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The Impact of ESG on Eco-Tourist Satisfaction and Choice in Smart Ecotourism

Salmi Mohd Isa *
Graduate School of Business
Universiti Sains Malaysia, Minden Penang Malaysia
Email: salmi.mohd.isa@usm.my

Low Tek Joo
Graduate School of Business
Universiti Sains Malaysia, Minden Penang Malaysia

** Corresponding Author*

Abstract

Purpose: Ecotourism is one of the core tourism products and is greatly promoted by Malaysian government. Hence, it is crucial to understand what potential fa`tors affect ecotourism demand to formulate effective policies and smart strategies. Therefore, this study emphasizes the impact of ESG on eco-tourist's satisfaction and choice who are likely to have experience of smart ecotourism. Consequently, it becomes imperative to scrutinize the perception of ESG in ecotourism, not only to comprehend consumer motivations but also to gauge awareness and performance within smart ecotourism.

Design/methodology/approach: A questionnaire-based survey was conducted among 100 eco-tourists in Malaysia.

Findings: The findings revealed that environment ESG have directly and significant effect on eco-tourist satisfaction respectively in smart ecotourism. Eco-tourist satisfaction also plays a mediating role in the indirect effect of each ESG indicator on eco-tourist's choice. Lastly, eco-tourist's satisfaction also has a direct and positive effect on their choice in smart ecotourism. The result serves as an encouragement or guidance for smart ecotourism operators to conduct ESG practices to attract eco-tourists. This study presents a novel finding that bridges the knowledge gap between ESG and eco tourist's satisfaction and choice, as well as the gap in ESG practice in smart ecotourism. ESG has a significant effect on eco-tourist's satisfaction and choice and thus encourages ESG practices in smart ecotourism.

Practical implications: This study provide suggestions for ecotourism business in Malaysia to develop smart and sustainable tourism product and services to the eco-tourists.

Originality/value: This study aspires to a more holistic understanding of sustainable development within smart ecotourism. The results of this study have contributed to the current ecotourism literature and broaden understanding of the ICTs-based ecotourism, particularly on the Malaysia context.

Keywords: ESG, smart ecotourism, eco-tourist satisfaction, eco-tourist choice, sustainability

Classification: Research paper

Introduction

Ecotourism is a unique form of tourism which focuses on nature and can provide tourist satisfaction and enjoyment through nature while protecting the environment. (Ceballos Lascuráin, 1996; Higgins, 1996; Orams, 1995). It focuses on achieving sustainable development in the long-term which includes conserving natural resources, generating economic income, providing education, involving local participation, and promoting social benefits infrastructure and economic developments (Ardoin et al., 2015; Coria & Calfucura, 2012; Krüger, 2005; Oladeji et al., 2022; Ross & Wall, 1999; Valdivieso et al., 2015; Whitelaw et al., 2014) Furthermore, in developing countries in particular, ecotourism is also known to boost rural economies and reduce poverty (Snyman, 2017; Zhong & Liu, 2017). According to Abdullah et al. (2020), this benefit can also be observed in Malaysia. In Malaysia, ecotourism is one of the core tourism products and is greatly promoted by the government (Abdurahman et al., 2016).

Hence, it is crucial to understand what potential factors affect ecotourism demand to formulate effective policies and strategies. In recent years, there is a growing concern about social, environmental, and ethical issues in consumer demand. These concerns have led to the development and production of products and services that are environmentally friendly, ethical, or socially responsible (Lubowiecki-Vikuk et al., 2021). Nilsson et al. (2014) also found that Corporate Social Responsibility (CSR) and Environmental, Social and Governance (ESG) indicators have direct impact on customer satisfaction and can produce long-term value to company. A study conducted in Greece also found that company's ESG performance influences consumer choice especially with regards to the ratings related to environment and social (Boufounou et al., 2023). These studies show that there is an interrelation between ESG indicators and customer satisfaction and choice. Since ecotourism is an important tourism product for Malaysia and ESG indicators influence customer choice and satisfaction, how these variables interact and affect each other becomes an important question that warrant for answers. As such, this study aims to address the lack of such study to evaluate ecotourism customers perspective towards ESG indicators in Malaysia and provide a better understanding on how these variables influence one another.

Additionally, Environmental, Social, and Governance (ESG) indicators has conventionally centered around their correlation with the financial performance of companies (Cek & Eyupoglu 2020), with a predominant focus on corporate outcomes rather than the consumer perspective. However, a notable departure emerges in Boufounou et al. (2023) study, which uniquely employs ESG indicators to examine their relation to consumer satisfaction and choice. Their findings concluded that satisfaction towards a company's ESG indicators influences eco-tourists' choice, and the authors advocated the expansion into specific industry sectors and other region to assess regional and sector differences (Boufounou et al., 2023).

Thus, this study answers the call made by Boufounou et al., (2023) to further the investigation. Besides that, given the global trend towards ESG compliance, smart ecotourism sector in particular, may gain benefit from the movement as operators may be incentivized to integrate sustainable practices as consumer preference skewed towards ESG practices. Consequently, it becomes imperative to scrutinize the perception of ESG in ecotourism, not only to comprehend consumer motivations but also to gauge awareness and performance within the sector. As this study is geared towards unravelling how ESG indicators of a company stimulates consumer

satisfaction with smart ecotourism products or companies and subsequently affect the consumer choices response, the Stimulus-Organism-Response (SOR) Model emerges as a fitting framework. The SOR Model has a history of applicability in various studies, including green consumption research (e.g., Luo et al., 2020; Sohaib et al., 2022; Xu et al., 2020).

In summary, the proposed research aims to bridge the gap between ESG studies predominantly focused on financial outcomes and the emerging need to understand eco-tourists' perspectives in the smart ecotourism sector. By delving into the intricacies of ESG in this context and employing the SOR Model, the study aspires to contribute valuable insights into the intricate dynamics that shape satisfaction and choice in ecotourism, fostering a more holistic understanding and sustainable development within the industry.

Literature Review

Review of the literature ESG Indicators, Eco-tourists Satisfaction, and Choice

As consumers grow more and more conscious on environmental, social, and ethical issues, it has contributed to the development of more products that are green, socially responsible, and ethical (Lubowiecki-Vikuk et al., 2021). Recent research underscores the interdependence of Corporate Social Responsibility (CSR) practices, ESG indicators, and customer satisfaction, highlighting their collective influence on the long-term value and financial performance of companies, factors that significantly shape investors' decisions (Nilsson et al., 2014). It was also indicated that company that performs well in the social aspects to improve consumer satisfaction can attract more investors (Hornuf et al. 2021). This is also observed for firms that perform well in environmental indicators having more intention from invest in their funds as suggested by Mehta et al. (2019). Additionally, literature review by Cek & Eyupoglu (2020) on the Standard & Poor's 500 companies from year 2010 to 2015 concluded that the companies' performance in social and governance indicators affects economic performance significantly.

Nonetheless, as concluded through the literature review by (Boufounou et al., 2023), majority of research focuses on long-term value creation of the company through performance of ESG indicators and there is a lack in research in the effect on consumer satisfaction by ESG indicators performance. In the same study by Boufounou et al. (2023), their investigation in studying the relationship between ESG indicators and customers choice found that ESG performance influences consumer choice particularly by environmental and social indicator.

In summary, ESG Indicators has shown in multiple studies to have positive relation with company performance in general. However, its effect on customer satisfaction and customer choice are rather limited in numbers and scope. It is also notable that although ESG are usually viewed to as one entity, literature review has shown that not all components in ESG have the same influence on the company performance. Hence, industry specific study for the effect should be prioritised for a more accurate result.

Ecotourism Sectors and ESG Indicators

The tourism industry, a rapidly expanding economic sector globally, serves as a crucial driver for socio-economic progress, with ecotourism emerging as one of its thriving sub-sectors (Nasir et al., 2020). According to Ionescu et al. (2019), tourism industry is a sector that deserves research attention due to the following reasons: 1) its large size and involves many stakeholders; 2) it encourages primary and secondary sector growth of the industry; and 3) its impact on environment during construction of related infrastructure and facilities. In Malaysia, tourism industries contribute to about RM 28.23 billion worth of total expenditure in 2022 (Malaysia Tourism Promotion Board (MTPB), 2024). Within this industry, one of the products that is highly promoted is ecotourism (Abdurahman et al., 2016). Therefore, it is important to understand the sector well to effectively market it. Despite ecotourism being a tourism product that is environmentally friendly, studies have shown that negative impact that may arise from it. For instance, as mentioned by Ionescu et al. (2019), the development of essential infrastructure like roads and airports, as well as tourism facilities such as resorts, hotels, restaurants, shops, golf courses, and marinas poses threats to the environmental resources.

In addition, as reviewed by Das & Chatterjee (2015) on the vision and practices of ecotourism sector, the authors found that failure of ecotourism are diverse, encompassing factors such as revenue leakages due to the recruitment of labour from urban areas instead of training local unskilled or less-skilled individuals, inequitable income distribution among locals, compulsory displacement for national park creation leading to widespread negative consequences like land loss, homelessness, food insecurity, loss of lives, and increased morbidity. Additionally, problems include restrictions on accessing sanctuaries resulting in joblessness, wildlife causing damage to crops and livestock, a reliance solely on a confrontational "gun and guard" approach for preservation, issues like crowding, crime, begging, and prostitution associated with a surge in tourists at ecotourism spots, tourists displaying insensitive attitudes, insufficient education for both visitors and locals, and policy gaps marked by inadequate planning and unethical ecotourism management practices (Das & Chatterjee, 2015). Hence, all stakeholders should exercise increased vigilance in acknowledging and considering these factors before engaging them in both investing and participating.

Considering the potential negative impacts of ecotourism in those aspects which can be classified under environmental impact, social impact, and governance issues, stakeholders may investigate ESG performance as indicators and guidance to avoid potential pitfall. Based on a recent study conducted in Greece on ESGs and consumer choice, general indicators of each ESG factors are used to gauge the consumers perception when choosing to buy products or services from the company (Boufounou et al., 2023). For environmental indicators, the implementation of policies with regards to emission and pollutants, climate change, energy and water consumption, and waste management is considered. For social indicators, the implementation of human right policies, having equal gender representation, providing employee training, disclose survey results, having complaint management policy, implement personal data confidentiality security policies, providing health protection policies, and comply to labour law are some indicators considered. Lastly, for governance indicators, implementation of policies on development of economic, social and environment, and disclosure on data with regards to business ethics, objective for social developments and environmental protection, and results of environmental, social and ethics

evaluation is used. Although these indicators are general, they are selected to be used in the present study as they can be used to evaluate a wide range of companies and service providers.

Underlying theories

Stimulus, Organism, and Response (SOR) Model is a model proposed by Albert Mehrabian and James A. Russell in 1974 (Mehrabian & Russell, 1974). Also known as the Mehrabian and Russell model, the model suggests that environmental stimulus affects individuals' internal attitude and perceptions, and moulds approach or avoid behaviours and intentions (Mehrabian & Russell, 1974). Generally, the SOR model is comprised of three aspects, namely stimulus aspect, organism aspect, and response aspect. Firstly, the stimulus component includes environment or any external provocation (Ali et al., 2016) that influences an individual's internal states, generally conceptualized as an influence that stimulates an individual (Chen et al., 2022). Stimulus drives the purchasing situation, related with subsequent decision-making in the context of consumer purchases (Su & Swanson, 2017). In an earlier description by Mehrabian & Russell (1974), the environmental stimulus aspect is more literal and may include stimuli such as colour, light, music, or even scent. Nonetheless, modern application of the model includes any stimulus that can affect an individual's emotions and satisfaction to purchase the product or use the services (Ali et al., 2018). Secondly, the organism component includes internal responses in terms of emotions or satisfaction (Ali et al., 2016). This component consists of internal process and structure that mediates the effect of external stimuli to the subsequent response actions. (Chen et al., 2022). The internal state, processes or responses in the organism component includes perception of feeling of pleasure, arousal, or dominance emotions such as happiness, encouraged, energetic, and powerful, and satisfaction or inner fulfilment towards the product or services (Mehrabian & Russell, 1974; Ali et al., 2018; Xu et al., 2020). Thirdly, for response component, it is the approach or avoid behaviour of the customer (Mehrabian & Russell, 1974). According to Xu et al. (2020), response may also include psychological reactions such as attitude towards the services or product and/or the behavioural intents towards them. This behaviour is affected by the stimulus elements and organism elements within the service or product delivery of the SOR Model (Ali et al., 2016). Continuing or switching to another service or product is an indication of response behaviour (Ali et al. 2018). The SOR Model developed by Mehrabian and Russell (1974) has been widely used in green consumption research (e.g., Luo et al., 2020; Sohaib et al., 2022; Xu et al., 2020) as well as trade marketing, E-shopping, hotels, and restaurants (e.g., Ali et al., 2016; Jang & Namkung, 2009; Kaltcheva & Weitz, 2006; Koo & Ju, 2010). As such, SOR Model provides a good theoretical framework to study the relationship between ESG indicators with eco-tourist choice and the mediating effect of eco-tourists' satisfaction.

Conceptual Research Framework

The aim of this research is to understand the effect of each ESG indicator on consumer choice and the mediating effect of consumer satisfaction. Using the theoretical framework of SOR Model by Mehrabian and Russell (1974), the effect of stimulus component which are environmental indicator (EI), social indicator (SI), and governance indicator (GI) on organism component which the eco-tourist's satisfaction (CS) with each ESG indicators' performance that in turns mediate the

effect towards the response component which is eco-tourists' choice (CC) can be studied. Below shows the proposed theoretical framework for this research (Figure 1).

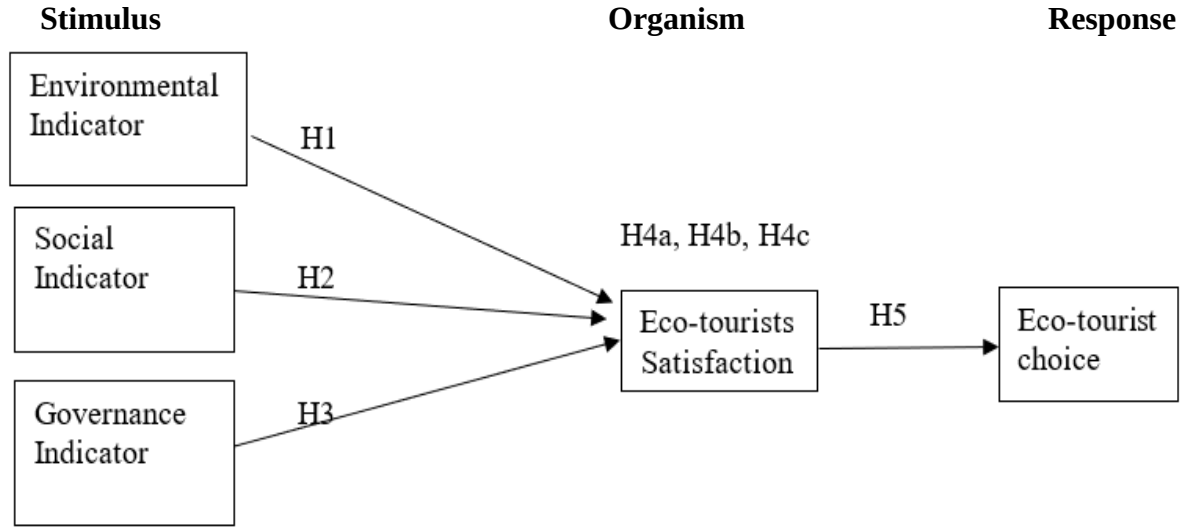

Figure 1. Conceptual Research Framework

Hypotheses Development

In the study conducted by Boufounou et al. (2023), implementation of policies with regards to emission and pollutants, climate change, energy and water consumption, and waste management is evaluated by consumers as the environmental indicator. In the same study, the authors found a positive correlation between environmental indicator and customer satisfaction (Boufounou et al., 2023). Hence, the following is hypothesised:
H1: Environment indicators positively affect eco-tourist satisfaction in smart ecotourism companies.

For social indicators, the implementation of human right policies, having equal gender representation, providing employee training, disclose survey results, having complaint management policy, implement personal data confidentiality security policies, providing health protection policies, and comply to labour law are some indicators considered by Boufounou et al. (2023). A positive correlation between social indicator and customer satisfaction were found in a study conducted in Greece (Boufounou et al., 2023). Therefore, the hypothesis below is formed:
H2: Social indicators positively affect eco-tourists' satisfaction in smart ecotourism sector.

As proposed by Boufounou et al., (2023), governance indicators such as implementation of policies on development of economic, social and environment, and disclosure on data with regards to business ethics, objective for social developments and environmental protection, and results of environmental, social and ethics evaluation is considered. The result from the study from the population in Greece showed a positive correlation between governance indicator and consumer satisfaction (Boufounou et al., 2023). As such, the hypothesis below is formulated:
H3: Governance indicators positively affect eco-tourists' satisfaction in smart ecotourism sector.

Consumer Choice in Ecotourism Sector In the study conducted by Boufounou et al. (2023), satisfaction with environmental indicator has a moderate to high influence on consumer choice for the product or service. Hence, it is hypothesis as follows:
H4a: Eco-tourists' satisfaction on environmental indicator positively influences eco-tourists' choice in smart ecotourism sector.

Boufounou et al. (2023) concluded that consumer's satisfaction with social indicator performance moderately to highly influences on consumer choice for the product or service. The following hypothesis:
H4b: Eco-tourists' satisfaction on social indicator positively influences eco-tourists' choice in ecotourism sector.

Interestingly, satisfaction with governance indicator has shown to have no significant effect on consumer choice based on the study by Boufounou et al. (2023). However, the following hypothesis is expected:
H4c: Eco-tourists' satisfaction with governance indicator positively influences eco-tourists' choice in ecotourism sector.

Based on research by Santoso & Aprianingsih (2017), customer satisfaction is positively related to repurchase intention. Hence, based on the study, the following hypotheses can be formulated:
H5: Eco-tourists' satisfaction has positive effect on eco-tourists' choice in smart ecotourism sector.

Method

As the population frame encompasses the huge adult ecotourism consumer population of Malaysia, it is not possible or practical to survey the entire population. Therefore, a sampling technique was employed to systematically select a smaller subset that represents the pre-defined population for study according to the objective of the research (Sharma, 2017). To ensure unbiased representation and equal probability from the study population, simple random sampling has been selected as the sampling approach (Noor et al., 2022). Nonetheless, it is also crucial to ensure selected sample is neither too big nor too small (Noor et al., 2022). To identify the right sample size, G* Power calculator is used to calculate the required sample size. To calculate that, the effect size shall be set to 0.15, alpha value is set at 0.05, power value at 0.8, and number of predictors as 5. Based on the calculation, a sample size of 92 participants is required to generate an accurate representation of the population. To reach the target samples, survey form was prepared via Google Forms to ease preparation and data storage and disseminated via email and social media networks. In the survey form, respondents were required to complete Section A to provide some demographic information and answer two screening questions to identify if they were aware about ESG and participated or used any ecotourism products. Only qualified respondents proceed to Section B to Section K where questions are listed under each construct of research theoretical framework. For each of those items in Section B to Section K, 5-point Likert Scale were used in which 1 represented 'strongly disagree' and 5 represented 'strongly agree' to the statement by the

respondents. Measurement items are as shown in Table 1. At the end of the survey period, a total of 100 qualified responses were collected for analysis.

Table 1. Measurement items

Variables	Number of indicators	Adapted from
Environmental indicators.	3 indicators	Boufounou et al. (2023)
Social indicators.	3 indicators	
Governance indicators.	3 indicators	
Customer satisfaction with environmental indicators.	3 indicators	
Customer satisfaction with social indicators.	3 indicators	
Customer satisfaction with governance indicators.	3 indicators	
Customer choice based on satisfaction with environmental indicators.	3 indicators	
Customer choice based on satisfaction with social indicators.	3 indicators	
Customer choice based on satisfaction with governance indicators.	3 indicators	
Customer choice based on customer satisfaction.	3 indicators	

This research uses SmartPLS version 4 software to conduct Partial Least Squares Structural Equation Modelling (PLS-SEM) for analysis and validation of the proposed theoretical model. PLS-SEM was chosen due to its suitability in estimating complex structural relationships and mediating effects with small sample sizes (Van Riel et al., 2017). The model was created from a causal perspective and analyzed using SmartPLS 4 software, which offers various statistical tools to elucidate the interactions between predictor and dependent variables. The measurement model explored relationships between measurable and latent variables, while the structural model examined the interactions among latent variables, providing a detailed understanding of the hypothesized relationships (Hair et al., 2019).

Findings

As tabulated in Table 2, majority of the respondents were female (66%) and were aged between 25–34 years old (61%). More than half of the respondents are from Pulau Pinang (54%), a state in Malaysia that has a relatively high Chinese ethnic population. This aligns with the ethnicity recorded which is 67% Chinese respondent. In terms of education level and annual income, 69% of the respondents hold a Bachelor's Degree and 31% of the respondents have an annual income of more than RM100,000. Notably, 27% of the respondent have an annual income between RM25,000 to RM50,000.

Table 2. Demographic Profile

Characteristics	Frequency (n) / Percentage (%)	Characteristics	Frequency (n) / Percentage (%)
Gender		State of Residence	
Male	34	Kedah	12
Female	66	Pulau Pinang	54
Age		Perak	8
18-24 years old	2	Pahang	2
25-34 years old	61	Selangor	8
35-44 years old	17	Wilayah Persekutuan	1
45-54 years old	14	Melaka	2
55-64 years old	4	Johor	13
65 years old and above	2	Annual Income	
Ethnicity		Less than RM25,000	12
Malay	26	RM25,000-RM50,000	27
Chinese	67	RM50,000- RM75,000	18
Indian	7	RM75,000- RM100,000	12
Education Level		More than RM100,000	31
Secondary School	2		
Certificate/Diploma	14		
Bachelor's Degree	69		
Master's Degree	15		

As presented in Table 3, the factor loading value of all constructs exceeds the minimum cut-off value recommended by Hair et al. (2017) except for CCE1 with the value of 0.666. Although higher loadings (typically above 0.70) are preferred as they indicate a stronger relationship between the indicator and the construct, loadings around 0.60 to 0.70 can still be acceptable, especially in exploratory research or in social sciences where constructs are often more complex and harder to measure. In terms of average variance extracted (AVE), all construct also exceeds the recommended minimum cut-off value of 0.5 (Hair et al., 2017) and signifies that convergent validity is sufficient. On the other hand, composite reliability (CR) of all constructs exceeds the threshold value recommended by Hair et al. (2014) of 0.7, signifying internal consistent reliability. Considering the factor loadings, AVE, and CR values, all constructs are well related to its specific latent structure and have sufficient reliability and convergent validity.

Table 3. Convergent validity and reliability for all constructs and items

Construct and Items	Outer Loading	CR	AVE
Environmental Indicator (EI)			
Company that implements sustainable water consumption policies indicates environmentally friendly practices.	0.865	0.864	0.679
Company that implements climate change environmental protection policies indicates environmentally friendly practices.	0.750		
Company that implements good waste management policies indicate environmentally friendly practices.	0.582		
Social Indicators (SI)			

Company that implements employee health protection policies indicates social responsibility.	0.944	0.934	0.825
Company that does not violate labour laws indicate social responsibility.	0.873		
Company that implements human rights policies indicates social responsibility.	0.905		
Governance Indicators (GI)			
Company that implements policies on economic, social, and environmental development indicates good governance.	0.854	0.872	0.696
Company that discloses environmental protection and social development objectives data indicates good governance.	0.919		
Company that discloses results of the environmental, social development and business ethics evaluation data indicates good governance.	0.718		
Customer Satisfaction and Environment Indicator (CSE)			
I feel satisfied if the ecotourism product/services company implements sustainable water consumption policies.	0.929	0.912	0.775
I feel satisfied if the ecotourism product/services company implements climate change environmental protection policies.	0.828		
I feel satisfied if the ecotourism product/services company implements good waste management policies.	0.882		
Customer Satisfaction and Social Indicator (CSS)			
I feel satisfied if the ecotourism product/services company implements employee health protection policies.	0.868	0.899	0.747
I feel satisfied if the ecotourism product/services company does not violate labour laws.	0.833		
I feel satisfied if the ecotourism product/services company implements human rights policies.	0.891		
Customer Satisfaction and Governance Indicator (CSG)			
I feel satisfied if the ecotourism product/services company implements policies on economic, social, and environmental development.	0.860	0.879	0.710
I feel satisfied if the ecotourism product/services company discloses environmental protection and social development objectives data.	0.912		
I feel satisfied if the ecotourism product/services company discloses results of the environmental, social development and business ethics evaluation data.	0.746		
Customer Choice and Customer Satisfaction on EI (CCE)			
I will continue to buy product/services from the ecotourism company if I am satisfied with its environmental indicators.	0.666	0.86	0.677
I will positively comment and refer to it when I talk about the ecotourism company if I am satisfied with its environmental indicators.	0.841		
I will recommend the ecotourism company to relatives, friends, colleagues if I am satisfied with its social indicators.	0.938		
Customer Choice and Customer Satisfaction on SI (CCS)			
I will continue to buy product/services from the ecotourism company if I am satisfied with its social indicators.	0.881	0.859	0.671
I will positively comment and refer to it when I talk about the ecotourism company if I am satisfied with its social indicators.	0.721		
I will recommend the ecotourism company to relative, friends, colleagues if I am satisfied with its social indicators.	0.847		
Customer Choice and Customer Satisfaction on GI (CCG)			
I will continue to buy product/services from the ecotourism company if I am satisfied with its governance indicators.	0.947	0.97	0.916

I will positively comment and refer to it when I talk about the ecotourism company if I am satisfied with its governance indicators.	0.955		
I will recommend the ecotourism company to relative, friends, colleagues if I am satisfied with its governance indicators.	0.969		
Customer Choice and Customer Satisfaction (CC)			
I will continue to buy product/services from the ecotourism company if I am satisfied with the company.	0.88	0.928	0.811
I will positively comment and refer to it when I talk about the ecotourism company if I am satisfied with the company.	0.924		
I will recommend the ecotourism company to relative, friends, colleagues if I am satisfied with the company.	0.897		

Note(s): CR: Composite Reliability; AVE: Average Variance Extracted.

For discriminant validity analysis, the more robust Fornell-Larcker criterion was calculated and tabulated in Table 4 (Fornell & Larcker, 1981). As proposed by Fornell & Larcker (1981), discriminant validity is supported when the square root of the average variance extracted (AVE) for each latent variable exceeds the correlations with other latent variables. According to Table 4, two variables, namely social indicator (SI) and governance indicator (GI) failed the test when compared to the customer satisfaction variable of their respective indicator. The high correlation between these constructs can be theoretically justified as satisfaction towards the social and governance indicators and agreeing that those social and governance practice are good ESG practices respectively are closely related measures. Additionally, since those two constructs demonstrated strong composite reliability (CR > 0.70) and average variance extracted (AVE > 0.50) according to Table 3, their discriminant validity are accepted despite not meeting the Fornell-Larcker criterion.

Table 4. Discriminant Validity: Fornell-Larker Criterion

	CCE	**CSE**	**EI**	**CCS**	**CSS**	**SI**	**CCG**	**CSG**	**GI**	**CC**
CCE	0.823									
CSE	0.437	0.88								
EI	0.346	0.809	0.824							
CCS	-	-	-	0.819						
CSS	-	-	-	0.489	0.864					
SI	-	-	-	0.476	*0.946*	0.908				
CCG	-	-	-	-	-	-	0.957			
CSG	-	-	-	-	-	-	0.417	0.842		
GI	-	-	-	-	-	-	0.416	*0.992*	0.834	
CC	-	-	-	-	-	-	-	-	-	0.9

Note (s): CCE: Eco-tourists' choice environment; CSE: Eco-tourists' satisfaction environment. EI: Environmental Indicators; CCS: Eco-tourists' choice social; CSS: Eco-tourists' satisfaction social; SI: Social Indicators; CCG: Eco-tourists' choice governance; CSG: Eco-tourists' satisfaction governance; CSG: Eco-tourists' satisfaction governance; GI: Governance indicators; CC: Eco-tourist choice

A total of four direct hypotheses were developed for this study namely to examine the effect of each ESG indicator on consumer satisfaction (H1, H2, and H3) and one on the effect of consumer satisfaction on consumer choice (H5). The bootstrapping procedure recommended by Hair et al. (2017) was conducted to identify significant path relationships. Referring to Table 4, all the paths were found to be statistically significant according to the t-value. Additionally, there are three hypothesis (H4a, H4b, and H4c) that studies the mediating effect of consumer satisfaction on each ESG indicators and consumer choice. Hence, bootstrapping re-sampling procedures were done according to Hair et al. (2017) to identify the significance of the indirect effect. According to Table5, all three hypotheses (H4a, H4b, and H4c) show significant indirect effect based on the t-value.

Table 5. Summary of hypotheses results

Path		**Standard Path**	***t*-value**	**Decision**
H1	Environment indicator →Eco-tourists' satisfaction	0.809	11.69	Supported
H2	Social indicator →Eco-tourist's satisfaction	0.946	54.031	Supported
H3	Environment indicator → Eco-tourist's satisfaction	0.992	309.102	Supported
H4a	Environment indicator →Eco-tourists' satisfaction→ eco-tourist's choice	0.354	5.145	Supported
H4b	Social indicator →Eco-tourist's satisfaction→ eco-tourist's choice	0.462	5.352	Supported
H4c	Environment indicator → Eco-tourist's satisfaction→ eco-tourist's choice	0.414	4.115	Supported
H5	Eco-tourists' satisfaction → eco-tourist's choice	0.360	3.434	Supported

Discussion

As ecotourism is an important tourism product of Malaysia and there is a growing trend towards emphasis on ESG practices for company, it was the aim of this study to develop a conceptual model to understand how this constructs affect customer satisfaction and choice. It was revealed that all three ESG indicators play a significant role in directly and positively affecting customer satisfaction. Furthermore, customer satisfaction with the company's ESG indicators has also shown a significant indirect and positive effect on their customer choice. The significant mediating role of customer satisfaction on ESG indicators towards customer choice has also been evidently confirmed. Moreover, the direct effect of customer satisfaction on customer choice in general has also been proven to be significant and positive. Given the substantial resource consumption inherent in the tourism sector, the adoption of eco-friendly practices is imperative to mitigate environmental impact. Consequently, there is a widespread call for the integration of green practices within the hotel industry (Deraman, Ismail, Izzat, & Izzuan, 2017). This shows that ecotourism companies that conduct ESG practices can add to their customers' satisfaction and

positively affect their choice towards the ecotourism company. Additionally, 70% of global travellers preferred booking accommodations certified as eco-friendly (Booking.com, 2019).

This study is pioneering in its exploration of the impact of Environmental, Social, and Governance (ESG) indicators on customer satisfaction and customer choice, specifically within the ecotourism sector. Previous research has mostly focused on long-term value creation for the company through the performance of ESG indicators, and there is a noticeable gap in research concerning the impact of ESG indicator performance on consumer satisfaction and choice. Additionally, considering consumer behavior in the niche industry of ecotourism with relation to ESG indicators have yet to be investigated prior to this, it makes this investigation particularly novel. Other than that, the application of the Stimulus-Organism-Response (SOR) model to study customer satisfaction and customer choice is unprecedented. This study shows that ESG indicators of ecotourism company may serve as external stimulus to customer's (organism) internal processes by providing satisfaction. This effect then generates the response of customer choice. The significant and positive relations indicate that this framework is suitable for this study. The S-O-R model categorises consumer reactions into three steps: (S) exposure to an external environmental stimulus, (O) the individual's internal state and emotions, and (R) the subsequent behavioural response (Su & Swanson, 2017). According to this model, a consumer's response to a given stimulus is based on their core emotional reaction (Hameed, Hussain, & Khan, 2021), which originates in the subconscious mind.

This study has practical implications for all stakeholders of the ecotourism sector. Firstly, for the customer, they can enjoy ecotourism better knowing that their choice towards companies that have good ESG practices is contributing to a sustainable future. Secondly, for ecotourism company owners, this study is evident for them to justify ESG practices that may not directly appear to be contributing to their business. According to Suchard and Polonski (1991, as cited in Kianpour & Asghari, 2012), consumers were willing to pay 15% to 20% more for eco-friendly products and services. Hence, they may use these insights to formulate business strategies and plan to not only contribute to a sustainable future but improve business performance as well. ESG study aspires to contribute valuable insights to shape satisfaction and choice in ecotourism (Kurniawan et.al, 2024). Consequently, it will foster a more holistic understanding on sustainable development in smart eco-tourism. Similarly, government and policy makers may use the information gathered to formulate national ecotourism marketing plan and establish policies to further encourage ESG practices.

For future research, this study can be expanded to cover a wider respondent demographic to ensure accurate representation of the Malaysia population. Moreover, future study may consider gauging the awareness of ESG practices of Malaysia ecotourism company when establishing ESG indicators to better reflect the local practices. Lastly, future research should also consider other relevant sectors to better understand the effect of ESG practices on customer satisfaction and choice.

Conclusion

In conclusion, this study represents a novel study that bridges the knowledge gap between ESG indicators and customer satisfaction and choice, as well as the knowledge gap in the significance of ESG practice in ecotourism sector. This study also shows that ESG indicators have a significant

effect on consumer satisfaction and choice and thus encourages ESG practices in ecotourism sector. Through this study, the findings may be utilized by relevant stakeholders to make better informed decisions. Lastly, it is encouraged that other sectors should also consider investing in ESG practices as it has a significant effect on customer satisfaction and choice.

References

Abdullah, M., Mamat, M. P., Adnan, N., & Hussain, F. N. T. (2020, August). Ecotourism as tool for eradicating rural poverty in Peninsular Malaysia. In *IOP Conference Series: Earth and Environmental Science* (Vol. 549, No. 1, p. 012091). IOP Publishing.

Abdurahman, A. Z. A., Ali, J. K., Khedif, L. Y. B., Bohari, Z., Ahmad, J. A., & Kibat, S. A. (2016). Ecotourism product attributes and tourist attractions: UiTM undergraduate studies. *Procedia-Social and Behavioral Sciences*, *224*, 360-367.

Ardoin, N. M., Wheaton, M., Bowers, A. W., Hunt, C. A., & Durham, W. H. (2015). Nature based tourism's impact on environmental knowledge, attitudes, and behavior: a review and analysis of literature and potential future research. *Journal of Sustainable Tourism*, *23*(6), 838-858.

Ali, F., Amin, M., & Ryu, K. (2016). The role of physical environment, price perceptions, and consumption emotions in developing customer satisfaction in Chinese resort hotels. *Journal of Quality Assurance in Hospitality & Tourism*, *17*(1), 45-70.

Ali, L., Yee, W. F., Imm, N. S., & Akhtar, M. S. (2018). Price fairness, guest emotions, satisfaction, and behavioral intentions in peer-to-peer accommodation sector. *Journal of Global Business Insights*, *3*(2), 41-51.

Booking.com. (2019, April 17). *Booking.com reveals key findings from its 2019 sustainable travel report*. https://news.booking.com/bookingcom-reveals-key-findings-from-its-2019-sustainable-travel-report/

Boufounou, P., Moustairas, I., Toudas, K., & Malesios, C. (2023). ESGs and customer choice: Some empirical evidence. *Circular Economy and Sustainability*, *3*(4), 1841-1874.

Ceballos-Lascuráin, H. C. (1996). *Tourism, ecotourism, and protected areas: The state of nature-based tourism around the world and guidelines for its development*. World Congress on National Parks and Protected Areas, 4th, Caracas.

Coria, J., & Calfucura, E. (2012). Ecotourism and the development of indigenous communities: The good, the bad, and the ugly. *Ecological Economics*, 73, 47–55.

Chen, G., So, K. K. F., Hu, X., & Poomchaisuwan, M. (2022). Travel for affection: A stimulus organism-response model of honeymoon tourism experiences. *Journal of Hospitality & Tourism Research*, *46*(6), 1187-1219.

Das, M., & Chatterjee, B. (2015). Ecotourism: A panacea or a predicament? *Tourism Management Perspectives*, 14, 3-16.

Deraman, F., Ismail, N., Izzat, M., & Izzuan, A. M. M. (2017). Green practices in hotel industry: factors influencing the implementation. *Journal of Tourism and Hospitality*, *9*(2), 305–316.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39-50.

Hair, J.F., Sarsteadt, M., Hopkins, L. & Kuppelwieser, V. (2014), "Partial Least Squares Structural Equation Modeling (PLS-SEM): an emerging tool for business research", *European Business Review*, *26* (2), 106-121.

Hair, J.F., Hult, G.T., Ringle, C.M. & Sarstedt, M. (2017), A *Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publication, Los Angeles, CA.

Hair, J. F., Marko, S., & Christian, M. R. (2019). Rethinking some of the rethinking of partial least squares. *European Journal of Marketing* 53: 566–84.

Hameed, I., Hussain, H., & Khan, K. (2021). The role of green practices toward the green word-of-mouth using stimulus-organism-response model. *Journal of Hospitality and Tourism Insights*, *5*(5), 1046–1061.

Higgins, B. R. (1996). The Global structure of the nature tourism industry: Ecotourists, tour operators, and local businesses. *Journal of Travel Research*, *35*(2), 11–18.

Hornuf, L., Stenzhorn, E., & Vintis, T. (2022). Are sustainability-oriented investors different? Evidence from equity crowdfunding. *The Journal of Technology Transfer*, *47*(6), 1662-1689.

Ionescu, G. H., Firoiu, D., Pirvu, R., & Vilag, R. D. (2019). The impact of ESG factors on market value of companies from travel and tourism industry. *Technological and Economic Development of Economy*, *25*(5), 820-849.

Jang, S. S., & Namkung, Y. (2009). Perceived quality, emotions, and behavioral intentions: Application of an extended Mehrabian–Russell model to restaurants. *Journal of Business Research*, *62*(4), 451-460.

Kaltcheva, V. D., & Weitz, B. A. (2006). When should a retailer create an exciting store environment? *Journal of Marketing*, *70*(1), 107-118.

Kianpour, K., & Asghari, M. (2012). Importance of price for buying environmentally friendly products. *Journal of Economics and Behavioral Studies*, *4*(6), 371–375.

Koo, D. M., & Ju, S. H. (2010). The interactional effects of atmospherics and perceptual curiosity on emotions and online shopping intention. *Computers in human behavior*, *26*(3), 377-388.

Krüger, O. (2005). The role of ecotourism in conservation: Panacea or Pandora's box? *Biodiversity & Conservation*, *14*, 579–600.

Kurniawan, R., Saununu, S. J., Harsono, I., & Dewi, H. B. (2024). The Effect of Product and Service Diversification in Ecotourism Business Management on Beaches in Bali. West Science Interdisciplinary Studies, *2*(02), 423-430.

Lubowiecki-Vikuk, A., Dąbrowska, A., & Machnik, A. (2021). Responsible consumer and lifestyle: Sustainability insights. *Sustainable production and consumption*, *25*, 91-101.

Malaysia Tourism Promotion Board (MTPB). (2024). *Malaysia tourism Statistics in Brief.* Tourism Malaysia Corporate Site.

Mehrabian, A., & Russell, J.A. (1974). An approach to environmental psychology. Cambridge, UK: MIT Press.

Mehta, P., Singh, M., & Mittal, M. (2020). It is not an investment if it is destroying the planet: A literature review of socially responsible investments and proposed conceptual framework. *Management of Environmental Quality: An International Journal*, *31*(2), 307-329.

Nasir, M., Mohamad, M., Ghani, N., & Afthanorhan, A. (2020). Testing mediation roles of place attachment and tourist satisfaction on destination attractiveness and destination loyalty relationship using phantom approach. *Management Science Letters*, *10*(2), 443-454.

Nilsson, J., Jansson, J., Isberg, S., & Nordvall, A. C. (2014). Customer satisfaction with socially responsible investing initiatives: The influence of perceived financial and non-financial quality. *Journal of Financial S*ervices *Marketing*, *19*, 265-276.

Noor, S., Tajik, O., & Golzar, J. (2022). Simple random sampling. *International Journal of Education & Language Studies*, *1*(2), 78-82.

Oladeji, S. O., Awolala, D. O., & Alabi, O. I. (2022). Evaluation of sustainable ecotourism practices in oke-idanre hills, ondo-state, Nigeria. *Environment, Development and Sustainability*, *24*(2), 2656-2684.

Orams, M. B. (1995). Towards a more desirable form of ecotourism. *Tourism Management*, *16*(1), 3–8.

Ringle, Christian M., Wende, Sven, & Becker, Jan-Michael. (2024). SmartPLS 4. Bönningstedt: SmartPLS. Retrieved from https://www.smartpls.com Ross, S., & Wall, G. (1999). Ecotourism: Towards congruence between theory and practice. *Tourism Management*, *20*(1), 123–132.

Santoso, A., & Aprianingsih, A. (2017). The influence of service and e-service quality to repurchase intention the mediating role of customer satisfaction. Case study: online transportation by Go-Jek Indonesia. *Journal of Business and Management*, 6(1), 32-43.

Sharma, G. (2017). Pros and cons of different sampling techniques. *International Journal of Applied Research*, *3*(7), 749-752.

Snyman, S. (2017). The role of private sector ecotourism in local socio-economic development in southern Africa. *Journal of Ecotourism*, *16*(3), 247–268.

Sohaib, M., Safeer, A. A., & Majeed, A. (2022). Role of social media marketing activities in China's e-commerce industry: A stimulus organism response theory context. *Frontiers in Psychology*, *13*, 941058.

Su, L., & Swanson, S. R. (2017). The effect of destination social responsibility on tourists environmentally responsible behavior: Compared analysis of first-time and repeat tourists. *Tourism Management*, *60*, 308-321.

Valdivieso, J. C., Eagles, P. F. J., & Gil, J. C. (2015). Efficient management capacity evaluation of tourism in protected areas. *Journal of Environmental Planning and Management*, *58*(9), 1544–1561.

Van Riel, A. C., Henseler, J., Kemény, I., & Sasovova, Z. (2017). Estimating hierarchical constructs using consistent partial least squares: The case of second-order composites of common factors. *Industrial Management & Data systems*, *117*(3), 459-477.

Whitelaw, P. A., King, B. E. M., & Tolkach, D. (2014). Protected areas, conservation and tourism-financing the sustainable dream. *Journal of Sustainable Tourism*, *22*(4), 584–603.

Xu, G., Wang, S., Li, J., & Zhao, D. (2020). Moving towards sustainable purchase behavior: examining the determinants of consumers' intentions to adopt electric vehicles. *Environmental Science and Pollution Research*, *27*, 22535-22546.

Zhong, L., & Liu, L. (2017). Ecotourism development in China: Achievements, problems and strategies. *Journal of Resources and Ecology*, *8*(5), 441–448.