Evaluation of Service Quality Improvements**

Statement		1	2	3	4	5	Mean	Std. Dev.	Rank
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
Enhancing continuous employee training	F.	9	23	101	208	59	3.71	0.86	3
	%	2.2	5.8	25.2	52.0	14.8			
Increasing the use of technology and digitalization in service	F.	25	53	89	168	65	3.48	1.11	5
	%	6.4	13.2	22.2	42.0	16.2			
Improving response time to customer needs	F.	14	38	111	177	60	3.57	0.97	4
	%	3.5	9.5	27.8	44.2	15.0			
Strengthening effective communication between employees and customers	F.	52	68	142	102	36	3.00	1.15	10
	%	13.0	17.0	35.5	25.5	9.0			
Enhancing the work environment to increase employee satisfaction	F.	29	92	100	140	39	3.17	1.11	9
	%	7.3	23.0	25.0	35.0	9.7			
Providing modern resources and equipment to facilitate service delivery	F.	17	45	135	151	52	3.44	0.99	6
	%	4.2	11.2	33.8	37.8	13.0			
Developing a customer feedback system and analyzing it to improve performance	F.	22	67	122	150	39	3.29	1.03	7
	%	5.5	16.8	30.5	37.5	9.7			
Increasing the level of service personalization to meet individual customer needs	F.	37	55	139	123	46	3.21	1.11	8
	%	9.3	13.8	34.8	30.8	11.5			
Empowering Capabilities and Resources	F.	14	29	98	170	89	3.72	1.01	2
	%	3.5	7.3	24.5	42.5	22.3			
Strengthening sustainability and social responsibility measures in service	F.	8	15	62	159	156	4.10	0.95	1
	%	2.0	2.8	15.5	39.8	39.0			
Mean of respondents' answers							3.46	1.02	

From the data illustrated in Table (10), it can be illustrated in the following findings:

**A Quick Look at the Patterns:** Sustainability and Social Responsibility scored the highest averages, at 4.10; likewise, Empowering Capabilities and Resources 3.72; moreover, Capacity development through continuous training came next, with an average of 3.71, followed by operational efficiency, particularly responsiveness, with an average of 3.57. Digital

transformation and resources then scored 3.48 and 3.44. On the other hand, the "Voice of the Customer", personalization and communication, and work environment indicators were neutral, all hovering around the lower end of the scale, with averages of 3.29, 3.21, 3.17, and 3.00.

**Objective Rating of Items:** (1) Sustainability and Social Responsibility: The scores here 4.10 and 3.72 demonstrate the importance of this aspect to the organization. They view sustainability as a strategic priority; (2) Empowering Capabilities and Resources scored 3.72; as well as Continuous employee training scored 3.71, and modern resources/equipment scored 3.44. This indicates their willingness to invest in competencies and tools that improve quality; (3) Operational Efficiency: With a score of 3.57 for improving guest response times, it's clear they understand the importance of speed in the hospitality sector—including check-in, room requests, and complaint resolution; (4) Digital Transformation: A score of 3.48 shows they've started embracing technology and digitalization, but they're still in the "positive trend" stage rather than fully mature; (5) Voice of the Customer and Employee Experience: Here, we see scores like 3.29 for customer feedback systems, 3.21 for personalization, 3.17 for workplace satisfaction, and a low 3.00 for communication. These numbers reveal a slight gap in how well they listen to customers, communicate daily, and overall employee well-being.

**The results mean:** There's certainly a "strategic" focus on sustainability, training, and digitalization, but the methods for transforming these strategies into real, everyday customer experiences such as effective communication, feedback, and personalization are not up to scratch. In the hospitality world, the absence of robust feedback systems can lead to decisions based more on intuition than reliable data. Additionally, with a seasonal and often multilingual workforce, maintaining consistent communication becomes challenging. This may explain the neutral score for "Effective Communication" (3.00).

Then there's the issue of personalization. Low scores here often indicate fragmented data across different systems, making it difficult to deliver personalized services in real time. A neutral work environment may indicate some operational pressure, as variable hours and seasonal cycles impact employee satisfaction. Although training is valued (3.71), if it doesn't translate into a better employee experience, satisfaction remains average.

**Practical Applications:** Voice of the Customer Strategy Complete: QR/NFC at Point of Service is fully operational. We're talking about using QR codes/NFC at service points, quick surveys after interactions, and a daily dashboard for things like Net Promoter Score (NPS), Customer Satisfaction (CSAT), and resolution times, all within a 24-48-hour feedback loop. Rapid personalization is also possible, with simple preference cards in the property management system (PMS) for things like pillow types, allergies, meal preferences, and languages. Not to mention sending pre-arrival welcome messages and smart upsells at check-in. For enhanced direct communication, what about unified multilingual chat scripts and careful training in listening and calming skills? A weekly communication quality index with randomized call or message reviews could also be helpful. For deeper digital integration, they should consider connecting the PMS to customer feedback tools and platforms like WhatsApp or chatbots, and automating room request notifications. Supporting employee well-being may mean providing flexible work schedules during peak seasons, gamifying assessments, and conducting monthly internal performance surveys (eNPS) with clear improvement actions. It also requires transforming training into weekly micro-learning sessions, on-site coaching, and monitoring how skills are applied in real-life situations with quick checklists after shifts.

The results reveal a clear "hierarchical" pattern: sustainability and social responsibility are at the forefront, followed by capability development, operational responsiveness, and

digitalization. Meanwhile, customer feedback, personalization, communication, and workplace environment scores are more neutral. This demonstrates a strong strategic intent, but there remains a gap in daily practices that prioritize customer experience.

Accordingly, the study recommends establishing a fully integrated system that reflects the voice of the customer. This means creating a closed-loop feedback system, accelerating personalization through PMS-based profiles, developing multilingual communication protocols, and linking training and digital tools to tangible KPIs (key performance indicators) that measure operational KPIs (such as response time, interaction quality, employee satisfaction, first-contact resolution, Net Promoter Score (NPS), and eNPS).

**Regarding, the significance of the standard deviation:** The Std. Deviation is 0.95, 1.01, 0.86, 0.97, 1.11, 0.99, 1.03, 1.11, 1.11 and 1.15 respectively, as for standard deviation values; standard deviation values actually indicate the variability of respondents' assessments. This indicates variability of opinions, showing a mix of different viewpoints among respondents on these items.

Low values, such as those between 0.86 and 0.97, indicate strong agreement among participants on issues such as enhancing sustainability and ongoing training. Most participants seem to agree on the importance of these areas, which is great it indicates a clear strategic priority. Moving to the middle values, between 0.99 and 1.03, we notice some acceptable variation. This could indicate different levels of technical readiness or resources within organizations.

The mean of 3.46 suggesting agreeing response, indicates a generally positive perception of sustainable practices. However, we must be careful, as relying solely on averages may miss some deeper insights. Therefore, regarding qualitative analysis, we can say that there is a general positive trend toward sustainability. However, this trend is not strong enough to reflect a complete commitment or comprehensive behavioral change. Furthermore, the variance in the standard deviation may indicate differences between hotels. For example, larger hotels may have the resources to implement sustainability, while smaller hotels may still face some difficulties.

Looking at this result from a Green Service Quality (GSQ) perspective, we find that it reflects participants' perception that environmental practices enhance service quality and customer satisfaction. Similarly, VBN theory explains these attitudes based on the underlying values and environmental beliefs that shape pro-sustainability norms. This suggests a series of values, beliefs, and norms that influence their willingness to adopt greener environmental practices.

However, the moderate level of agreement also demonstrates uneven willingness across organizations. This is consistent with previous studies highlighting resource disparities between large and small hotels. The findings here are consistent with previous literature such as Han et al. (2019), Kumar et al. (2021), and Abd-Elhamead et al. (2024). Thus, our findings not only provide statistical agreement, but also point to an urgent need for strategic interventions that transform these positive perceptions into more consistent behavioral and organizational changes.

### Section Six: Evaluation of How Government Policies Can Better Support Sustainable Tourism:

**Table (11) respondents' answers regarding Evaluation of How Government Policies Can Better Support Sustainable Tourism**

Statement		1	2	3	4	5	Mean	Std. Dev.	Rank
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
Providing financial incentives for sustainable tourism establishments	F.	17	41	133	157	52	3.46	0.98	6
	%	4.2	10.3	33.3	39.2	13.0			
Establishing mandatory laws and regulations for sustainable environmental practices	F.	26	54	92	172	56	3.44	1.09	7
	%	6.5	13.5	23.0	43.0	14.0			
Promoting awareness and education about sustainable tourism	F.	22	43	86	111	138	3.75	1.19	1
	%	5.5	10.7	21.5	27.8	34.5			
Investing in environmentally friendly infrastructure	F.	33	57	125	118	67	3.32	1.15	8
	%	8.2	14.2	31.3	29.5	16.8			
Supporting research and development in sustainable tourism fields	F.	44	82	140	85	49	3.03	1.16	10
	%	11.0	20.5	35.0	21.2	12.3			
Encouraging the use of renewable energy in tourism establishments	F.	27	33	90	171	79	3.60	1.08	3
	%	6.7	8.2	22.5	42.8	19.8			
Imposing taxes or fees on environmentally harmful tourism activities	F.	60	111	147	59	23	2.68	1.07	2
	%	15.0	27.8	36.8	14.7	5.7			
Enhancing collaboration between the government and the private sector in sustainability	F.	34	66	153	116	31	3.11	1.04	9
	%	8.5	16.5	38.2	29.0	7.8			
Developing sustainable and sustainable tourism transport systems	F.	15	81	108	125	71	3.57	1.10	4
	%	3.8	20.2	27.0	31.2	17.8			
Improving the management of natural resources and tourist sites	F.	15	61	126	125	73	3.55	1.07	5
	%	3.8	15.3	31.5	31.2	18.2			
Mean of respondents' answers							3.35	1.09	

**From the data illustrated in Table (11), it can be illustrated in the following findings:**

**The study draws a clearer idea of investigators views on sustainable tourism initiatives.**

Strategic Direction (Statements 1-6): First, regarding issues such as awareness and education, participants appear to be in strong agreement, with an average score of 3.75. The use of renewable energy is not far behind, with a score of 3.60, while the development of sustainable transportation is rated 3.57. All of these figures fall within the "agree" range (ranging from 3.40 to 4.20). Not only these issues, but improving natural resource management (3.55), providing financial incentives (3.46), and enforcing mandatory environmental regulations (3.44) also

receive approval. Together, these results indicate that participants support and endorse strategic approaches that can help shift toward greener tourism models.

**Operational and Systemic Challenges (Statements 7-10):** In contrast, support for operational or systemic issues declines significantly. For example, environmentally friendly infrastructure received a neutral score (3.32), which are not strongly endorsed. Then there are government-private sector collaborations (3.11), support for sustainable tourism research and development (3.03), and taxes on harmful tourism activities (only 2.68). These low scores indicate some skepticism or even resistance to ideas that require significant financial investment or extensive collective action across multiple sectors.

**General Trend and Inconsistency:** Although six out of ten items received a "agree" score, the overall average is 3.35, which leans more toward neutrality than full support. This kind of inconsistency suggests that while guests generally support sustainability when it comes to theoretical approaches, they are less supportive when it comes to systemic or resource-intensive measures. They balk when it comes to the finer details, especially when it comes to measures that require greater resources or significant commitment.

**Policy Implications:** For policy, the gap between public buy-in to sustainability and then their reluctance to implement it in practice highlights some significant obstacles. The difference between strategic buy-in and practical reluctance underscores the importance of addressing systemic barriers. Low scores on issues such as taxation, collaboration, and research point to structural problems that plague many sustainability discussions. Consider weak regulatory enforcement, funding gaps, and stakeholder resistance (Bramwell and Lane, 2013; Gössling and Hall, 2019). If these barriers are not addressed, we risk leaving sustainability efforts as mere rhetoric, rather than real change.

Standard deviation values indicate the level of variability in participants' answers. Values such as 1.19, 1.08, and so on tell us how different participants' answers are. If the value is around 1.10 or higher, such as 1.15 or 1.16, this indicates a significant difference in opinions on the topic. On the other hand, lower numbers, such as 0.98 or 1.04, show that participants were more in line with each other; they generally agreed on the topic.

**Thoughts on Standard Deviations and Thematic Categorization :**When we look at standard deviation values, they tell us more than just the average score. They actually reveal the extent of agreement or disagreement among participants. Take, for example, research and development support, which has a standard deviation of 1.19, or taxes on harmful tourism activities, which are 1.15. These relatively high numbers indicate substantial differences in how stakeholders view these regulatory measures. It's interesting to consider why this is so. For example, government officials may see taxes as a necessary tool for control, while those in the private sector may see them as just an additional financial burden. On the other hand, when we look at items like renewable energy use, which has a lower standard deviation of 0.98, the situation is different. This suggests stronger agreement here guests seem to be more in agreement about sustainability initiatives in this area, which is a good thing.

The study also has a mix of high-level strategies like legislation and research funding alongside practical practices, like awareness campaigns and the use of renewable energy. If we lump these together, we might miss some important nuances. Dividing them into strategic versus operational axes would enhance our understanding. Generally, operational measures garner greater support and consensus, while strategic interventions appear to elicit more diverse and divergent responses. This makes sense, given the complexity and cost of these strategic moves, not to mention the fact that they often require cross-sector collaboration and reliance on cross-sector governance. While operational measures tend to generate stronger consensus and

agreement, strategic or systemic interventions generate more divergent responses, reflecting their complexity and cost implications.

The results reveal a paradox. There is significant support for sustainability in general, but when it comes to determining the best approach, stakeholders' views do not always agree. This presents a challenge for policymakers. They urgently need to focus on dialogue and consensus-building, particularly on thorny topics such as taxation and research support. This is crucial to ensuring that sustainability efforts are not only well-intentioned but also truly practical and accepted.

The mean score is approximately 3.35. It falls right in the middle of the neutral zone, which ranges from 3.00 to 3.40. This means that participants, overall, were not very inclined in either direction; rather, they were somewhat ambivalent, neither agreeing nor completely disagreeing with the statements.

### Section Seven: Recommendations:

**Table (12) respondents' answers regarding Recommendations**

Statement		1	2	3	4	5	Mean	Std. Dev.	Rank
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
Providing financial incentives and tax exemptions to support sustainability	F.	46	47	81	106	120	3.45	1.25	5
	%	11.5	11.8	20.2	26.5	30.0			
Implementing awareness campaigns and training programs for workers and tourists	F.	22	43	86	111	138	3.75	1.19	1
	%	5.5	10.7	21.5	27.8	34.5			
Developing laws and regulations that require establishments to adopt sustainable tourism practices	F.	81	108	125	71	15	2.67	1.10	9
	%	20.2	27.0	31.2	17.8	3.8			
Encouraging the use of renewable energy sources and efficient resource management	F.	13	40	96	171	80	3.66	1.01	3
	%	3.2	10.0	24.0	42.8	20.0			
Enhancing local community participation in tourism management	F.	24	64	146	120	46	3.26	1.03	8
	%	6.0	16.0	36.5	30.0	11.5			
Investing in sustainable public transportation and sustainable buildings	F.	14	29	98	170	89	3.72	1.01	2
	%	3.5	7.2	24.5	42.5	22.3			
Strengthening partnerships between the government, private sector, and civil society	F.	35	58	109	142	56	3.32	1.13	7
	%	8.8	14.5	27.2	35.5	14.0			
Imposing restrictions on environmentally harmful activities and promoting eco-tourism	F.	35	65	88	142	70	3.36	1.19	6
	%	8.8	16.2	33.0	35.5	17.6			
Establishing systems to monitor and measure the environmental and social impact of tourism	F.	18	25	145	131	81	3.58	1.01	4
	%	4.5	6.2	36.2	32.8	20.3			
<b>Mean of respondents' answers</b>							<b>3.40</b>	<b>1.10</b>	

From the data illustrated in Table (12), it can be illustrated in the following findings:

The results reveal support for various sustainability measures. As you can see, when it comes to behavioral and awareness-raising initiatives such as worker and tourist training programs, which received a score of 3.75, or the push for renewable energy and improved resource management, which received a score of 3.66 the scores were very encouraging, ranging from 3.40 to 4.20. This indicates that participants are generally supportive of ideas that focus on education and individual activities. Similarly, infrastructure-related measures, such as investing in sustainable transportation and green buildings (which received a score of 3.72) or establishing systems to monitor environmental and social impacts (which received a score of 3.58), were also highly favored. There appears to be a good understanding of the importance of physical infrastructure and institutions in promoting sustainable tourism.

However, the challenge lies in the fact that policy-based measures have not achieved the desired success. Financial incentives, at 3.45, exceeded the threshold for approval, while restrictions on harmful activities (3.36) and encouraging public-private partnerships (3.32) fell into the neutral zone. The lowest score was for binding sustainability laws, at just 2.67, clearly demonstrating weak enthusiasm for implementing regulations.

These results highlight an important gap: While people are comfortable with awareness-raising, infrastructure, and incentive-based approaches, they appear to avoid heavier policy interventions that require compliance or cross-sector coordination. Overall, the average score of 3.40 fluctuates between "approval" and "neutrality." This suggests that support is temporary, leaning more toward neutrality than strong agreement.

The stark difference between high scores for behavioral measures and low scores for policy initiatives highlights a significant challenge. To truly promote sustainability, we will likely need a combination of popular awareness and top-down governance – which, interestingly, seems to be the area where support is most lacking.

The Std. Deviation is 1.19, 1.01, 1.01, 1.01, 1.25, 1.19, 1.13, 1.03 and 1.10 respectively, the standard deviation values here reflect the extent to which investigators' answers varied from one another. Higher values, such as 1.19, 1.25, and 1.13, indicate greater dispersion, meaning that opinions were more diverse. While values hovering around 1.00 typically indicate a good level of agreement among responses but when you start to notice higher numbers, such as 1.19, 1.25, or even 1.13, things get more complicated. This suggests variations in stakeholder roles, which could be due to many reasons perhaps related to people's roles or simply to their varying levels of knowledge about the topic. Sometimes, the practical challenges of implementing sustainability practices can also hinder action.

Understanding these differences is crucial, as they highlight discrepancies in how people see things. This means there's a need to focus on clarifying what matters, better communication, or even providing some training to help everyone understand things more uniformly. It's all about building stronger consensus.

Values closer to 1.00 mean there was greater agreement among answers. An important point: The overall mean score was 3.40, which falls within the "agreement" range (3.40-4.20). This means that, in general, guest tended to agree with the statements posed.

**Hypotheses Test:****First Hypothesis Test:****Table (13) Simple linear regression analysis for First Hypothesis Test**

Variable	B	Beta $\beta$	R	R <sup>2</sup>	F	F Sig.
environmentally friendly practices	1.438	0.634	0.634	0.402	33.670	0.000
green marketing strategies	0.628					

Table 13 shows the results of the regression analysis related to the first hypothesis. You will find that the correlation coefficient  $R = 0.634$ , and the  $R^2$  value is 0.402. This indicates that green marketing strategies are responsible for approximately 40.2% of the observed variations in environmentally friendly practices. However, there is still 59.8% that we cannot fully explain. This suggests that other factors, such as employee awareness of environmental issues, organizational culture, laws and regulations, and even what customers value in terms of the environment, may also play a significant role. Therefore, it is clear that we should consider including more variables in future studies to get a more comprehensive picture.

We can formulate the regression equation as follows: Environmentally friendly practices ( $Y$ ) =  $1.438 + 0.628$  (green marketing strategies). This equation shows a fairly linear relationship between green marketing strategies and environmentally friendly practices. Furthermore, since we are only dealing with one independent variable, we don't have to worry about multicollinearity, which is a good thing.

The equation also tells us that for every one-unit increase in green marketing strategies, we see a 0.628-unit increase in environmentally friendly practices. And wait, this isn't just a random number it's statistically significant ( $F = 33.670$ ,  $Sig = 0.000 < 0.05$ ). This means that organizations that intensify their green marketing efforts actually see improvements in their sustainable practices. But here's the kicker: the model's modest explanatory power shows that it's not just marketing that matters. We need to back it up with strong operational, cultural, and legal support. Things like employee training, environmental certification, or adopting sustainable processes are equally important for enhancing environmental performance.

Theoretically, the results align well with the Value-Belief-Norm (VBN) theory and the Green Service Quality (GSQ) framework. These theories help us understand the behaviors and service mechanisms that influence environmental practices. They also highlight how marketing interacts with consumer values and norms to influence sustainable behavior. Therefore, including these frameworks adds real depth to our findings.

From a methodological perspective, some assumptions, such as linearity and significance, can be partially verified; given that there is only one independent variable there are no multicollinearity issues here. However, the study here did not address some key assumptions, such as the normal distribution of residuals, independence of errors, or homogeneity of variance. Furthermore, we did not provide confidence intervals or margins of error, which are crucial for verifying the accuracy of our findings. Addressing these points in future research may enhance the reliability and generalizability of our findings.

Finally, the F-test result was statistically significant ( $F = 33.670$ ,  $Sig = 0.000 < 0.05$ ), meaning we can confidently reject the null hypothesis. Therefore, we are on solid ground to accept the alternative hypothesis: green marketing strategies do indeed influence environmentally friendly practices.

## Second Hypothesis Test:

Table (14) Simple linear regression analysis for Second Hypothesis Test

Variable	B	Beta $\beta$	R	R <sup>2</sup>	F	F Sig.
positive customer perceptions	2.694	0.421	0.421	0.177	10.782	0.002
green marketing strategies	0.341					

In Table 14, we have the regression results for Hypothesis 2. What we see here is a correlation coefficient of 0.421 and a coefficient of determination of 0.177. This indicates that green marketing strategies explain only about 17.7% of the variance in how positively customers perceive things. This reflects poor explanatory power. It leaves 82.3% of these perceptions unexplained. This suggests that other factors, such as employee awareness of environmental issues, organizational culture, laws and regulations, service quality and brand image, how fair customers perceive prices, or even what customers value in terms of their environmental awareness, are at play. Therefore, to gain a clearer picture, we need to include these factors in future research models. Now, there's also a regression equation we can consider: Customer Positive Impressions (Y) = 2.694 + 0.341 (Green Marketing Strategies) This equation shows a fairly linear relationship between green marketing strategies and customer perceptions. Furthermore, since we're dealing with only one independent variable, we don't need to worry about multicollinearity.

In simpler terms, every time we improve our green marketing strategies by one unit, customer impressions improve by about 0.341 units. This is certainly statistically significant (F = 10.782 and Sig = 0.002, which is less than 0.05). However, the practical significance is still very modest, especially with such a small percentage of explained variance due to the low explanatory power of the model. So, while adopting a green marketing approach can certainly improve customer impressions, it's not a panacea. We urgently need to combine these efforts with other efforts, such as high-quality eco-friendly products, sustainability certifications, or even just open and honest communication.

Theoretically, these results align well with ideas like the "Triple Bottom Line" (TBL) and the theory of green consumer behavior. These results remind us that customer perceptions of sustainability are complex they're not just about attractive marketing, but also about a company's authenticity and performance.

Regarding the methodology, the study did not include some important controls for regression assumptions such as linearity and ensuring the absence of multicollinearity. Ignoring these controls makes the results less reliable. Confidence intervals or margins of error, which are essential for understanding the accuracy and reliability of these estimates, were also not provided. For future studies, including these elements would certainly enhance the validity and generalizability of the model.

## Third Hypothesis Test:

Table (15) Simple linear regression analysis for Third Hypothesis Test

Variable	B	Beta $\beta$	R	R <sup>2</sup>	F	F Sig.
customer loyalty (repeat visit)	2.022	0.487	0.487	0.237	15.512	0.000
green marketing strategies	0.479					

The results of the regression analysis are shown in Table (15). This analysis shows that green marketing strategies do have a significant impact on customer loyalty, specifically on repeat visits. We examine the regression coefficient B = 0.479 and the beta coefficient ( $\beta$ ) of 0.487. This is a very significant indicator! The model explains approximately 23.7% of the variance

( $R^2 = 0.237$ ), which is very good. In addition, the F-test value of 15.512 at a significance level of 0.000 confirms the validity of our model. Therefore, we can reject the null hypothesis and proceed with the alternative hypothesis. The regression equation is analyzed as follows:

$$Y = 2.022 + 0.479X$$

Where: - Y = Customer Loyalty (Repeat Visits)

- X = Green Marketing Strategies

**Limitations of the Model:** Although we have some strong statistics, there is a problem. The explanatory power of the model is rather weak ( $R^2 = 0.237$ ). This means that, despite the role of green marketing strategies, they only explain a limited portion of the factors driving customer loyalty. There are certainly other important factors at play—such as customer satisfaction, perceived service quality, trust, brand image, competitive pricing, and customer environmental awareness—all of which are known to influence loyalty in the hospitality and tourism world. This means that relying on green marketing alone is not sufficient to comprehensively enhance customer loyalty. Loyalty is a multidimensional phenomenon influenced by a combination of psychological, behavioral, and market variables. Ignoring these factors may limit the explanatory power of the model. Take service quality, for example; it may act as a mediating factor. Meanwhile, factors such as environmental concerns or price sensitivity may also influence the relationship. Failure to consider these aspects makes the model appear incomplete.

Although the model is statistically significant (F Sig. < 0.05), the low coefficient of determination requires caution in interpreting the results. It should be emphasized that the effect is present, but of a moderate magnitude, and needs to be complemented by other factors to further explain the phenomenon.

Speaking of limitations, the lack of confidence intervals (CIs) or margins of error means that we cannot generalize these results as precisely as we would like. If they had reported confidence intervals for the regression coefficients—for example, a 95% CI for  $B = 0.479$ —it would have greatly helped us understand the potential range of effects.

**Integration with Green Marketing and Sustainability Theory:** Theoretically, the results are somewhat consistent with Value-Belief-Norm (VBN) theory, which asserts that consumers' environmental orientations support positive behaviors such as loyalty to eco-friendly establishments and the concept of green service quality. In short, implementing green marketing strategies can enhance customers' pro-environmental beliefs, which may in turn lead to increased loyalty, such as repeat visits. However, the low  $R^2$  coefficient suggests that focusing solely on green practices is not enough to paint a complete picture of the drivers of loyalty. It points to the need for a more holistic approach—one that combines economic value, service excellence, and sustainable practices. It is also consistent with Sustainable Marketing Theory, which argues that integrating an environmental dimension into marketing practices enhances customer perceived value.

**Practical Implications:** Green marketing strategies arguably contribute to customer loyalty, but they represent only one part of the overall strategy. Although these findings are statistically significant, they should be treated with caution. For hotel managers, it is clear that relying solely on green marketing will not work if they want to build customer loyalty. Instead, it is about combining these green initiatives with improvements in service quality, creating personalized experiences, and transparency about sustainability efforts. This approach not only enhances competitive advantage but also capitalizes on the growing global interest in sustainable tourism. Therefore, companies must integrate green marketing with quality

improvements, service innovation, and building a strong brand image to sustainably increase customer loyalty.

#### Fourth Hypothesis Test:

Table (16) Simple linear regression analysis for Fourth Hypothesis Test

Variable	B	Beta $\beta$	R	R <sup>2</sup>	F	F Sig.
positive customer perceptions	2.365	0.526	0.526	0.277	19.130	0.000
environmentally friendly practices	0.421					

As for the analysis of the fourth hypothesis, looking at Table 16, we see the results of a simple linear regression to determine the validity of the fourth hypothesis. The correlation coefficient, or R, was 0.526. This isn't bad, but the coefficient of determination, R<sup>2</sup>, was only 0.277, indicating that environmentally friendly practices (we'll call it X) accounted for only about 27.7% of the variance in positive customer sentiment (i.e., Y).

While this correlation is statistically significant—that is, truly statistically significant (F = 19.130, Sig. = 0.000, which is well below 0.05), its lack of further explanation suggests that other factors are at play. Things like green service quality, how customers perceive value, their satisfaction, trust, and even how the sustainability message is communicated are all key factors in shaping these positive perceptions. This is also consistent with the Value Belief Norm (VBN) theory, or the Green Consumer Behavior Theory, which shows how environmental attitudes can influence consumer opinions and behavior.

In actual numbers, we can express our model as follows:

Y (positive customer perceptions) = 2.365 + 0.421 \* X (environmentally friendly practices).

Theoretically, with every increase in environmentally friendly practices, we can expect an increase of approximately 0.421 in positive customer perceptions. This is consistent with Green Marketing Theory and Theory of Planned Behavior (TPB), which suggest that when companies adopt these practices, customers tend to view them as more committed to sustainability, leading to these positive and favorable feelings. This is also consistent with the Value Belief Norm (VBN) theory, which shows how environmental attitudes can influence consumer opinions and behavior.

In practice, even with these solid statistics, simply adopting green practices is not enough to boost positive impressions of hotels. Rather, it must be accompanied by other strategies, such as effective customer engagement, highlighting environmental values in the brand, improving service quality, and being open about environmental reporting. All of this is consistent with previous research indicating that sustainability is most clearly evident when it is an integral part of a company's identity, rather than just a basic element.

#### Fifth Hypothesis Test:

Table (17) Simple linear regression analysis for Fifth Hypothesis Test

Variable	B	Beta $\beta$	R	R <sup>2</sup>	F	F Sig.
customer loyalty (repeat visit)	1.617	0.507	0.507	0.257	17.700	0.000
environmentally friendly practices	0.567					

As illustrated in Table (17), a simple linear regression analysis reveals some interesting insights. It appears that eco-friendly practices have a positive impact on customer loyalty,

especially with regard to repeat visits. The correlation coefficient here is 0.507, and the coefficient of determination is 0.257. This indicates that these green practices account for only about 25.7% of the impact on customer loyalty, which reflects moderate explanatory power and leaves a significant amount of variance unexplained. This leaves a very large portion—74.3%—unexplained.

This unexplained variance may be attributed to other factors we didn't consider in the model. Factors such as service quality, customer satisfaction, perceived value, or even cultural factors may play a role here. Therefore, it's definitely worth considering for future research.

The regression equation is  $Y = 1.617 + 0.567X$ . Here, Y represents customer loyalty—i.e., the likelihood of them returning—and X represents eco-friendly practices. It's clear from this that if a company increases its environmentally friendly practices by one unit, we can expect customer loyalty to increase by 0.567.

While the model shows strong statistical significance—yes,  $F = 17.700$  and a p-value of 0.000, which is less than 0.05—focusing on the numbers alone isn't enough. We really need to consider the practical significance as well. What's interesting here is that, although green practices appear to boost loyalty, they aren't the only factor at play.

Relevant to theory: These results are also consistent with the Value-Belief-Norm theory, which suggests that when customers care about the environment, they tend to act favorably toward companies that share those values. They also align well with green marketing ideas, where a company's commitment to the environment builds trust and encourages repeat purchases.

In terms of practical implications, this suggests that if hotels and tourism companies invest in environmentally friendly practices, they may experience increased customer loyalty. However, managers must remember that these environmental efforts must be part of a larger picture that also includes excellent service quality and a superior overall customer experience. Furthermore, let's not forget that these outcomes may not be applicable everywhere—what works in one local context may not apply to different industries or cultures.

### Sixth Hypothesis Test:

Table (18): Pearson Correlation Matrix for relationship between study variables

Variables	green marketing strategies	customer loyalty	environmentally friendly practices
green marketing strategies	1.000	0.850**	0.841**
customer loyalty		1.000	0.870**
environmentally friendly practices			1.000

\*\*. Correlation is significant at the 0.01 level (2-tailed).

From the data illustrated in Table (18), Interpretation of Hypothesis Testing, the results of the Pearson Correlation Coefficients between the variables we are studying. There are very strong correlations, such as (0.850) between green marketing strategies and customer loyalty, (0.841) between green marketing strategies and environmentally friendly practices, and (0.870) between customer loyalty and environmental practices. All of these correlations are statistically significant at the ( $p = 0.000 < 0.01$ ) level, meaning that the relationship here is clear and supports the research hypothesis.

However, despite all these strong numbers, it is important to be aware that the results reflect correlational relationships, not causation. That is, we cannot conclude the presence of a direct effect without relying on a longitudinal or experimental design.

Theoretically, these results are consistent with Sustainability Theory and green marketing concepts, which demonstrate that environmental and sustainable marketing practices enhance customers' perceptions of an organization's value, and also increase their commitment and loyalty in the long term. Let's not forget the theory of symbolic capital, which states that adopting environmentally friendly practices enhances an organization's legitimacy and positive image, which in turn is reflected in customer loyalty.

From a practical perspective, these results indicate that green marketing strategies are not merely advertising initiatives, but rather strategic tools for enhancing customer loyalty. This is because we see that consumers have become more aware of environmental issues and tend to support organizations that align with their values. However, some of the variance in customer loyalty remains unexplained by these relationships. It is clear that other factors, such as service quality, perceived value, or brand trust, play an important role.

In light of this, we can say that the results provide strong support for Hypothesis 6, but it requires a deeper and more comprehensive analysis in future studies, including examining mediating and moderating variables, verifying methodological assumptions, and providing confidence intervals, in order to arrive at more robust and generalizable results.

### **Seventh Hypothesis Test:**

Table (19): Pearson Correlation Matrix for relationship between study variables

<b>Variables</b>	<b>government support</b>	<b>environmentally friendly practices</b>	<b>customer loyalty</b>
government support,	1.000	.783**	.772**
environmentally friendly practices		1.000	.782**
customer loyalty			1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed).

From the data illustrated in Table (19), the results show the Pearson correlation coefficients for our study on a sample of 400 individuals. The conclusion: There is a strong, statistically significant positive relationship between government support and environmentally friendly practices ( $r = 0.783$ ,  $p < 0.01$ ). It doesn't stop there; we also observe a strong link between government support and customer loyalty ( $r = 0.772$ ,  $p < 0.01$ ). Furthermore, there is a strong link between environmental practices and customer loyalty ( $r = 0.782$ ,  $p < 0.01$ ).

What this tells us is that government support motivates organizations to adopt environmentally friendly practices, which in turn enhances customer loyalty. Theoretically, these results are consistent with legitimacy theory, which suggests that when organizations commit to environmental responsibility, they build trust with society and their customers. We can also relate this to sustainability theory, which suggests that external factors, such as government policies, influence the adoption of sustainable practices and improve customer value in the long term.

But here's the problem: Although these relationships are strong, they don't explain everything. There are likely other influential factors that also influence customer loyalty and the adoption of environmental practices—such as service quality, corporate image, and individual

customers' feelings about these issues. This suggests that future studies should expand our model to include mediating or moderating variables.

Practically speaking, this means that if governments increase their support, for example, by granting tax breaks or implementing environmentally friendly laws, this may lead organizations to become more committed to sustainability. This means that customers, who are more aware of environmental issues, may feel more loyal to them. So, this isn't just a matter of mathematical calculations; it has real-world implications for green marketing strategies. However, caution is needed here. The mere presence of a strong association doesn't necessarily mean that government support is the direct cause of increased loyalty. It may be just one factor among several.

In conclusion, these findings highlight strong links between government support, environmentally friendly practices, and customer loyalty, which are fully consistent with green marketing and sustainability theories. However, there is still ample scope for more systematic testing and expanding our understanding of these dynamics, especially when it comes to practical strategies for fostering loyalty through effective and sustainable government policies.

### **Eighth Hypothesis Test:**

Table (20) Simple linear regression analysis for Eighth Hypothesis Test

Variable	B	Beta $\beta$	R	R <sup>2</sup>	F	F Sig.
sustainable hotel performance	1.025	0.587	0.587	0.430	18.212	0.000
environmentally friendly practices	0.220					

As illustrated in Table (20) Hypothesis 8: There is a close relationship between environmentally friendly practices and sustainable hotel performance.

When looking at the statistics, we need to address a few assumptions. First, linearity the relationship between the independent variable (environmentally friendly practices) and the dependent variable (sustainable hotel performance) was tested using Pearson's correlation coefficient with a sample size of 400. The results showed a moderately positive relationship, showing an R value of 0.587, which is acceptable.

Then there is homogeneity of variance, which is simply a fancy way of saying there is no evidence of increased variance in the residuals when looking at the values of the independent variables. This is a good sign of a valid regression. As for the normal distribution of the residuals, we confirmed this assumption thanks to the Shapiro-Wilk test previously conducted. Therefore, all of these tests actually help strengthen the reliability of the study's statistical model.

As for the effect size, the unstandardized coefficient B = 0.220 is statistically significant ( $p < 0.01$ ), but frankly, the practical effect size is very small. This means that while improving environmentally friendly practices helps, the improvement in sustainable hotel performance is not significant. The standardized beta coefficient of 0.587 shows moderate power compared to other available models.

Regarding variance, the R<sup>2</sup> value of 0.430 indicates that 43% of the variance in sustainable hotel performance can be explained by these environmentally friendly practices. However, 57% remains a mystery as other factors, such as service quality, may be at play. Future studies need to consider these factors, such as customer satisfaction, government support, and corporate culture, to accurately determine their explanatory power.

What this means in the real world, especially for the tourism and hotel sectors. While the effect may seem somewhat weak, there is still a substantial benefit: hotels can stand out by adopting greener practices, such as energy and water conservation. This would enhance their image among environmentally conscious guests. Decision makers should pay attention to this point, as it may guide them to formulate stricter environmental policies and align them with hotel classification standards, such as eco-labels and green certifications. Furthermore, this emphasizes the need to provide sustainability training programs for hotel employees.

Integration with relevant theories: Integrating these findings with existing theories is crucial. For example, green marketing theory supports the idea that investing in green practices can enhance a company's image and attract loyal customers. Then there's the value-belief-norm theory, which demonstrates how embracing environmental values can positively shape operational practices and lead to sustainable performance. And let's not forget the theory of sustainable competitive advantage—which suggests that while environmentally friendly practices can create long-term competitive advantages, other factors can also play a role.

To summarize, here's the regression equation: Sustainable hotel performance (Y) = 1.025 + 0.220 × environmentally friendly practices (X).

It is also necessary to add a 95% confidence interval to the regression coefficient (B = 0.220). For example, if its value ranges between 0.150 and 0.290, we can be fairly confident that the effect is statistically significant, even if it is not large.

## **Recommendation**

### **Proposed Recommendations to Promote Sustainability in the Tourism and Hotel Sector**

Based on the results of the study and theoretical reviews, a set of practical recommendations was formulated to enhance the role of green marketing and sustainability in the tourism and hotel sector, prioritizing the most urgent and feasible.

#### **First: Institutional and Regulatory Reforms (Highest Priority)**

Adopting binding policies and legislation: Enacting supportive laws to oblige hotel and tourism establishments to adhere to environmental standards (such as specific energy and water consumption rates). Regarding financial and tax incentives: Tax exemptions and financial support should be provided to hotels that obtain recognized certifications such as ISO 14001 or Green Key. Cost and resource estimation should take into account: Allocating government budgets or private sector partnerships (PPP) to cover the costs of green technology, while identifying the human and technical resources required for implementation.

#### **Second: Hotel and Tourism Facilities Applications (High Priority)**

Transitioning to green technology: Installing solar panels, water recycling systems, and smart sensors to reduce energy and water waste; Encouraging human resource training: Implementing ongoing training programs for employees on sustainable practices; Emphasizing the provision of measurable practical mechanisms: Setting operational indicators such as reducing energy consumption by 15% within three years; Recycling 30% of waste by 2027. Increasing the percentage of employees trained in sustainability to 80%.

#### **Third: Local community and community engagement (medium priority)**

Creating green jobs: Employing local community members in ecotourism and resource management projects; Supporting traditional crafts: Integrating handicrafts and local cuisine into sustainable tourism supply chains; implementing practical steps: Establishing local

ecotourism associations, organizing green festivals, and developing environmental guidance programs for visitors.

#### **Fourth: Performance indicators and monitoring mechanisms (medium-long-term priority)**

Linking indicators directly to tourism outcomes such as: "visitor satisfaction rates with environmental experiences, occupancy rates of sustainable hotels compared to non-sustainable hotels, and the percentage of tourists returning due to environmental services; Focusing on periodic reporting: Publishing semi-annual evaluation reports that demonstrate progress and are transparently presented to stakeholders (government, hotels, and the community).

#### **Fifth: Timeframe and Implementation Plan (Supporting Priority)**

Short-term (1-2 years): Amend policies and launch training programs. Medium-term (3-5 years): Invest in green technology and expand community participation. Long-term (5-10 years): Build a national base for sustainable hotels and disseminate the experience to other tourist destinations. Geographical expansion is not limited to Luxor and Aswan, but rather extending the experience to destinations such as Sharm El-Sheikh, Hurghada, and the North Coast to address similar environmental challenges.

#### **For Future Research**

After reviewing the results of this study, it is clear that there are several directions that future research could take in the field of green practices and sustainable hospitality. To begin with, it might be useful to expand the sample. Consider including different tourism sectors, such as eco-resorts or even floating hotels. This way, the degree to which different operational practices align with each other can be compared.

Next, it might be useful for future studies to examine some mediating or influencing factors, such as the impact of customer satisfaction or service quality. This could help us delve deeper into how sustainability relates to customer loyalty.

The importance of using a combination of research methods should also not be overlooked. Longitudinal studies that track changes over time or that combine quantitative and qualitative approaches, can strengthen the results and provide a more comprehensive understanding. Furthermore, examining the cultural and organizational aspects that influence the adoption of green practices, especially in different tourism contexts, would be extremely useful.

With the growing interest in sustainability and social responsibility, there is much to explore in relation to technological innovation and digital transformation. How do these elements support green operations in the hospitality sector? We must not forget their impact on employee satisfaction and mental health. Ultimately, employees play a pivotal role in the success of environmental strategies.

Ultimately, these research avenues will help build a richer knowledge base and provide practical recommendations. This will guide the tourism and hospitality sector toward a more sustainable future.

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## ممارسات التسويق الأخضر والأداء الفندقي المستدام: دراسة تطبيقية في الأقصر وأسوان

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المعلومات المقالة	الملخص
الكلمات المفتاحية التسويق الأخضر؛ الاستدامة؛ الأداء الفندقي المستدام؛ الأقصر و أسوان.	يهدف هذا البحث إلى دراسة تأثير استراتيجيات التسويق الأخضر على استدامة قطاع الضيافة والسياحة، من خلال دراسة تطبيقية على فنادق الأقصر وأسوان. تتبع مشكلة البحث من ضعف تبني ممارسات التسويق الأخضر في الفنادق المصرية، رغم تزايد الضغوط البيئية والتغيرات العالمية الداعمة للسياحة المستدامة. يعتمد الأساس المفاهيمي لهذا البحث على النظرية الأساسية: نظرية سلوك المستهلك الأخضر ونظرية القيم والمعتقدات والمعايير. اعتمدت الدراسة على منهج كمي، واستخدم استبيان مغلق لجمع البيانات. تم تطبيق الأداة على عينة عشوائية بسيطة من 400 استبيان صالح من 450 مستجيبًا من نزلاء الفنادق ذات الخمس نجوم وشركات السياحة التابعة لها في الأقصر وأسوان خلال الفترة من ديسمبر 2024 إلى أبريل 2025. تم تحليل البيانات المجمعة باستخدام برنامج SPSS الإصدار 25. تسلط الدراسة الضوء على فجوة بحثية تتمثل في ندرة الدراسات التطبيقية الحديثة التي تبحث في العلاقة بين التسويق الأخضر والاستدامة في السياحة الثقافية في صعيد مصر. أظهرت نتائج التحليل الإحصائي وجود تأثير إيجابي كبير لاستراتيجيات التسويق الأخضر مع النزلاء في تعزيز الاستدامة البيئية والاجتماعية والاقتصادية وزيادة رضا العملاء وتحسين صورة الفندق والوجهة السياحية. أهم المساهمات لهذا البحث هي: إنه من أوائل الدراسات التي تدرس تجريبيًا العلاقة بين ممارسات التسويق الأخضر وأداء الفنادق المستدامة، ويلقي نظرة فاحصة على كيفية ارتباط ممارسات التسويق الأخضر بأداء الفنادق المستدامة في الوجهات التراثية مثل الأقصر وأسوان. علاوة على ذلك، توفر نتائج الدراسة بعض الرؤى العملية لمديري الفنادق. يمكنهم استخدامها لدمج الممارسات الخضراء في عملياتهم اليومية، مما قد يعزز القدرة التنافسية ورضا العملاء والمساءلة. تُثري هذه الدراسة المناقشات الأكاديمية وتمهد الطريق لبحوث مقارنة مستقبلية عبر وجهات متنوعة يمكنها مقارنة وجهات مختلفة.