Charting the Course of Eco-Conscious Travel: Exploring the Continuity of Green Tourism Among Tourists and its Reverberations on Environmental Preservation in Mindanao, Philippines

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ABSTRACT

With the grappling effect of climate change and the influx of tourists in the post-pandemic world, governments and the private sector have turned their efforts towards sustainability, and green tourism is one of the priorities. For years, Mindanao has gained the attention of tourists around the world due to its pristine and natural beauty. Drawing from the model provided by the Theory of Planned Behavior, this study sought to understand the behavior of foreign and local tourists who have visited Mindanao Island. A total of 425 respondents answered the survey, and the data was analyzed using the Structural Equation Modelling approach. Findings showed that attitudes, subjective norms, and perceived behavioral control had significant positive effects on the intention of tourists to participate in green tourism. Moreover, environmental concerns and the intention to participate in green tourism have significant positive effects on the intention toward environmentally responsible tourism behavior. However, green tourism perception and environmental concern had a negative effect on environmentally responsible tourism behavior. This study offers a valuable and rich understanding of how tourists appreciate the green movement, its effect on their behaviors, and their motivation to participate in green tourism practices that eventually lead to sustainability.

Keywords: Green tourism, sustainability, eco-travel, responsible tourism behavior.

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1. INTRODUCTION

In the wake of climate change's escalating impact, environmental challenges have reached critical levels. The emission of greenhouse gases from human activities has set in motion a series of consequences, including changes in global temperature and precipitation patterns, which, in turn, intensified the frequency and intensity of intense weather events such as forest fires, droughts, heat waves, floods, and storms. These events can damage ecosystems and biodiversity, which, in turn, pose significant risks to human societies (National Geographic Society, 2023; United Nations, n.d.). Hence, sustainable practices have gained prominence as a response, with eco-tourism emerging as a priority for addressing challenges caused by climate change (Thakkar, 2023; Wardhana, 2022). Thus, understanding society, the environment, and the economy is crucial in achieving sustainability and strengthening green tourism among different industries.

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Tourism is a rapidly expanding industry, recognized as a key sector for growth and a key driver of economic recovery. However, this growth is accompanied by the escalation of carbon emissions, which warrants concern, attention, and appropriate action. Various activities such as air travel, boat and car rides, souvenirs, and lodging collectively contribute to tourism's carbon footprint, entailing energy absorption, great contribution to waste generation, and CO2 emissions (Sustainable Travel International, 2024; UN Tourism, 2023). Thus, research on tourism has increased, given its substantial contribution to economic development, particularly evident in small island developing states (SIDS) that show consistent recent growth (Ibnou-Laaroussi et al., 2020; MEDDEB 2020).

Sustainable tourism practices are increasingly in demand. Hence, the tourism industry has been embracing environmentally friendly practices. The Philippines has been employing environmental practices such as eco-friendly accommodations, wildlife conservations, sustainable transportation options, and community engagement. These are noticeable trends in the country that minimize carbon footprints and conserve resources. (Avelino, 2023; Thakkar, 2023). Mindanao, known for its natural attractions and rich cultural heritage, emphasizes the importance of implementing environmentally responsible measures while meeting the needs of its local communities and tourists to preserve its natural beauty and cultural integrity (Asael, 2023). Hence, analyzing tourists' behaviors and attitudes towards sustainable practices becomes crucial in ensuring environmental preservation, particularly in Mindanao, Philippines.

This study aims to analyze tourists' behaviors concerning green tourism. Thus, this study utilizes a model that emphasizes tourists' intentions to engage in green environmental behaviors, which are influenced by attitude, subjective norms, and perceived behavioral control (Ibnou-Laaroussi et al., 2020). Thus, the Theory of Planned Behavior (TPB) is employed as a framework to predict individual behavioral intentions accurately. Moreover, this study provides valuable insights into green marketing strategies, which is instrumental for businesses seeking to target tourists whose values align with green tourism.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Theory of Planned Behavior

Ajzen (1991) proposed the Theory of Planned Behavior (TPB), which explains how an individual's decision to engage in a specific behavior is influenced by their intention to perform that behavior. It is an extension of the theory of reasoned action. This study will utilize the theory by incorporating the concept of perceived behavioral control. Intentions are indications of how hard people are willing to try and how much effort they are willing to exert to perform the behavior (Brookes, 2023). As per Ibnou-Laaroussi et al. (2020), there has been a growing interest in sustaining green tourism among international tourists as they most likely seek destinations with attractive natural and cultural resources, along with diversity and valuable heritage. Hence, this study will delve into the usage of the TPB to further predict tourists' environmental intentions to participate in green tourism. Subsequently, Hamid and Bano (2021) validated the variables of TPB in predicting intention to visit eco-friendly destinations for tourism experiences. In fact, Wang et al. (2021) perceived TPB as an effective predictive model to explain consumers' green purchase behavior as well as predicting green hotel visitations. With regards to green

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tourism, Fauzi et al. (2022) found the TPB effective in predicting tourists' behavior and the intention to participate in environmentally friendly behavior.

2.6 Model and Hypotheses Development

This study was conducted on Mindanao, an island renowned for its diverse landscapes, including mountains, coastlines, and rich cultural heritage. Surrounded by the Bohol, Philippine, Celebes, and Sulu seas, Mindanao usually attracts visitors primarily interested in coastal tourism destinations such as Siargao, Surigao, Camiguin, and the Island City of Samal. Additionally, cities like Marawi and Zamboanga offer a unique blend of diverse cultures, providing tourists with enriching cultural experiences.

This study seeks to investigate the relevant interrelationships among the variables to analyze the behavioral aspects of both international and local tourists in Mindanao, Philippines, as illustrated in Figure 1. Hence, the Theory of Planned Behavior was utilized due to its widespread acceptance and effectiveness in predicting pro-environmental behaviors and environmental behavioral intentions. Moreover, the extended TPB model was used, incorporating two pro-social constructs, which are environmental concern (EC) and green tourism perception (GTP).

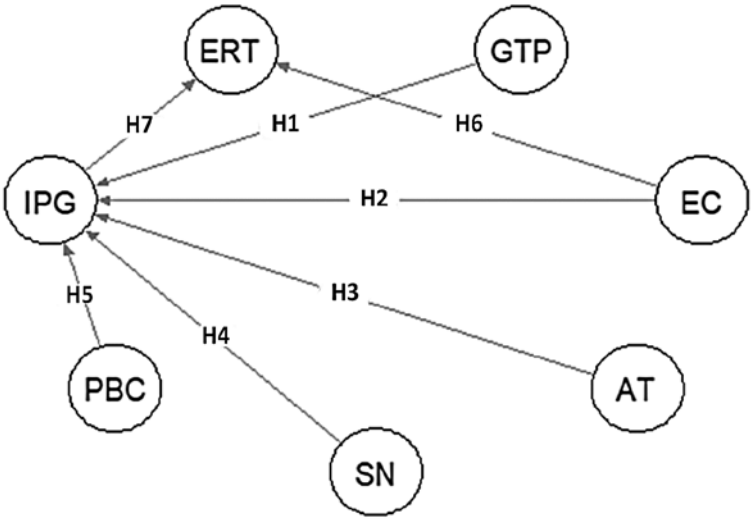

Figure 1. Green tourism research model.

2.7 Interrelationship between Green Tourism Perception and Intention of Participation in Green Tourism

Abdullah, Samdin, Teng, and Heng (2018) highlighted the importance of environmental knowledge and destination image in influencing the tourists' intention to engage in environmentally responsible behaviors to participate in green tourism. Furthermore, Ibnou-Laaroussi et al. (2020) emphasized that tourists' perceptions of green tourism and their environmental concerns significantly impact their attitudes. In addition, Xu et al. (2019) highlighted the indirect and great influence of biosphere values on tourists' environmentally responsible behavior. Therefore, the proposed **Hypothesis 1 (H1)** *is that*

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tourists' perceptions of the sustainability of green tourism have a positive link to tourists' intentions to participate in environmentally responsible behavior.

2.8 Interrelationship between Environmental Concern and Intention of Participation in Green Tourism

A study has laid a foundation for understanding the relationship between tourists' environmental concerns and their intentions to participate in green tourism practices. Rusyani et al. (2021) show that environmental knowledge and environmental concern are positively related to and significantly affect tourists' eco-friendly purchasing behavior. Thus, this study proposed **Hypothesis 2 (H2)**, *which states that tourists' environmental concerns have a positive link to tourists' intentions to participate in environmentally responsible behaviors.*

2.9 Interrelationship between Attitude and Intention of Participation in Green Tourism

Studies have shown attitudes have a significant link to tourists' intention to engage in the sustainability of green tourism (Wong, 2020; Ibnou-Laaroussi et al., 2020). In relevance to this, consumers' intentions in purchasing energy-efficient appliances were positively influenced by their attitude, which was notably shaped by factors such as functional value, price value, environmental value, and awareness of the products (Lin & Dong, 2023). Moreover, Shein et al. (2022) found that the tourists' positive environmental behavior was influenced by their attitudes, which affects their intentions to participate in green tourism. Thus, **Hypothesis 3 (H3)** *is that tourists' attitudes have a positive link to tourists' intentions to participate in environmentally responsible behaviors.*

2.10 Interrelationship between Subjective Norm and Intention of Participation in Green Tourism

Wang et al. (2023) demonstrated that social norms have a positive impact on personal norms and green purchase intentions. Relative to this, Wang et al. (2023) found that subjective norms positively influence personal norms, amplitude, explicit attitude, and intention. In addition, studies within the hospitality sector highlighted the significance of perceived morals, responsibility, and willingness to purchase and pay for environmentally friendly accommodations directly influencing tourists' intentions to stay at green hotels (Fauzi et al., 2022). Hence, aligning with existing literature, the following conjecture was proposed: **Hypothesis 4 (H4).** *Tourists' subjective norms have a positive link with tourists' intention to participate in green tourism.*

2.11 Interrelationship between Perceived Behavioural Control and Intention of Participation in Green Tourism

Previous study highlights that the behavioral intentions of tourists are positively influenced by green city satisfaction and green perceived value, which are identified as mediators between green city image, experience quality, and behavioral intentions (Wang, 2021). Moreover, consumers' behavioral control shows a positive influence on their intention to visit green hotels (Chen & Tung, 2014). Thus, in this study, we proposed the following hypothesis: **Hypothesis 5 (H5).** *Tourists' perceived behavioral control has a positive link to tourists' intention to participate in green tourism.*

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2.12 Interrelationship between Environmental Concern and Environmentally Responsible Tourism Behavior

According to Seow et al. (2020), environmental concern and knowledge are vital for environmental attitudes to cultivate environmentally responsible behavior among tourists. In relevance to this, Wong (2020) demonstrated that environmental concerns among tourists and their intention to participate in green tourism had a significantly positive impact on environmentally responsible tourism behavior. In addition, Saari et al. (2021) demonstrated that sustainable consumption behavior is associated with environmental concern, which is shaped by the level of environmental knowledge and perception of environmental risk. Moreover, Patwary (2022) found that the environmental beliefs of tourists and their conservation commitment have a significant influence on their environmentally responsible behavior. Therefore, this study proposed the following hypothesis: **Hypothesis 6 (H6).** *Tourists' environmental concerns have a positive link to individuals' environmentally responsible tourism behaviors.*

2.13 Interrelationship between Intention of Participation in Green Tourism and Environmentally Responsible Tourism Behavior

Previous studies emphasized that the tourists' intention to participate in green tourism has a significant impact on their environmentally responsible tourism behavior (Ibnou-Laaroussi et al., 2020; Wong, 2020). Relative to this, research by S. Wang et al. (2021) revealed that factors such as tourists' attitudes, subjective norms, perceived behavioral control, and personal norms significantly activate waste reduction intentions. Moreover, Ding (2023) highlighted that the destinations' fresh food attractiveness is positively linked with the intention of tourists to be environmentally responsible, which emphasizes the influence of destination attributes shaping tourists' intentions to engage in environmentally friendly behavior. Furthermore, Safshekan and Öztüren (2020) show that community attachment, involvement, and environmental attitude impact the residents' environmentally responsible behavior. This highlights the impact of psychological factors on environmentally responsible behaviors, which may also apply to tourists. Thus, the following hypothesis was proposed in this study: **Hypothesis 7 (H7).** *Tourists' intention to participate in green tourism has a positive link to tourists' environmentally responsible behavior.*

3. METHODOLOGY

3.1 Instrument Development

This study aims to investigate the behavioral aspects of tourists toward green tourism, employing an extended framework of the theory of planned behavior (TPB). In collecting the necessary data, the questionnaire used consisted of demographic characteristics and the items for each of the seven variables in the study model. The specifics of the items are presented in Appendix A, which were adapted from a previous study by Maichum et al. (2016) and Cheng et al. (2018) and were modified to suit the objectives of this study. The green tourism variable was measured with six items; environmental concern was measured through four items; attitudes were measured with five items; behavior was also measured with five items; intention to participate in sustainability of green tourism was measured with four items; subjective norms were measured with three items; while perceived behavioral control was measured with three items which were adapted from

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(Chuang et al., 2018). Subsequently, all the items were scaled with a five-point Likert scale, which ranged from 1 (strongly disagree) to 5 (strongly agree).

3.2 Data Collection and Analysis

This study utilized a simple random sample technique to gather data. The study mainly focused on both domestic and international tourists around Mindanao, Philippines. A structured questionnaire was administered in this study to collect data from the respondents. In terms of data analysis, the researchers applied the two-stage Structural Equation Modelling (SEM) procedure to examine whether our proposed hypothesized model, as presented in Figure 1, was appropriate. Initially, Confirmatory Factor Analysis (CFA) was conducted to test how well the questionnaire items represent the underlying latent variables and to assess the reliability and validity of the proposed model (Schork, 2023). Subsequently, the researchers estimated the full structural model to test the hypotheses.

4. ANALYSIS AND FINDINGS

This section presents the summary of results and insights on the relationship between the seven (7) variables: green tourism perception, environmental concerns, subjective norms, attitude, perceived behavioral control, intention, and environmentally responsible behavior.

4.1 Descriptive Analysis

This study utilized a five-point Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree) in order to measure the variation of each observation relative to the mean. The values in *Table 2* represent how the participants in this study perceived and engaged with green tourism practices. As shown in the table below, the mean and standard deviation scores among all the variables varied from 3.96 to 4.27 (0.63 to 0.60), which reveals that all variables of the studied population generally hold positive perceptions, attitudes, and intentions toward green tourism. However, since individual differences exist, there is a need for targeted interventions to promote sustainable practices.

In terms of green tourism perception, the mean and its standard deviation are 3.96 and 0.63, respectively, which suggests that international tourists perceive green tourism at a neutral to average level. Subsequently, environmental concern (4.53 and 0.57), attitude (4.57 and 0.59), subjective norm (4.00 and 0.79), perceived behavioral control (4.21 and 0.66), intention (4.31 and 0.67), and environmentally responsible tourism behavior (4.27 and 0.60) respectively, indicating that international tourists expressed a relatively high level of concern for the environment inferring a moderate to average intention toward green tourism. Overall, the statistics revealed that 6 out of the seven variables being used in this study garnered mean scores that are higher than 4.

Table 1. Descriptive Statistics: Mean and Standard Deviation

Characteristic	*Mean*	*Sd*
Green Tourism Perception	3.96	0.626
Environmental Concern	4.53	0.565
Attitude	4.57	0.589
Subjective Norm	4.00	0.790
Perceived Behavioral Control	4.21	0.659

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Intention of Participation in Green Tourism	4.31	0.671
Environmentally Responsible Tourism Behavior	4.27	0.596

4.2 Convergent Validity and Discriminant Validity

This part provides the Factor Loading, the Average Variance Extracted (AVE), and Construct Reliability, along with Cronbach's alpha for each construct. Moreover, the measurement of model discriminant validity was also presented, and it was used in this study to test the reliability and convergent discriminant validities.

This study considered the basis of the analysis of Kite and Whitley (2018), which is to look for >0.40 values in the factor matrix as it explains that a variable is closely associated with the factor. This threshold allowed the researchers to block out factor loadings that were less than the particular value. Following Hair et al. (2010) suggestions, a review conducted by Cheung et al. (2023) supported that the best-practice recommendations for SEM-based studies are the following: Construct Reliability (CR) values should be 0.6 or greater, all standardized factor loadings (λ) should be 0.5 or greater, and AVE values should be 0.5 or greater. Mendoza-Torres et al. (2023) also used the 0.50> threshold in AVE, which was considered appropriate. Cronbach's alpha was another criterion used in this study, and it had a threshold value of 0.70>. A factor below the cut-off value should be subjected to thorough evaluation to be considered not included in that particular factor.

It was revealed in *Table 2* that almost all of the requirements are met among the constructs. In green tourism perception, GTP2 did not reach the factor loading and AVE threshold values. Also, the factor ERT1 in environmentally responsible tourism behavior did not meet both the factor loading and AVE threshold values. Hence, the researchers employed the cross-loading measurement criteria to test the discriminant validity for the respective constructs (Kite & Whitley, 2018).

Table 2. Confirmatory Factor Analysis (Convergent Validity and Discriminant Validity)

		Factor Loadings	AVE	CR	α
Green Tourism Perception	GTP1	0.550	0.342	0.741	0.747
	GTP2	0.367			
	GTP3	0.713			
	GTP4	0.644			
	GTP5	0.503			
	GTP6	0.450			
Environmental Concern	EC1	0.462	0.561	0.843	0.830
	EC2	0.521			
	EC3	0.542			
	EC4	0.548			
Attitude	AT1	0.567	0.724	0.930	0.928
	AT2	0.560			
	AT3	0.525			
	AT4	0.618			
	AT5	0.567			
Subjective Norm	SN1	0.750	0.822	0.933	0.932
	SN2	0.754			
	SN3	0.782			

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Perceived Behavioral Control	PBC1	0.517	0.560	0.790	0.785
	PBC2	0.557			
	PBC3	0.680			
Intention of Participation in Green Tourism	IPG1	0.505	0.654	0.884	0.877
	IPG2	0.686			
	IPG3	0.682			
	IPG4	0.649			
Environmentally Responsible Tourism Behavior	ERT1	0.378	0.345	0.713	0.713
	ERT2	0.489			
	ERT3	0.604			
	ERT4	0.415			
	ERT5	0.628			

Further, Table 3 shows that the variables load together to represent each factor, hence proving that the value of the discriminant validity was satisfied for each construct. Although there are two-factor loadings that did not reach the threshold, as presented in Table 3, such loadings are still considered important according to Rahn (2023) because a variable should have a rotated factor loading of at least 0.4 ($\geq +.4$ or $\leq -.4$) onto one of the factors in order to be considered important. However, Costello and Osborne (2005) stated that if an item's commonality is below 0.40, it could imply that the items might not have a connection with the rest, or it could indicate a new factor that needs investigation. In relation, the minimum loading for an item is 0.32, which equates to approximately 10% overlapping variance with the other items in that factor. Hence, items that load 0.32 or higher on two or more factors will most likely be dropped from the analysis, given that there are several factors that are strong loaders in this study (>0.50). Thus, it can be concluded that the two items from the factors, Green Tourism Perception ($0.367 \geq 0.32$) and Environmentally Responsible Tourism Behavior ($0.378 \geq 0.32$), will be subject to elimination and will not fit into the data.

Table 3. The Measurement of Model Discriminant Validity

Constructs	GTP	EC	AT	SN	PBC	ERT
EC	0.517					
AT	0.513	0.707				
SN	0.496	0.457	0.539			
PBC	0.571	0.585	0.646	0.722		
ERT	0.496	0.588	0.569	0.586	0.683	
IPG	0.583	0.662	0.764	0.669	0.808	0.737

4.3 Model Testing, Path Coefficient, and Level of Significance

Based on the review of Newsom (2023), which provides a comprehensive overview of various fit indices, their interpretation, and recommended thresholds, the measurement model, the structural model, and goodness of fit index (GFI), comparative fit index (CFI), Tucker–Lewis Index (TLI), and root mean square error of approximation (RMSEA) must be above the recommended threshold.

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Subsequently, depicted below is Leonard's (2024) AMOS model fit cheat sheet, which is being adapted in this study. This sheet summarizes some of the most important parameters being used in this study, along with its accepted values. Moreover, in relation to the sheet, this study also adapted the suggestion of Hu & Bentler (1999) that values .90 to .95 from the CFI and TLI are considered acceptable.

Table 4. AMOS model fit cheat sheet

Acronym	Explication	Accepted fit	Reference
Likelihood ratio	P-value	≥ 0.05	Joreskog & Surbom (1995)
CMIN/df	Chi-square divided by Degree of Freedom	≤ 3 = acceptable fit ≤ 5 = reasonable fit	Kline (1998); Marsh & Hocevar (1985)
GFI	Goodness of fit	1 = perfect fit ≥ 0.95 = excellent fit ≥ 0.90 = acceptable fit	Kline (2005); Hu & Bentler (1998)
CFI	Comparative fit index	1 = perfect fit ≥ 0.95 = excellent fit ≥ 0.90 = acceptable fit	West et al. (2012); Fan et al. (1999)
RMSEA	Root Mean Square Error of Approximation	≤ 0.05 = reasonable fit	MacCallum et al. (1996)

The results show that the p-value is less than the predetermined level of significance (0.001 > 0.05), indicating that there is a significant relationship and effect among the variables used in this study. The results reflected a 2.43 *x2/df,* which indicates an acceptable fit. Additionally, the GFI is 0.983 ≥ 0.95, which means that the model presented an excellent fit. Moreover, the TLI is 0.913 ≥ 0.90 while the CFI is 0.923 ≥ 0.90, which is an acceptable fit. Further, the RMSEA is 0.059, $p \leq 0.05$, which is considered a reasonable fit. The confirmatory factor analysis (CFA) presented a good model fit since the three fit indices obtained high values.

Table 5. Model Fit Statistics Model Testing, Path Coefficient, and Level of Significance

Criteria	χ^2	df	p	χ^2/df	RMSEA	GFI	TLI	CFI
Coefficients	933.447	384	< 0.001	2.43	0.059	0.983	0.913	0.923

The next step was the model testing, which involved estimating the original coefficients (β) and p-values of the structural model to determine the model fit within the conceptual framework. Structural Equation Modeling (SEM)was employed with SmartPLS for variance-based structural equation modeling and tests of model fit.

As outlined in Table 6, the primary factors examined in the study encompassed several vital relationships. The relationship between GTP→IPG ($\beta = 0.067$) as well as EC→IPG ($\beta = 0.108$) showed no significant effect. However, significant positive effects were observed in the relationship between EC→ERT ($\beta = 129$, $p < 0.01$) as well as the

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relationship between IPG→ERT (β = 489, p < 0.01). These findings underscore the pivotal role of environmental concern and intention in influencing environmentally responsible tourism behavior. Furthermore, significant positive effects were identified in the relationships between AT→IPG (β = 0.281, p < 0.01), SN→IPG (β = 0.079, p < 0.01), and PBC→IPG (β = 421, p < 0.01). This highlights the significance of attitude, subjective norms, and perceived behavioral control in shaping individuals' intention towards engaging in green tourism activities.

Overall, all paths except H1 and H2 were not supported. The results indicated that the five variables were useful and significant in determining the core construct of the Theory of Planned Behavior (TBP) model.

Table 6. Path Coefficients and Significance Level

Hypothesis	Effects	β	z	p	Paths
H_1	GTP →IPG	0.067	1.453	0.146	Not Supported
H_2	EC →IPG	0.108	1.742	0.082	Not Supported
H_3	AT →IPG	0.281	5.320	< 0.001	Supported
H_4	SN →IPG	0.079	2.155	0.031	Supported
H_5	PBC →IPG	0.421	5.440	< 0.001	Supported
H_6	EC →ERT	0.129	2.084	< 0.001	Supported
H_7	IPG →ERT	0.489	6.171	0.037	Supported

Figure 2 indicates that H3, H4, H5, were *statistically significant*. In the context of the theory of planned behavior, behaviors directly affect the individual's intention. Thus, attitude, subjective norms, and perceived behavioral control have a significant link to tourists' intention to participate in green tourism (Ajzen, 1991; Brookes, 2023; Ibnou-Laaroussi et al., 2020; Hamid & Bano, 2021; Wang et al., 2022). Notably, an extension of the theory of reasoned action by incorporating the concept of perceived behavioral control was also found significant towards the intention to participate in green tourism (H6).

In addition, H7 was also *statistically significant*. Tourists' perception of green practices is usually influenced by their concerns for the environment, which directly affects their actions and behaviors. Hence, Environmental concerns and intention to participate in green tourism have a significant link to tourists' environmentally responsible tourism behavior (Hou & Wu, 2020; Brookes, 2023; Yang et al., 2023).

However, the path coefficients for H1 and H2 were found to be *negatively significant.* Tourists' concern towards the environment and promoting environmentally-friendly practices does not have a significant influence on tourists' actions and behaviors towards aiding in minimizing the negative effect on the environment. Therefore, green tourism perception and environmental concern do not have a significant link to tourists' intention to participate in green tourism.

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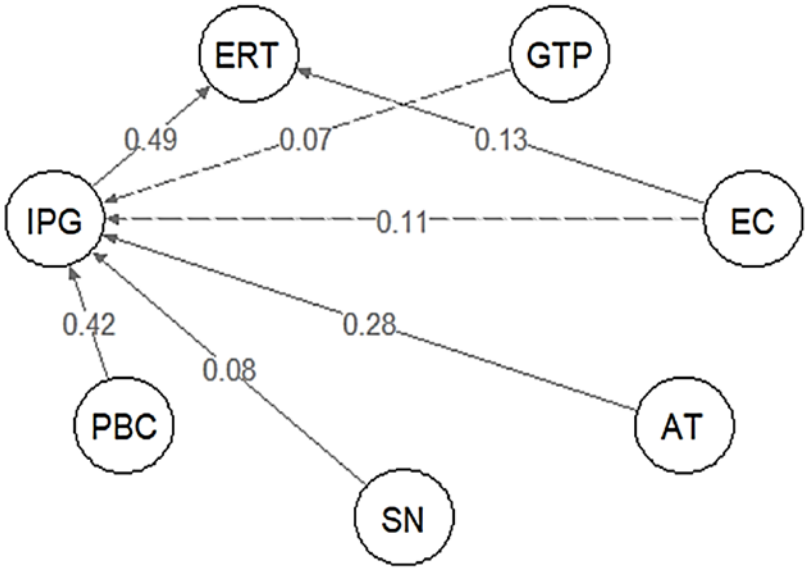

Figure 2. Results of Hypothesis Test

4.4 Discussion and Conclusion

Even though most studies have concluded that green tourism perception significantly impacts intentions to participate in green tourism activities, this study, however, proves in contrast to related research.

A notable result of this study was that green tourism perception and environmental concern have no significant impact on the intention to participate in green tourism. One example of this is the case of Boracay Island, a popular tourist destination that suffered from deteriorating environmental conditions in 2018; where it stopped operating for six months as some tourists did not follow responsible travel and sustainable tourism practices. This underscores that even though tourists care and perceive green practices positively, their intention to perform such behavior may be affected by barriers such as limited availability of eco-friendly accommodations or education and lack of awareness. In fact, the urgency of the tourism industry in the Philippines has harmed the ecosystems by the lack of effective waste management, over-development, and irresponsible tourist behaviors (Jack, 2023). However, there remains a gap in research aimed at exploring whether individuals' perceptions of climate change impact their willingness to make environmentally friendly practices and engage in green-oriented actions (Atzori et al., 2018).

Specifically, the reliability and convergent discriminant validities are another possible reason to highlight the insignificant relationship between green tourism perception and environmental concern towards the intention to participate in green tourism activities where the Average Variance Extracted of green tourism perception and environmental concern did not meet the required threshold of $\geqslant 0.05$, having values of 0.342 and 0.345 respectively. Furthermore, in reference to Costello and Osborne (2005), this might be due to the 10% overlapping variance with the other items in both factors since GTP and EC have a factor loading below 0.40. Nevertheless, the significance of the statistical

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relationship depends on the magnitude of the path coefficients and other factors, such as the sample size and intercorrelations among the variables (Suhr, 2008).

4.5 Implications

With the mandate of the new government to reinvigorate the tourism industry in the Philippines, the main implication of this study is putting an emphasis on government intervention to maximize the benefits of globalization and internalization (Castañeda, 2022). Hence, this study not only addresses a significant gap in the existing literature by exploring rarely investigated relationships and provides a direction for more empirical research in the context of green tourism. A significant contribution of this study is the empirical support of the significant impact of the Theory of Planned Behavior (TPB) determinants on the intention to participate in green tourism (Wong, 2020; Ibnou-Laaroussi et al., 2020). Similarly, among the contributions of this study is the relationship between environmental concern and intention to participate in green tourism, which is found to positively impact environmentally responsible tourism behavior and is a subset of sustainable development. That being said, this study highly recommends giving notice to use this as a basis to develop community programs that will highlight how an environmentally responsible person can help attain environmental degradation reduction, which measures green tourism effectiveness.

This study has created a framework that emphasizes the importance of understanding tourists' perceptions and their connection to behavioral intentions, which can significantly contribute to the field of tourism. Given that this study applied the Theory of Planned Behavior, wherein the three determinants (attitude, subjective norms, and perceived behavioral control) have a direct influence on the intention to participate in green tourism activities, thus the researcher recommends including the environmental concern and environmentally responsible behavior in the context of sustainability on green tourism to the theory to discover more about the relationship among the factors. This idea will contribute to understanding the behavior toward green tourism as well as in the advancement of existing policies and in creating tourism-related initiatives – placing all tourism stakeholders through campaigns, programs, and seminars. Thus, creating or raising awareness could improve or develop a positive green tourism perception towards the intention to participate in green tourism practices.

In the context of globalization and internalization, the implication of this study is beneficial to the economy as a whole in staying competitive with the world's standards while still being responsive to local needs and their peculiarities (Castañeda, 2022). Given that the Philippines has been gaining international recognition that pulls inbound travelers, extending this study will be beneficial for future purposes, and further research is needed to confirm findings.

Moreover, green tourism perception and environmental concern could be significant factors in the intention to participate in green tourism if mediated by environmentally responsible tourism behavior. Wang (2021) highlighted in his study that when tourists actively intend to make sustainable practices, their behavior also aligns with eco-friendly practices. Further, since it was concluded in the findings that items GTP2 and ERT1 will be dropped, it is essential to reanalyze the data; thus, it may be possible that the association between the item and the latent variable will become strong and significant after removing them.

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Ultimately, the Department of Tourism (DoT), together with the Local Government Units (LGUs), should build and improve effective communication channels across organizations, communities, consumers, and local businesses on the significance of green environment and should strengthen their tourism management by implementing policies, marketing, community engagement, and education and training which could contribute to a positive perception on green tourism. Hence, it is suggested that this study be extended for future purposes to assess the effectiveness of green tourism initiatives. All these implications will pave the way to an increase in tourism demand, as well as work opportunities and a change of livelihood among the members of the community.

4.6 Limitations and Directions for Future Studies

There are few to no studies about sustainable tourism present here in the Philippines. This limits the comparison of context-specific findings with other related studies, hoping to derive meaningful insights from different regions and cultures - assuming that one island group may significantly vary from the other groups. In connection, because this study is carried out only to find out the relationship among the determinants, it is also desirable to delve into understanding the tourists' behavior, preferences, and attitudes towards sustainable practices to see whether there is any difference on the level of awareness and their behavior towards green growth, which undoubtedly will serve as a framework in mitigating environmental degradation and climate change. In collecting the data, this study utilized a simple random sampling method. Hence, the researchers only randomly selected participants that represented Mindanao. Therefore, an extension for this study is to proportionally distribute respondents who stayed in green hotels, hotel and resort owners, managers, staff, and people who patronize eco-friendly products to provide a deeper understanding of the context of sustainability of green tourism. As such, moderating variables such as age, gender, and consumer and business type might significantly influence the relationship, which will create a clearer direction and strengthen the results of this study.

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