

## Article

# Assessing Green Practices on Eco-Friendly Hotel Customer Loyalty: A Partial Least Squares Structural Equation Modeling and Fuzzy-Set Qualitative Comparative Analysis Hybrid Approach

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**Abstract:** With a global focus on environmental sustainability, hotels worldwide are actively transitioning their services from conventional to eco-friendly practices. This study aims to comprehensively understand the factors that contribute to visitors' satisfaction in eco-friendly hotels and how this satisfaction influences customers' future reactions towards such environmentally conscious establishments. Employing the Stimulus-Organism-Response theory, this study collected data from 277 respondents using a robust quantitative research strategy. A combined approach of Partial Least Squares Structural Equation Modeling (PLS-SEM) and Fuzzy-Set Qualitative Comparative Analysis (fsQCA) was employed, to uncover deep insights into visitors' satisfaction and their reactions towards eco-friendly hotels. The PLS-SEM results reveal significant associations between customers' satisfaction towards eco-friendly hotel services and service quality, green practices, perceived value, and environmental sensitivity. Moreover, this study highlights a positive correlation between satisfaction and crucial outcomes like revisit intention (RVI), willingness to pay a premium (WTPP), and word-of-mouth intention (WOMI). Complementing these findings, the fsQCA analysis uncovers intricate causal relationships among antecedents that influence customer satisfaction in eco-friendly hotels. By offering critical marketing insights, this study provides guidance for hotels, the tourism industry, and policymakers on attracting customers to eco-friendly hotels, to meet the increasing demands for environmental sustainability.

**Keywords:** eco-friendly hotels; satisfaction; green practice; environmental sensitivity; revisit intention; Stimulus-Organism-Response (S-O-R) theory



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## 1. Introduction

The green economy has become a central focus in conceptual policy frameworks for sustainable development, driven by concerns over global warming, climate change, and escalating environmental pollution [1]. Recent studies underscore the crucial role sustainability in the hotel industry will play in the future success of this competitive sector [2]. It has been established that environmental sustainability and conservation practices are top priorities for customers, with 71% considering these factors when selecting a hotel to stay in [3].

Despite the hotel industry's significant contribution to the global economy, its contribution to carbon emissions (accounting for 8% of global emissions) and environmental pollution have become growing concerns for customers [4]. The World Travel and Tourism Council [5] warns that climate change risks and the severe impacts of environmental pollution are more prevalent in countries where tourism is predicted to increase. The excessive

consumption of natural resources, water, electricity, and non-recyclable products results in substantial waste generation and air pollutants, leading to adverse environmental effects. In fact, Wang et al. [6] highlighted that, on average, each hotel visitor produces one kilogram of waste per night. While it is acknowledged that environmental interest is on the rise within the hospitality sector, it is crucial to recognize that the extent of this interest varies widely among hotel managers across the globe. In many instances, actions taken are not uniform, with some regions displaying a more proactive engagement than others. This study acknowledges the disparities and, as such, narrows its focus on the specific context of Bangladesh. Bangladesh, as a developing country with a burgeoning hospitality industry, presents a unique case where environmental attention is gaining momentum, but also faces distinct challenges. In this region, environmental considerations in the hotel industry are not just a matter of global best practices, but a necessary response to local environmental pressures and customer expectations.

As a result, an increasing number of environmentally conscious customers are basing their hotel stay decisions on the eco-friendly services offered by hotels. Consequently, more hotels are proactively transitioning to eco-friendly and sustainable operations to cater to the growing demand for eco-friendly hotel services among customers [7]. While adopting eco-friendly practices can offer various benefits, such as reduced operational costs, increased competitive advantage, ecological benefits, and enhanced operational efficiency [2], hotel management is concerned about customers' response and the return on investment associated with implementing green operations.

Simultaneously, customers' environmental awareness is on the rise, motivating them to choose products and services that support environmental sustainability [8]. Therefore, green practices in the hotel industry and consumers' responses to eco-friendly hotels have become focal points of recent research. Some studies have explored visitors' intention to visit eco-friendly hotels and their positive perception of eco-friendly hotel goods and services in various countries [6,9–12]. For example, [13] investigated how visitors' mental health perceptions influence their satisfaction and revisit intention, while van Huy et al. [14] uncovered that the visit intention of eco-friendly hotels depends on the green attitudes and environmental concern of customers. Sharma et al. [15], on the other hand, observed that visit intention in eco-friendly hotels is significantly influenced by perception of the newness and uniqueness of the eco-innovative attributes of hotels. According to Sadiq et al. [10], concern about the environment and health has an influence on visit intention of customers in eco-friendly hotels. Moreover, Sharma and Chen [16] performed a study to understand how customers' pro-environmental attitude, knowledge, and a selective list of green hotel attributes contribute to eco-friendly hotel visit intentions of visitors. However, few studies have specifically investigated the factors that generate local visitors' satisfaction with eco-friendly hotels services and how satisfied local visitors respond after experiencing an eco-friendly hotel stay, especially from the perspective of developing countries like Bangladesh.

To address this gap, this study aims to explore the dimensions leading to customer satisfaction, subsequently influencing revisit intention in eco-friendly hotels, word-of-mouth intention, and willingness to pay a premium for services. The research objectives are as follows:

RO1: To investigate the stimulus factors influencing customer satisfaction.

RO2: To examine the effect of satisfaction on customers' loyalty.

Studies have already shown that green practices significantly contribute to increasing customer satisfaction in hotels [2]. Moreover, the quality of eco-friendly services in green restaurants and their perceived value have also been found to impact customer satisfaction [17,18]. On the other hand, environmentally conscious customers' internal satisfaction increases when they experience services from eco-friendly restaurants [19]. Customer satisfaction has been linked to significant benefits for eco-friendly hotels and restaurants, including repeat visit intention (RVI), positive word-of-mouth intention (WOMI), and willingness to pay a premium (WTPP) [20]. Based on these previous studies, factors such

as service quality, green practices, perceived value, and environmental sensitivity are likely to impact customer satisfaction towards eco-friendly hotel services.

Consequently, satisfied customers respond by revisiting eco-friendly hotels, leaving positive reviews, and being willing to pay a premium for green services. This study's findings may help identify critical factors associated with enhancing customer satisfaction, leading to customers' RVI, WOMI, and WTPP. Eco-friendly hotel providers can utilize these insights to improve their services according to customers' current and future demands, fostering loyalty among existing customers and attracting environmentally sensitive tourists from emerging countries. Additionally, researchers in the green service literature will have valuable references on how consumers behave, to support environmental sustainability. Moreover, theoretical advancements will be achieved through the application of a hybrid strategy involving PLS-SEM and fsQCA to measure the utilized structural model. This approach will contribute to expanding the knowledge base for future researchers exploring antecedents influencing customers' satisfaction with eco-friendly hotels.

## 2. Literature Review

### 2.1. The Stimulus-Organism-Response (S-O-R) Theory

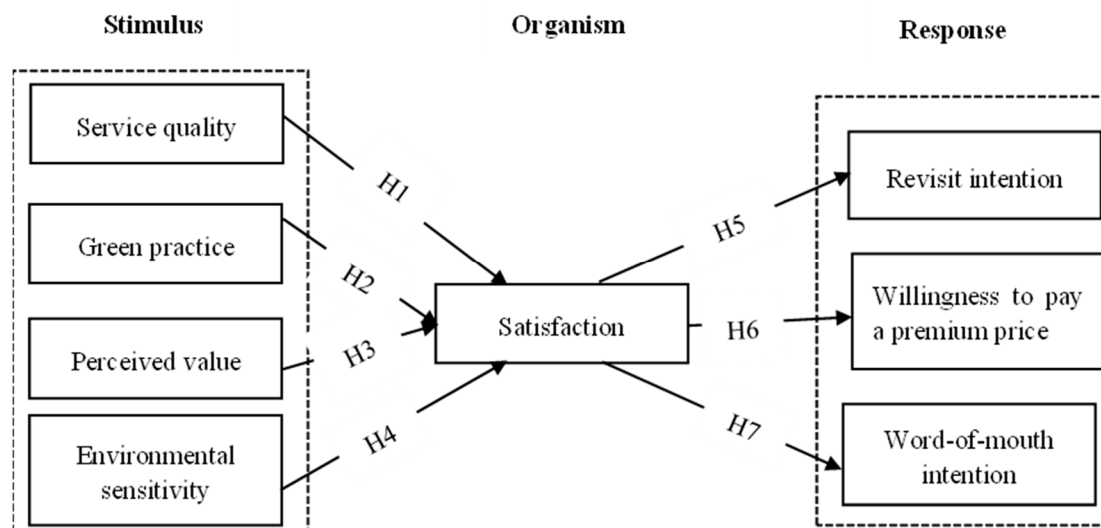
This study has incorporated the S-O-R theory to understand the necessary driving factors (stimulus) of the internal perception (organism) of individual customers to generate consumer behavior (response) regarding eco-friendly hotels. Mehrabian and Russell [21] proposed the S-O-R theory and described that if consumers are exposed to a stimulus, it generates an internal perception or emotion (positive or negative), which ultimately leads to behavioral intention. Thus, this theory investigates how diverse inputs (stimulus) affect a person's emotional or cognitive states (organism) and further forecast behavior (response) [21]. This demonstrates how an individual's internal perception or feeling mediates the association between stimulus and response [22]. However, stimulus indicates the factors that influence an individual's internal judgment or belief toward any behavior [23]. In contrast, the internal emotion or perception that is triggered by a stimulus and leads to a certain response is known as the organism [24]. Finally, response refers to the behavior of individuals generated from internal feelings or perceptions (organism) [21].

The S-O-R theory is the theoretical foundation of this study, which investigated the relationship between service quality, green practice, perceived value, environmental sensitivity, and satisfaction with revisit intention, willingness to pay a premium, and word-of-mouth intention. According to this study, the S-O-R theory refers to stimuli (service quality, green practice, perceived value, environmental sensitivity) as social psychological stimuli (Figure 1). The satisfaction of visitors toward the eco-friendly hotel is considered as the organism in this study. Moreover, revisit intention, willingness to pay a premium, and word-of-mouth intention were measured as responses from satisfied customers of the eco-friendly hotels [25].

Numerous studies have been previously conducted to understand consumers' eco-friendly behavior using the Stimulus-Organism-Response (S-O-R) framework. Hameed et al. [26] delved into the role of organizational green practices in influencing customers' intention to engage in green word-of-mouth, using the S-O-R theory. Similarly, Tan [27] explored visitors' intention to patronize green hotels through the lens of the S-O-R theory. On the other hand, Han et al. [28] investigated how consumer confidence and intention to make green purchases can be influenced by employing the S-O-R theory. Furthermore, other studies have examined eco-friendly consumption behavior in various contexts, such as green apparel [29], tourist environmental responsibility [30], and pro-environmental purchase intention of electric vehicles [31]. Therefore, it is evident that the S-O-R theory is well-suited for studying the literature on eco-friendly hotels.

Previously, many studies have used the S-O-R theory to understand how the stimulus and organism influence consumer behavior. Wang et al. [6] explored green image as the stimulus raising customers' satisfaction toward eco-friendly hotels, resulting in positive word-of-mouth intention among Chinese tourists. Yadav et al. [32] also used the S-O-R

theory to investigate how electronic word-of-mouth (stimulus) grows customers' destination preference (organism) and destination preference produces the travel intention of individual customers. Cheng et al. [33] attempted to investigate how marketing strategy and motivation (stimulus) grow positive emotion and satisfaction (organism) in customers and drive them to revisit the intention of hotels by using the S-O-R theory. Therefore, this study has also used the S-O-R theory to demonstrate how stimulus (service quality, green practice, perceived value, and environmental sensitivity) actively influences organism (satisfaction) and leads to response (revisit intention, willingness to pay a premium, and word-of-mouth intention).



**Figure 1.** Theoretical framework.

## 2.2. Review of Previous Studies

Environmental pollution, global warming, and climate change, resulting from unsustainable business practices of organizations, are increasingly becoming major concerns for customers. Consequently, customer satisfaction now heavily relies on the green practices of organizations. As a result, hotels are increasingly focusing on eco-friendly practices in their service operations. Several studies have been previously conducted to understand how the green practices of hotels influence visitors' intention to revisit, intention to engage in word-of-mouth promotion, and willingness to pay premium prices for eco-friendly accommodations. Basarir-Ozel et al. [34] analyzed big data and identified that consumer satisfaction is influenced by the eco-friendly services offered by their visited hotels. Gonzalez-Rodriguez et al. [35] found that environmentally conscious customers are willing to pay premium prices for eco-friendly services. Conversely, Sharma et al. [15] identified that innovative eco-friendly attributes of hotel services influence customers' intention to visit eco-friendly hotels. Aksu et al. [36] observed that environmentally sensitive customers feel satisfied when they find that the hotels they visit practice eco-friendly services and offer organic foods. Kapoor et al. [37], however, observed that when eco-friendly hotels sponsor social media influencers, their attribute-value message is more effective than a simple recommendation message in influencing travelers' perceptions and intentions. Furthermore, Park and Kang [38] found that customers' green perceptions and their feelings toward eco-friendly artwork influence their intention to visit eco-friendly hotels. Noticeably, the majority of previous studies have mainly focused on foreign visitors or both local and foreign visitors [39,40]. Table 1 below provides an overview of several pertinent prior studies falling within the scope of this study.

**Table 1.** Overview of previous studies.

Author	Title	Objective	Types of Samples	Major Findings	Country
Basarir-Ozel et al. (2023) [34]	“Big social data analysis for impact of food quality on travellers’ satisfaction in eco-friendly hotels”.	To understand whether food quality impacts the relationship between hotel performance criteria and travelers’ satisfaction, using big data analysis.	Customers’ online reviews	Eco-friendly hotels’ performance criteria are significantly but positively associated with satisfaction of customers.	Malaysia
González-Rodríguez et al. (2020) [35]	“Factors influencing willingness of customers of environmentally friendly hotels to pay a price premium”.	To understand how environmental practices and image of hotels influence their intention to pay a price premium for staying at environmentally friendly hotels.	Customers staying at eco friendly hotels	The findings of this study indicate that environmentally concerned customers prefer to pay a premium price, compared to people with positive perception toward eco-friendly hotels.	Spain
Sharma et al. (2024) [15]	“Visitors’ eco-innovation adoption and green consumption behaviour: the case of green hotels”.	To investigate the way green hotel attributes influence visitors’ adoption of eco-friendly hotels and their intentions to partake in green initiatives.	Visitors of green hotels	Visitors’ perception of newness and uniqueness of eco-innovative attributes influence their visit intention and green consumption behavior.	USA
Aksu et al. (2022) [36]	“Hotel customer segmentation according to eco-service quality perception: the case of Russian tourists”.	To investigate the components of eco-service quality at hotels and to cluster hotel customers based on their eco-service quality perceptions.	Russian tourists	Environmentally sensitive customers feel satisfied when they found that their visiting hotel practice eco-friendly services and offer organic foods.	Turkey
Yu et al. (2020) [41]	“Hotels’ Eco-Friendly Physical Environment as Nature-Based Solutions for Decreasing Burnout and Increasing Job Satisfaction and Performance”.	To investigate how the eco-friendly nature of hotels influences job satisfaction and employees’ performance.	Employees in eco-friendly hotels.	Green environment has a positive impact on reduction in burnout in employees and has a significant effect on job satisfaction and job performance of employees.	South Korea
Kapoor et al. (2022) [37]	Effectiveness of Travel Social Media Influencers: A Case of Eco-Friendly Hotels.	To understand the role of social media influencers (SMIs) for influencing travelers’ perceptions toward a hotel’s commitment to sustainability and their intention to stay at the eco-friendly hotel.	Social media users	The findings indicates when eco-friendly hotels sponsor SMIs, an attribute-value message is more effective than a simple recommendation message in influencing travelers’ perceptions and intentions.	China
Park and Kang (2022) [38]	“The Mediating Role of Eco-Friendly Artwork for Urban Hotels to Attract Environmental Educated Consumers”.	Investigating the role of eco-friendly artwork for attracting environmentally educated consumers to visit eco-friendly hotels.	South Korean consumers	Customers’ green perceptions and their satisfaction toward eco-friendly artwork influence their intention to visit eco-friendly hotels.	South Korean
Abdou et al. (2022) [42]	“The Effect of Environmentally Sustainable Practices on Customer Citizenship Behaviour in Eco-Friendly Hotels: Does the Green Perceived Value Matter?”	To examine the effect of environmentally sustainable practices on customer citizenship behavior in a sample of five-star eco-friendly hotels in Egypt.	Guests in eco-friendly hotels	Environmentally sustainable practices significantly and positively affect green perceived value and customer citizenship behavior.	Egypt



Table 1. Cont.

Author	Title	Objective	Types of Samples	Major Findings	Country
Kokkhangplu et al. (2023) [40]	“What Predicts Behavioural Intention in Eco-Friendly Hotels? The Roles of Tourist’s Perceived Value and Satisfaction: A Case Study of Thailand”	Investigating the relationship between eco-friendly perceived value, tourist satisfaction, and behavioral intention to revisit eco-friendly hotels in Thailand.	Tourists	Perceived value and tourist satisfaction have a significant association to revisit intention for eco-friendly hotels in Thailand.	Thailand
Salah et al. (2023) [39]	“Power of e-WOM and Its Antecedents in Driving Customers’ Intention to Revisit: An Empirical Investigation on Five-Star Eco-Friendly Hotels in Saudi Arabia”.	To understand how perceived quality, positive emotional experience, and customer satisfaction influences electronic word-of-mouth and revisit intention in eco-friendly hotels.	Tourists	Perceived quality and positive emotional experience generate electronic word-of-mouth intention and revisit intention in eco-friendly hotels.	Saudi Arabia

### 2.3. Eco-Friendly Hotel

The term “eco-friendly hotel” refers to a lodging facility that is environmentally friendly and takes steps to minimize waste, conserve water and energy, protect sustainability, and provide healthy and hygienic services, while also increasing revenue and maximizing customer satisfaction [43]. Eco-friendly hotels prioritize energy-saving, water conservation, waste reduction and recycling, and sustainable materials and design use, as well as offering local and organic food [10,44]. Moreover, eco-friendly facilities, green transportation options, and guest comfort and experience are also prioritized [45]. Eco-friendly hotels believe in community engagement and social responsibility [42]. Generally, eco-friendly hotels are certificated and recognized by respective authorities, because of their focus on sustainable services [40].

Adopting eco-friendly practices in hotels leads to more efficient management, including recycling waste, introducing linens and towels that can be reused, installing low-flow faucets and water-saving urinals, providing naturally supported ventilation facilities, and offering amenities such as refillable toiletries, organic bedding, and towels [46,47]. All of these advantages contribute to saving maintenance costs, improving ecological sustainability, promoting socially responsible organizational behavior, enhancing social recognition, minimizing risks, gaining support from the local community, and improving the efficiency of business operations [48].

In addition to these benefits, eco-friendly hotels can generate higher revenues, as customers are willing to pay more for green services than they would for conventional hotels [49]. Customers today are more environmentally aware than ever before and recognize how irresponsible behavior towards the environment contributes to global warming [20]. As a result, they are increasingly opting for eco-friendly hotels, to support environmental growth and sustainability [50]. Hotels that support environmental sustainability through their operations and maintain the quality of their services are becoming popular destinations for environmentally responsible customers.

### 2.4. Service Quality (SQ)

Zeithaml [51] defined service quality (SQ) as ‘the customer’s assessment of the overall excellence or superiority of a service’. The diversification of offers and services is crucial for hotels to gain a competitive edge in the market, making it a key success factor in the hotel sector [52]. Customers typically evaluate service quality based on the degree of tangibility, dependability, responsiveness, assurance, and empathy of a hotel’s services [20]. The service quality in an eco-friendly hotel can be ensured through green practices in services, the use

of green amenities, sustainable dining, and the adoption of energy-saving technologies for serving customers [42].

Many hotels now offer eco-friendly services to preserve environmental and natural values and satisfy the demands of environmentally conscious guests [36]. Such customers expect their visited hotel to provide eco-friendly and sustainable quality services. Lee and Cheng [43] found that improving service quality in eco-friendly hotels contributes to increasing customer satisfaction. Assaker et al. [20] concluded that customers have hidden expectations for service quality in eco-friendly hotels and prefer to compare them with actual performance during their visit to environmentally sustainable hotels. Yadegaridehkordi et al. [45] stated that customer satisfaction increases when the service quality of eco-friendly hotels matches their expectations. Sadiq et al. [10] elaborated on how high-quality services in eco-friendly hotels enhance the connection between visitors' environmental attitudes and their eco-friendly behaviors. Similarly, Hashish et al. [53] highlighted that when customers' expectations regarding the quality of eco-friendly services are met, their intention to visit eco-friendly hotels remains consistently positive. This suggests that meeting or exceeding customers' expectations regarding eco-friendly services plays a crucial role in fostering favorable intentions towards eco-friendly accommodations. Nilashi et al. [54] also showed that the green service quality of hotels influences customer satisfaction and their future hotel selection. Therefore, this study can hypothesize the following:

**H1.** *Service quality in eco-friendly hotels positively impacts customers' satisfaction.*

## 2.5. Green Practice (GP)

In recent years, the concept of sustainability has gained increasing relevance, capturing the interest of both businesses and consumers [2]. As the demand for eco-friendly services in the hotel industry grows, hotels are gradually adopting sustainable practices to reduce their negative environmental impact. These practices include waste reduction and energy conservation, which promote environmental health [55]. Kasimu et al. [56] categorized green practices (GPs) in hotels into the following four types: energy management, waste management, water savings, and the conservation of other valuable and scarce resources. However, Kim et al. [57] identified the following five types of GP in eco-friendly hotels: sustainable waste management and water treatment, using sustainable technology to save energy, cleaning solid waste and contaminated water, encouraging customers to save water, and supporting sustainable biodiversity. Moise, Gil-Saura, and Ruiz Molina [2] found that customers who are environmentally aware are more willing to make certain compromises, in terms of comfort and luxury, to support eco-friendly hotels. Merli et al. [58] concluded that green practices in hotels lead to a higher customer satisfaction. Han et al. [59] described how environmentally aware customers tend to actively monitor the green practices of hotels, which, in turn, positively influences their satisfaction with the services provided by the respective hotel. This implies that for environmentally conscious customers, the implementation and adherence to eco-friendly practices play a significant role in shaping their overall satisfaction with their hotel experience. Assaker [3] stated that the level of customer satisfaction with hotel services strongly correlates with the degree of green practices adopted by hotels. Therefore, this study hypothesizes the following:

**H2.** *Green practices in eco-friendly hotels positively impact customers' satisfaction.*

## 2.6. Perceived Value (PV)

The affordability of goods and services offered is a crucial factor that influences customers' decisions in choosing hotels [3]. Customers tend to compare the monetary value they give with the perceived value of the tangible or intangible goods they receive. Therefore, perceived value (PV) refers to the comparison between the received value and the provided monetary value of a product or service [58]. According to Zeithaml [51], PV is "the consumer's overall assessment of the utility of a product (service) based on percep-

tions of what is received and what is given". To measure the PV of a product or service, researchers commonly use unidimensional (utility of service) or multidimensional (quality of services) scales [60]. When it comes to eco-friendly hotel stays, customers expect that the pricing policy and service standards of eco-friendly hotels will be equal. Kokkhangplu et al. [40] identified that visitors expect eco-friendly hotels to fulfill several values, including functional value, social value, emotional value, epistemic value, and conditional value, before selecting an eco-friendly hotel to visit. Abdou et al. [42] discovered that when eco-friendly hotels successfully satisfy customer values, customers exhibit customer citizenship behavior. This suggests that meeting these values not only enhances customer satisfaction, but also fosters a sense of responsibility and engagement among customers, towards the environment and society. Heydari Fard et al. [61] observed a positive association between PV for hotel services and customer satisfaction in their study. Konuk [17] also stated that the PV of food and service in eco-friendly restaurants significantly influences customer satisfaction. Therefore, this study can hypothesize the following:

**H3.** *Perceived value positively impacts customers' satisfaction.*

### 2.7. Environmental Sensitivity (ENS)

Environmental sensitivity inspires consumers to engage in eco-friendly consumption behavior. By embracing moral and ethical principles regarding what customers find acceptable and sufficient for ensuring sustainability in eco-friendly hotel services, ENS is a unique attempt towards ecologically responsible behavior [62]. Several concerns may contribute to an increase in consumers' ENS, such as their lifestyle, health, and safety; consciousness for the social environment, including care for people and society; or concern for natural environmental conservation, including trees, plants, birds, and other species [63,64]. Numerous studies have investigated how ENS affects consumer behavior [65]. Park and Kang [38] identified that environmentally conscious customers experience internal satisfaction when visiting urban hotels that maintain eco-friendly services. Gupta et al. [66] observed that environmentally conscious hotel visitors do not solely rely on the display of green practices by hotels when deciding where to stay. Instead, they seek deeper engagement and assurance of eco-friendly practices throughout their experience. Sarmiento and Sarmiento et al. [67] found that environmental sensitivity raises consumer awareness and encourages them to engage in eco-friendly consumption behaviors, such as dining at an eco-friendly restaurant. Visitors who are environmentally sensitive feel satisfied when they experience services from eco-friendly hotels. Chaturvedi et al. [19] show that there is a positive relationship between ENS and satisfaction towards eco-friendly restaurants' service. Silvestri et al. [68] also found that environmentally sensitive customers experience internal satisfaction by using eco-friendly services. Therefore, this study can hypothesize the following:

**H4.** *Environmental sensitivity positively impacts customers' satisfaction.*

### 2.8. Satisfaction

Customer satisfaction is defined as the positive feeling a customer experiences when their expectations are met by the service they receive [3]. According to Oliver [69], satisfaction is "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience". In other words, customers feel satisfied when the service they receive matches their expectations. When customers visit eco-friendly hotels and find that the green services align with their expectations, their satisfaction increases. This satisfaction has various outcomes for the hotel industry, such as repeat visit intention (RVI), word-of-mouth intention (WOMI), and willingness to pay a premium price (WTPP). Word-of-mouth is characterized as spoken, individual communication regarding a product or service [70]. Han et al. [13] concluded that visitors' satisfaction with the services of eco-friendly hotels influences their intention to revisit the respective hotel in the future. Meanwhile, Eid



et al. [12] observed that visitor satisfaction acts as a catalyst for generating their intention to revisit eco-friendly hotels. Konuk [17] discovered that customer satisfaction significantly influences revisit intention to organic restaurants and word-of-mouth intention (WOMI). Similarly, Kumar et al. [71] also found that customer satisfaction leads to revisit intention (RVI) and WOMI. González-Rodríguez et al. [35] described that only satisfied customers of eco-friendly services would demonstrate eagerness to pay a premium price for services in eco-friendly hotels. Galati et al. [4] uncovered that satisfied customers respond positively when eco-friendly hotels charge extra for their environmentally conscious services. Meanwhile, Huang et al. [72] found that satisfied customers of eco-friendly services are inclined to share their positive experiences with others. Hameed et al. [26] identified that green satisfaction produces positive WOMI and WTPP [35]. Galati et al. [4] concluded that visitors' satisfaction with the service of environmentally sustainable hotels impacts their WTPP for the service. The willingness of customers to pay extra for eco-friendly and environmentally sustainable services is inspired by eco-friendly hotels [35]. Therefore, the following hypothesis can be formulated for this study:

**H5.** *Customers' satisfaction positively impacts revisit intention to eco-friendly hotels.*

**H6.** *Customers' satisfaction positively impacts willingness to pay a premium price.*

**H7.** *Customers' satisfaction positively impacts word-of-mouth intention.*

### 3. Research Methodology

#### 3.1. Participants and Sample Design

This study focused on local visitors who have stayed in eco-friendly hotels at least once within the past year, in popular tourist spots of Bangladesh, namely Chittagong, Sylhet, and Cox's Bazar. To ensure accuracy, data were collected using a purposive sampling technique. To clarify the meaning of eco-friendly hotels, this study identified several features to help respondents better understand them during their participation in our online survey. These features include the application of green products and materials in the hotels, waste reduction management, energy management, and water conservation systems implemented by the visited hotels. We elaborated on these features of eco-friendly hotels in the introduction part of the questionnaire. Before distributing the final version of the survey questionnaire to the respondents, two academics and twenty practitioners pre-tested it to ensure questionnaire clarity. They recommended minor corrections of the questions, which were corrected. Then, the research team visited hotels that adhere to these eco-friendly practices in their day-to-day operations and are located in the tourist spots of the Chittagong, Sylhet, and Cox's Bazar districts. The research team requested the names and email addresses of local visitors from these hotels, explaining the purpose of data usage. Only few hotels agreed to share this information, with the condition that it would only be used for research purposes. In total, we managed to collect 576 names and email addresses. Subsequently, we sent the online questionnaire link through email to all 576 visitors. Among them, 304 visitors responded, resulting in a response rate of 48%. The data collection process took two months to complete. All constructs were measured using a five-point Likert scale. After data cleaning, a total of 277 usable responses were deemed suitable for analysis.

Of the respondents, 70 were male and 207 were female (Table 2). The majority of participants were aged between 26 and 45 (81%) and held postgraduate degrees (85%). Most respondents were full-time employees (77%) and nearly half of the respondents' families earned above BDT 70,000 (49%). All respondents had visited an eco-friendly hotel at least once previously.

**Table 2.** Demographic information of respondents for eco-friendly house purchasing intention.

Total Number of Participants (N = 277)	Description	Frequency	Percentage
Gender	Male	70	25
	Female	207	75
Age (Years)	17–25	42	15
	26–35	126	46
	36–45	98	35
	Above 45	11	4
Education (Completed)	Secondary	0	0
	Diploma	0	0
	Undergraduate	42	15
	Postgraduate	235	85
Occupation	Unemployed	51	18
	Part-time work	9	3
	Full-time work	214	77
	Own business	3	2
	Others	0	0
Monthly Family Income	Less than BDT 30,000	27	10
	BDT 30,000 to 40,000	28	10
	BDT 40,000 to 50,000	41	15
	BDT 50,000 to 60,000	44	16
	Above BDT 70,000	137	49
Did you stay at an eco-friendly hotel previously?	Yes	277	100
	No	0	0

Note: USD 1 = BDT 105 (Bangladeshi Taka).

To mitigate common method variance (CMV), this research employed the following two suggested approaches: full collinearity and correlation matrix. Full collinearity was measured using the Variance Inflation Factor (VIF), which should be below 3.3 [73,74], while the correlation between constructs must be below 0.90 [75]. In this study, the VIF demonstrated full collinearity below 3.3, while the correlation matrix was below 0.90 for all constructs, indicating that CMV did not bias this research study.

This study employed PLS-SEM (Partial Least Squares Structural Equation Modeling) and fsQCA (Fuzzy-Set Qualitative Comparative Analysis) methods to analyze data and test hypotheses. PLS-SEM demonstrates superior statistical power across all sample sizes, particularly excelling in smaller sample sizes, as indicated by [76]. This statistical significance, especially beneficial for exploratory research involving less-developed or emerging theories, is a key feature of PLS-SEM [77]. Meanwhile, the fsQCA methodology facilitates the simultaneous assessment of multiple alternative causal recipes, complementing PLS-SEM's evaluation of pre-determined associations, expected to explain the dependent variable of interest [78]. According to Papas et al. [79], fsQCA delves into how causative conditions or independent factors amalgamate into various configurations, resulting in similar outcomes. To some extent, fsQCA supplements the PLS-SEM results [16,80]. However, a one-stage application of PLS-SEM may not suffice in forecasting complex decision-making processes. Instead, it might solely capture the linear relationship within the study framework [81,82]. Therefore, to address this limitation, other researchers have employed a second-stage data analysis, utilizing fsQCA to mitigate this constraint [16,83]. In light of these considerations, the present study adopts a multi-stage approach employing PLS-

SEM and fsQCA, to enhance the accuracy of evaluating linear (symmetric) and non-linear (asymmetric) associations.

Since this study is descriptive in nature, PLS-SEM is applicable to test hypothesized relationships in the structural model [76,84]. Moreover, PLS-SEM effectively generates results of latent variables, which are used as inputs for fsQCA analysis, to gain deeper insights into the study [85]. Previous researchers have also used fsQCA in their tourism studies [86]. PLS-SEM and fsQCA as a combined approach have been used in previous studies [87].

In this study, fsQCA was applied to identify the possible sufficient casual combinations that can generate satisfaction among visitors of eco-friendly hotels [88]. SmartPLS version 4.0.9.7 was used as the statistical software to perform PLS-SEM [89], while fsQCA 3.0 software was used to identify the sufficient combinations or recipes of antecedents, with the view of generating possible outcomes in this study [90]. A sufficient configuration is determined based on consistency, which must remain above 0.8, and coverage, which should be above 0.2 [90].

### 3.2. Measures

Overall, a total of 24 items were adapted/adopted from previous studies, to measure the constructs in this study (see Appendix A). To measure revisit intention, three items were adapted from [91], while willingness to pay a premium was measured using three items adapted from [35]. Word-of-mouth intention was tested using three items adapted from Wang et al. [6] and satisfaction of eco-friendly hotel visitors was examined using four items adapted from Merli et al. [58]. Service quality was tested using four items adapted from Lee et al. [92] and green practice was measured using three items adapted from Merli et al. [58]. Perceived value was tested using three items adapted from Riva et al. [93] and environmental sensitivity was measured using three items adapted from Chaturvedi et al. [19].

## 4. Results and Findings

### 4.1. Measurement Model Results Using PLS-SEM

To assess the reliability and validity of the data in this study, the outer model (measurement model) was analyzed using PLS-SEM [76,94–96]. The reliability and validity of the data were assessed using five dimensions in PLS-SEM analysis, as follows: outer loading, Cronbach's alpha (CA), Rho\_A, composite reliability (CR), and average variance extracted (AVE). According to Hair et al. [76], these dimensions should be at least 0.7, 0.7, 0.7, 0.7, and 0.5, respectively, to determine the reliability and validity of data in a study. Table 3, in this study, shows that the collected data are statistically reliable and valid in terms of all selected constructs, such as RVI, WTPP, WOMI, SAT, SQ, GP, PV, and ENS. Therefore, the survey data of this study are deemed statistically reliable and valid. Discriminant validity was evaluated using the heterotrait–monotrait (HTMT) ratio, which should be below 0.9, to confirm the discriminant validity of constructs in a model [97,98]. Table 4, in this study, shows that all variables are different from each other, as all constructs have HTMT values below 0.9, in terms of comparing between variables. As a result, the results have confirmed the discriminant validity of the research [97,99].

**Table 3.** Construct reliability and validity.

Constructs	Items	Loadings	CA	Rho_A	CR	AVE
Revisit intention	RVI1	0.901	0.879	0.880	0.926	0.807
	RVI2	0.932				
	RVI3	0.860				
Willingness to pay a premium	WTPP1	0.815	0.744	0.748	0.854	0.662
	WTPP2	0.776				
	WTPP3	0.848				

Table 3. Cont.

Constructs	Items	Loadings	CA	Rho_A	CR	AVE
Word-of-mouth intention	WOMI1	0.832	0.761	0.858	0.855	0.665
	WOMI2	0.715				
	WOMI3	0.891				
Satisfaction	SAT1	0.843	0.870	0.870	0.911	0.720
	SAT2	0.876				
	SAT3	0.823				
	SAT4	0.852				
Service quality	SQ1	0.875	0.896	0.899	0.928	0.762
	SQ2	0.891				
	SQ3	0.846				
	SQ4	0.880				
Green practice	GP1	0.907	0.885	0.887	0.929	0.813
	GP2	0.913				
	GP3	0.886				
Perceived value	PV1	0.875	0.867	0.868	0.919	0.791
	PV2	0.915				
	PV3	0.877				
Environmental sensitivity	ENS1	0.821	0.896	0.897	0.928	0.763
	ENS2	0.894				
	ENS3	0.895				
	ENS4	0.881				

Table 4. Discriminant validity using HTMT ratio.

	ENS	GP	PV	RVI	SAT	SQ	WOMI	WTPP
ENS								
GP	0.786							
PV	0.852	0.845						
RVI	0.738	0.631	0.652					
SAT	0.885	0.817	0.849	0.753				
SQ	0.823	0.812	0.848	0.740	0.883			
WOMI	0.753	0.721	0.626	0.634	0.681	0.776		
WTPP	0.763	0.729	0.746	0.732	0.809	0.839	0.566	

#### 4.2. Structural Model Results Using PLS-SEM

The results of the structural model analysis are presented in Figure 2, which demonstrates strong descriptive power and substantial path coefficients. To determine the statistical significance of the path coefficients, a bootstrapping function [77,100] was used in this study, with 5000 bootstraps, performed using SmartPLS-V4. The findings indicate that 70.7% of the variance ( $R^2$ ) in satisfaction can be explained by service quality, green practice, perceived value, and environmental sensitivity. Additionally, 43.5% of the variance ( $R^2$ ) in revisit intention can be explained by satisfaction, while 53.8% and 35.9% of the variance ( $R^2$ ) in WTPP and WOMI, respectively, can be explained by satisfaction.

Table 5 presents the findings of this study. The results indicate that perceived quality is significantly associated with satisfaction ( $\beta = 0.277$ ,  $t = 3.361$ ,  $p < 0.05$ ), providing statistical support for H1. Similarly, the association between green practice and satisfaction is also statistically significant ( $\beta = 0.181$ ,  $t = 2.867$ ,  $p < 0.05$ ), confirming H2. Perceived value was found to have a positive and significant association with satisfaction ( $\beta = 0.177$ ,  $t = 2.878$ ,  $p < 0.05$ ), providing evidence for H3. Additionally, environmental sensitivity was found to be directly and positively related to satisfaction ( $\beta = 0.293$ ,  $t = 3.995$ ,  $p < 0.05$ ), supporting H4.

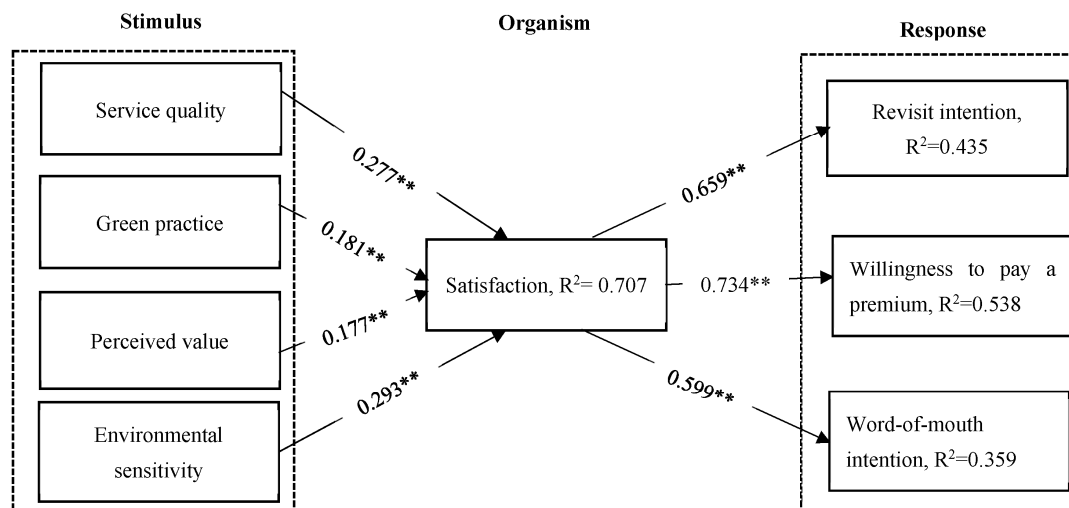


Figure 2. Results of structural model. Note: \*\*  $p < 0.05$ .

Table 5. Path coefficients and confidence interval.

Hypothesis	Relationship	$\beta$	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	p-Values	Confidence Interval		Results
							2.5%	97.5%	
H1	SQ $\rightarrow$ SAT	0.277	0.278	0.082	3.361	0.001	0.117	0.438	Yes
H2	GP $\rightarrow$ SAT	0.181	0.181	0.063	2.867	0.004	0.058	0.304	Yes
H3	PV $\rightarrow$ SAT	0.177	0.178	0.061	2.878	0.004	0.059	0.297	Yes
H4	ENS $\rightarrow$ SAT	0.293	0.292	0.073	3.995	0.000	0.147	0.432	Yes
H5	SAT $\rightarrow$ RVI	0.659	0.660	0.037	17.711	0.000	0.583	0.729	Yes
H6	SAT $\rightarrow$ WTPP	0.734	0.736	0.030	24.395	0.000	0.674	0.791	Yes
H7	SAT $\rightarrow$ WOMI	0.599	0.602	0.037	16.281	0.000	0.524	0.671	Yes

Furthermore, satisfaction was found to be significantly associated with revisit intention ( $\beta = 0.659$ ,  $t = 17.711$ ,  $p < 0.05$ ), indicating support for H5. The results also showed a positive and significant association between satisfaction and willingness to pay a premium ( $\beta = 0.734$ ,  $t = 24.395$ ,  $p < 0.05$ ), supporting H6. Finally, the findings of this study confirmed that satisfaction is positively and significantly associated with word-of-mouth intention ( $\beta = 0.599$ ,  $t = 16.281$ ,  $p < 0.05$ ), thereby providing evidence for H7.

#### 4.2.1. PLS Predict

This study assessed the predictive ability of the PLS model using the ten-fold method, as recommended by Shmueli et al. [101]. To produce case-level predictions on the item or construct level in PLS-SEM, we used PLS predict, a holdout-sample-based methodology. As shown in Table 6, the errors of the PLS model were generally smaller than those of the LM model, indicating that our model has moderate predictive power [102]. Specifically, the  $Q^2$  of the latent variables was greater than 0, suggesting that the PLS model is useful for predicting the constructs of interest.

Table 6. PLS predict.

Item	PLS (RMSE)	LM (RMSE)	PLS-LM	$Q^2$ Predict
RVI1	1.025	1.039	−0.014	0.376
RVI2	0.967	0.975	−0.008	0.414
RVI3	1.086	1.135	−0.049	0.295
SAT1	0.913	0.923	−0.010	0.455



Table 6. Cont.

Item	PLS (RMSE)	LM (RMSE)	PLS-LM	Q <sup>2</sup> Predict
SAT2	0.911	0.942	−0.031	0.494
SAT3	0.820	0.834	−0.014	0.554
SAT4	0.833	0.858	−0.025	0.484
WOMI1	0.955	0.974	−0.019	0.308
WOMI2	1.168	1.182	−0.014	0.118
WOMI3	0.885	0.851	0.034	0.426
WTPP1	1.113	1.135	−0.026	0.308
WTPP2	1.111	1.139	−0.028	0.228
WTPP3	1.032	1.023	0.009	0.408

#### 4.2.2. Findings from fsQCA

This study utilized standardized scores of constructs as inputs, which were produced using PLS-SEM, for conducting fsQCA. The collected standardized scores of constructs were calibrated to [0–1] using fsQCA [85]. The calibration function of fsQCA was set such that minus three was coded as non-membership, zero was set to 0.5 as the crossover point, and plus three was instructed as 1 (full-membership). A truth table was developed to identify the conditions or configurations that could successfully generate the outcome for this study [103,104]. The consistency threshold was set at three, based on Fiss's [105] recommendation for sample sizes greater than 150 and the rows that had two cases or fewer were automatically deleted by the system Fiss [105]. Consistency and coverage were then calculated to identify all possible combinations or configurations with more than 0.8 and a coverage higher than 0.2, which were considered acceptable for generating outcomes [88].

fsQCA generates three types of outputs, as follows: complex, intermediate, and parsimonious solutions. The solution is described by a combination or configuration supported by many cases, leading to an outcome [88,106]. Among those three outputs, previous studies recommended the intermediate solution for the literature [85]. Hence, this study also applied intermediate solutions to describe customers' satisfaction towards eco-friendly hotels.

Tables 7 and 8 present the results of the necessity analysis and the fsQCA, respectively. According to Table 7, six combinations of constructs can generate higher satisfaction among the visitors of eco-friendly hotels. The findings suggest that higher environmental sensitivity (ENS) and lower green practice (GP) can generate higher satisfaction among visitors of eco-friendly hotels (Configuration 1). Configuration 2 indicates that higher perceived value with lower service quality is also sufficient for generating higher satisfaction, leading to various outcomes, namely RVI, WTPP, and WOMI. However, Configuration 3 shows that customers experience high satisfaction with eco-friendly hotel services when they experience a high level of perceived value (PV) and green practices. Higher positive environmental sensitivity and service quality (SQ) can also increase visitors' satisfaction (Configuration 4). The findings also confirm that a high level of green practice with a lower positive environmental sensitivity and service quality can generate a higher satisfaction among visitors (Configuration 5). Finally, Configuration 6 highlights that a lower GP and PV and a higher SQ are sufficient to produce higher customer satisfaction. Table 8 shows that none of the constructs have a high enough consistency (more than 0.9) and coverage (more than 0.9) value to be a necessary condition for generating a high level of satisfaction among the visitors of eco-friendly hotels.

Table 7. Sufficient configurations for generating visitors' satisfaction towards the eco-friendly hotel.

Configurations	Raw Coverage	Unique Coverage	Consistency
Visitors' satisfaction towards eco-friendly hotel = f (ENS1, GP1, PV1, SQ1) Algorithm: Quine–McCluskey			
ENS*~GP	0.625439	0.00609469	0.913403

Table 7. Cont.

Configurations	Raw Coverage	Unique Coverage	Consistency
PV*~SQ	0.613752	0.0074569	0.914725
GP*PV	0.828063	0.0203629	0.930996
ENS*SQ	0.850505	0.033412	0.931303
~ENS*GP*~SQ	0.572381	0.00494742	0.916322
~GP*~PV*SQ	0.572381	0.00444561	0.91748
solution coverage: 0.945365			
solution consistency: 0.857171			

Table 8. Results of necessity analysis for eco-friendly house purchasing intention.

Antecedents	Consistency	Coverage
ENS	0.893095	0.885288
GP	0.879114	0.884186
PV	0.885925	0.887771
SQ	0.898544	0.894567

Note: ENS = environmental sensitivity, GP = green Practice, PV = perceived value, and SQ = service quality.

## 5. Discussion

Environmental concerns are increasingly shaping consumer behavior around the world; the hotel industry is no exception. As such, this study investigates how satisfied customers react to the service of eco-friendly hotels. The results of the PLS-SEM analysis indicate that eco-friendly hotels' service quality significantly influences visitors' satisfaction. Therefore, maintaining service quality in accordance with customer expectations is crucial to increase satisfaction with eco-friendly hotels, as supported by Nilashi et al. [54]. Additionally, the study confirms that green practices in eco-friendly hotels generate a higher satisfaction among visitors. Consequently, hotels that continuously engage in sustainable practices can increase customer satisfaction with eco-friendly hotel services, as supported by Assaker [20].

Providing value in line with visitors' expectations is also a significant factor in generating high customer satisfaction in eco-friendly hotels. This highlights that visitors of eco-friendly hotels have specific expectations from the hotels they visit. If the services provided meet their expectations, they will feel satisfied with the hotel, as noted by Heydari Fard et al. [61]. Furthermore, the study found that environmentally sensitive customers are more satisfied by staying in hotels that practice sustainability in their services, as supported by Chaturvedi et al. [19].

Customer satisfaction brings significant advantages to eco-friendly hotels in several ways. Firstly, satisfied customers are more likely to revisit the hotel soon, as observed by Kumar et al. [71]. Secondly, they are willing to pay a premium price for the services of an eco-friendly hotel, as noted by Hameed et al. [26]. Finally, satisfied customers will have a positive perception of eco-friendly hotels and recommend them to family members, friends, and others they know, as supported by Galati et al. [4].

At the same time, the findings from fsQCA can provide a deeper understanding of the factors that generate high customer satisfaction towards eco-friendly hotels, redefining the results of PLS-SEM [107]. As fsQCA is case-based, its results are more heterogeneous than those of PLS-SEM. While PLS-SEM identifies how antecedents influence the outcome of a study, fsQCA addresses the various combinations of antecedents that are sufficient to generate higher outcomes. Therefore, both methods produce complementary results for a study.

Overall, fsQCA produced six configurations in this study, each of which is adequate in producing higher customer satisfaction. Two configurations identified a higher level of environmental sensitivity (ENS) as an influential construct for high satisfaction among visitors of eco-friendly hotels. Perceived value (PV) was also observed to impact satisfaction

(SAT) in two combinations. Two configurations identified higher positive green practice (GP) as an influential antecedent, contributing to generating high satisfaction towards eco-friendly hotels. Additionally, high service quality (SQ) was noticed in two configurations in fsQCA, raising high customer satisfaction towards eco-friendly hotels. Thus, PLS-SEM and fsQCA have confirmed that ENS, GP, PV, and SQ, all of the antecedents, produce high levels of customer satisfaction towards the services of eco-friendly hotels. This customer satisfaction ultimately leads to rising RVI, WTPP, and WOMI of customers.

In conclusion, the results of the study showed that environmental sensitivity, positive green practices, perceived value, and service quality are key factors that generate customer satisfaction in eco-friendly hotels. Moreover, satisfied customers tend to return to the same eco-friendly hotel, are willing to pay higher prices for their stay, and are more likely to recommend eco-friendly hotel services to their acquaintances. Therefore, hotels that adopt eco-friendly practices not only contribute to environmental sustainability, but also create business opportunities by attracting and retaining more customers. In conclusion, this study emphasizes the importance of eco-friendly practices in the hotel industry. The findings highlight the significant role of environmental sensitivity, positive green practices, perceived value, and service quality in generating customer satisfaction in eco-friendly hotels. This study's outcomes can help hotel businesses to identify and implement sustainable practices to attract and retain environmentally conscious customers, leading to economic, environmental, and social benefits.

## 6. Research Implication

### 6.1. Theoretical Implication

This study aimed to identify the antecedents or variables that influence consumers' satisfaction with environmentally friendly hotels and the reactions of satisfied customers toward eco-friendly hotels. Theoretical contributions of this study include various aspects of eco-friendly hotel service literature. Firstly, this study confirms the effectiveness of the Stimulus-Organism-Response (S-O-R) theory in comprehending consumers' behavior towards eco-friendly hotel services. Previous research has successfully applied the S-O-R theory to understand the factors generating green attitudes and intentions among tourists staying in eco-friendly hotels [14]. However, we found no study addressing our specific concern—applying the S-O-R theory to investigate the factors influencing visitors' satisfaction with eco-friendly hotels and the outcomes of customer satisfaction, particularly from the perspective of local visitors in developing countries like Bangladesh. Hence, the findings of this study will introduce a new dimension to the literature on eco-friendly hotels. By exploring the relationship between stimuli, the internal states of visitors (organism), and their responses, especially within the context of developing countries, this research aims to provide valuable insights into enhancing visitor satisfaction and promoting sustainable tourism practices in eco-friendly accommodations.

Secondly, the primary focus of this study is to investigate local visitors' satisfaction with eco-friendly hotel services and the subsequent benefits derived for eco-friendly hotels, such as RVI, WOMI, and WTPP. However, previous studies on eco-friendly hotels primarily concentrated on visitors' green attitudes toward such establishments [14,108], the intention of young Indians to visit eco-friendly hotels [55], guests' intentions to visit eco-friendly hotels [12], and attitudes and concerns regarding visits to eco-friendly hotels [55]. Therefore, this study aims to provide empirical evidence for future researchers in fields related to green services, sustainable tourism, or eco-friendly hotel services. By shedding light on the increasing demand for sustainable services to enhance tourist satisfaction within the hotel industry, this research contributes to a deeper understanding of the dynamics surrounding eco-friendly accommodations and their impact on visitor experiences.

Thirdly, this study has identified that ENS, GP, PV, and SQ are effective antecedents in cultivating customer satisfaction towards eco-friendly hotels, thereby yielding favorable responses for these establishments. In an earlier study, Heesup Han et al. [13] underscored the pivotal role of visitors' mental perception in generating satisfaction towards eco-friendly

hotels. Meanwhile, Hashish et al. [53] discovered that the implementation of environmentally sustainable practices within eco-friendly hotels efficiently fosters visitor satisfaction with the services provided. However, the integration of ENS, GP, PV, and SQ as antecedents has rarely been explored collectively in the previous study to investigate local visitors' satisfaction with eco-friendly hotel services, particularly from the perspective of developing countries. Hence, the findings of this study are poised to make a significant contribution to the tourism literature. Moreover, they can serve as a valuable reference for future studies, offering insights into enhancing visitor satisfaction and promoting sustainable practices within the hospitality industry.

Fourthly, this study has identified the reactions of satisfied customers towards eco-friendly hotels, offering valuable insights for future researchers in the field of eco-friendly tourism literature. Van Huy et al. [14] concluded that visitor satisfaction significantly influences their intention to revisit eco-friendly hotels. Similarly, Kokkhangplu et al. [40] also found that visitors' satisfaction plays a crucial role in influencing their intention to visit eco-friendly hotels. However, this study delves deeper into understanding how visitors' satisfaction translates into outcomes such as revisit intention (RVI), word-of-mouth influence (WOMI), and willingness to pay a premium (WTPP). Consequently, this study provides more nuanced insights into how the satisfaction of local tourists can contribute to the growth and success of eco-friendly hotels, particularly in tourist spots within developing countries. By shedding light on these mechanisms, this research contributes to a better understanding of the dynamics between customer satisfaction and sustainable hospitality practices.

Finally, this study has applied PLS-SEM and fsQCA to analyze visitors' sustainable behavior toward eco-friendly hotels. Both approaches provided the same results, which strengthened the validity of the findings. Therefore, the results of this study will be a more reliable reference for future studies on sustainable tourism literature. In conclusion, this study is insightful for understanding consumers' behavior towards hotels that practice sustainable, eco-friendly services. It not only provides practical implications for eco-friendly hotel operators, but also contributes to the theoretical development of eco-friendly hotel service literature. Overall, satisfied customers are willing to come back to eco-friendly hotels, pay premium prices, and recommend the services to others, leading to more sustainable and profitable businesses.

## 6.2. Managerial Implication

Managers of hotels that offer green services or are interested in transitioning to eco-friendly services will find the results of this study particularly beneficial. The survey research results offer valuable insights to hotel managers concerning sustainable investments in the hotel business, which can result in high returns by supporting environmental sustainability in their future operations. The study highlights that environmental sensitivity, perceived value, green practice, and service quality are essential antecedents that generate high customer satisfaction toward eco-friendly hotels. Hence, managers must ensure that their eco-friendly services meet these criteria to satisfy customers' expectations.

To facilitate this, hotel managers are advised to implement structured training programs tailored specifically towards enhancing the understanding and execution of green practices among staff. This would involve routine training sessions that not only focus on the operational aspects of eco-friendly services, but also enhance the staff's ability to communicate the benefits of these practices to guests, thereby enriching the overall customer experience.

Moreover, managers should adopt advanced metrics for monitoring and evaluating the performance of green services. By employing data analytics, managers can gain deeper insights into the effectiveness of their eco-friendly initiatives and make informed decisions to optimize these practices continually.

The study suggests that eco-friendly hotels can increase customers' environmental sensitivity by educating them about the importance of environmental sustainability through

various marketing campaigns. Thus, managers should focus on designing effective marketing strategies to raise customers' awareness of environmental issues and how their services align with sustainable practices. Additionally, managers should create compelling narratives around their green initiatives that resonate with guests' values, using digital platforms to amplify their message and reach a broader audience.

The findings suggest that the quality of green services must be maintained to meet customers' expectations. To achieve this, managers should provide special training to employees to enhance their skills in delivering quality services. Furthermore, adopting customer relationship management (CRM) systems could help personalize the guest experience, thereby enhancing satisfaction and loyalty.

According to the findings of this study, implementing environmentally sustainable actions in their day-to-day operations allows eco-friendly hotels to cultivate a fresh, positive environmentally responsible image in the minds of visitors. This image has an enormous influence on rising customer satisfaction. Consequently, to demonstrate a commitment to eco-friendliness, hotels can enhance their capacity in areas such as energy efficiency, water conservation, waste reduction and recycling, sustainable building design, and the use of eco-friendly amenities. By doing so, they not only fulfill their environmental responsibilities, but also enhance the overall guest experience. As a result of being educated about the green practices of their chosen hotel, visitors will not only be inclined to return to the same establishment in the near future, even if it requires paying a premium for their services, but they also tend to recommend the hotel to others.

Moreover, the findings of this study also indicate that the perceived value in the minds of tourists regarding eco-friendly hotels plays a significant role in satisfying them. Therefore, managers must identify potential eco-friendly services that customers value and expect from such establishments. If visitors find that their expectations have been met by the eco-friendly hotel they have visited, they are likely to express satisfaction by returning to the respective establishment and recommending it to others. They are willing to pay extra for eco-friendly services that align with their values and preferences.

The study also reveals that satisfied customers are more likely to revisit eco-friendly hotels and pay more for their services. This information is insightful for managers, as it implies that eco-friendly hotels can retain customers' loyalty by generating customer satisfaction, even when charging higher prices. Furthermore, the study indicates that satisfied customers of eco-friendly hotels are likely to share their positive experiences with others. Thus, managers should leverage this by encouraging customers to share their experiences, which can enhance the profitability of the hotel by attracting more customers and reducing marketing costs.

Overall, the findings of this study can motivate more hotels to invest in eco-friendly services, while also supporting environmental sustainability by reducing environmental degradation without sacrificing profitability. Therefore, the study's results can provide valuable managerial implications to eco-friendly hotels and guide their efforts to offer sustainable services that meet customers' expectations.

## 7. The Limitations of the Research and Scope for Future Work

While this survey research has made a significant theoretical and practical contribution, there are certain limitations that call for careful interpretation and may open the door for expanded future research.

Firstly, the research team visited various eco-friendly hotels situated in tourist spots, to collect information about local visitors. However, most of the hotels refused to share information, despite our efforts to explain our novel purpose. Consequently, we managed to convince only a few hotels to share information. Moreover, due to time and budget limitations, we were unable to revisit those hotels multiple times to further highlight the benefits and to convince them to share information for research. As a result, we were only able to collect data from a few hundred visitors of eco-friendly hotels, which did not meet our sample size expectations. Therefore, for future studies, researchers may need to



allocate more time and budget to accommodate necessary expenses. Furthermore, future researchers can emphasize the benefits of data sharing for business development, assure reliable data security measures, offer collaboration opportunities, demonstrate past success stories, and provide transparency to convince hotel authorities. This approach is likely to make more hotels feel secure about sharing data and willing to contribute to future research efforts.

Secondly, the participation in our survey was voluntary. Due to our limited research budget, we did not offer any incentives to participants for their involvement. Consequently, the participation rate in our survey was relatively low (48%). However, in future studies, researchers may consider offering financial rewards to participants to incentivize their participation. Additionally, researchers can promise participants that the survey results will be shared with them, allowing them to gain insights into the survey's purpose and to feel assured that their information will not be misused. This approach may encourage greater participation and foster trust between researchers and participants.

Finally, this study has only considered ENS, GP, PV, and SQ to measure customers' satisfaction with eco-friendly hotels. However, variables such as green trust, environmental knowledge, and green loyalty of customers [58] can be applied to measure customer satisfaction towards eco-friendly hotels in future studies. Therefore, researchers may consider expanding the study by incorporating these variables to obtain a more comprehensive understanding of the factors that contribute to customer satisfaction with eco-friendly hotels.

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## Appendix A

**Table A1.** Measurement items.

Constructs	Items	Questions	Sources
Revisit intention	RVI1	I will revisit eco-friendly hotels in the near future.	[91]
	RVI2	My happy experience with eco-friendly hotel inspires me to revisit the hotel.	
	RVI3	There is a high chance that I will revisit the eco-friendly hotel on my next holiday.	
Willingness to pay a premium	WTPP1	It is acceptable to pay a premium to stay at a hotel that engages in environmentally friendly practices.	[35]
	WTPP2	I am willing to pay more to stay at an environmentally friendly hotel.	
	WTPP3	I am willing to spend extra to support the hotel's effort to be environmentally sustainable.	

Table A1. Cont.

Constructs	Items	Questions	Sources
Word-of-mouth intention	WOMI1	I will encourage my friends and relatives to stay at an eco-friendly hotel during traveling outside.	[6]
	WOMI2	I will say positive things about an environmentally friendly hotel to others.	
	WOMI3	I strongly recommend eco-friendly hotels due to their environmental features.	
Satisfaction	SAT1	I am satisfied with my experience in the eco-friendly hotel.	[6,58]
	SAT2	My expectations were satisfied during my visit to the eco-friendly hotel.	
	SAT3	Overall, I am happy visiting eco-friendly hotels because they are environmentally friendly.	
	SAT4	Overall, I am satisfied with the eco-friendly hotel I visited because of its environmental performance.	
Service quality	SQ1	I think that an eco-friendly hotel has hygienic and attractive dining areas.	[92]
	SQ2	Overall, the rooms and accommodations at an eco-friendly hotel are clean and comfortable.	
	SQ3	The services offered by my visited eco-friendly hotel met my needs and expectations.	
	SQ4	I think that the facilities and atmosphere of a green hotel are preferable.	
Green practice	GP1	The hotel I visited has implemented water- and energy-saving practices.	[58]
	GP2	My visited hotel separates waste during collection, to reduce the amount of waste.	
	GP3	My visited hotel provides its guests with information on how they can contribute to reduce the hotel's environmental impact.	
Perceived value	PV1	The eco-friendly hotel I visited offers expected environmentally friendly services.	[93]
	PV2	The services provided by the eco-friendly hotel are good for what I have to pay.	
	PV3	The food that I purchased from the eco-friendly hotel during my visit was a good buy in terms of green attributes and my money spending.	
Environmental sensitivity	ENS1	The eco-friendly hotel I visited offers sustainable products and services for visitors.	[19]
	ENS2	The eco-friendly hotel I visited contributes to the environment by reducing food and other types of wastages.	
	ENS3	The eco-friendly hotel I visited contributes to the environment by reducing water and electricity wastage.	
	ENS4	The eco-friendly hotel I visited use environmentally sustainable energy to serve the visitors.	

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