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Drivers of Consumers' Intentions to Choose Green Hotels in Malaysia

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ABSTRACT

Malaysia has long been regarded as a leading destination for international tourists, with visitor arrivals increasing steadily over the years. Concurrently, global concern for environmental sustainability has grown, prompting travellers to become more conscious of eco-friendly practices. In response, the hospitality industry has seen the rise of "green hotels," establishments that implement sustainable initiatives to minimise environmental impact and cater to environmentally aware guests. This study investigates how the key constructs of the Theory of Planned Behaviour (TPB) attitude, subjective norms, and perceived behavioural control, influence tourists' intentions to choose eco-friendly hotels in Malaysia. Data were collected through a survey of 329 domestic and international travellers staying at certified green hotels nationwide. The data were then analysed using SPSS 21 and AMOS 21. Results from the structural equation modelling indicate that all TPB dimensions exert significant effects on tourists' behavioural intentions, thereby supporting the proposed conceptual framework. These findings offer important implications for hotel marketers and managers of green hotels by demonstrating how tourists' environmental concerns shape their decision-making. The insights can assist practitioners in developing more effective marketing strategies, enhancing service quality, and fostering repeat visitation as well as positive word-of-mouth.

Keywords: Green Hotels, Theory of Planned Behaviour, Sustainable Tourism, Consumer Behaviour
JEL Classifications: D91; M31; Q56

1. INTRODUCTION

Tourism remains one of the world's fastest-growing industries and a major contributor to national economies, including Malaysia, where the sector generated RM240.2 billion in gross value added and supported 3.6 million jobs in 2022 (Department of Statistics Malaysia, 2023). Hotels, as a central component of the tourism system, play a critical role in shaping the environmental footprint of the sector. Their 24-h operations demand significant quantities of energy, water, food and disposable materials, making them one of the most resource-intensive segments of tourism (Jones et al., 2016; Bohdanowicz and Martinac, 2020). As environmental degradation and climate concerns intensify, the hotel industry faces growing pressure from governments, consumers and industry bodies to adopt more sustainable operational practices (Stylos and Zwiegelaar, 2019; Mensah, 2022).

In response, many hotels have introduced environmental initiatives such as waste-reduction programmes, water-saving technologies, energy-efficient systems, eco-friendly procurement and staff training. These developments have contributed to the emergence of "green hotels," a category of accommodation that deliberately integrates environmental considerations into service delivery and operational decision-making (Green Hotel Association, 2020; Chan, 2021). However, despite the global growth of green hotel practices, adoption in developing countries remains uneven. In Malaysia, sustainability has been formally prioritised within national tourism strategies, yet the transition to green hotel

operations is slow, inconsistent and often limited to isolated initiatives (Ministry of Tourism, Arts and Culture Malaysia, 2022; Mohamed et al., 2020).

A key barrier to broader adoption lies in the limited understanding of consumer demand. Although research acknowledges that environmentally conscious guests prefer sustainable hotel options (Han and Hyun, 2018; Zainuddin et al., 2020), empirical evidence in the Malaysian context remains fragmented. Existing studies tend to examine general environmental attitudes or broad consumer perceptions, offering limited insight into the specific psychological determinants that influence green hotel choice (Kasim, 2004; Rezai et al., 2013). Furthermore, most studies conceptualise *attitude* as a single, general construct, without distinguishing between environmentally specific attitudes, such as perceived severity of environmental problems or the inconvenience of being environmentally friendly, which may be more directly linked to green hotel decision-making (Han et al., 2010).

The Theory of Planned Behaviour (TPB) provides a robust framework for examining such determinants because it integrates attitudinal, social and control-related influences on behavioural intention (Ajzen, 1991). TPB has been widely applied to predict pro-environmental behaviours, including recycling, eco-consumption and green hotel visitation (Chen and Tung, 2010; Han and Kim, 2010). However, its application in Malaysia has been limited, with few studies incorporating environmentally specific attitudinal dimensions or addressing the unique cultural and contextual factors shaping Malaysian travellers' sustainability considerations.

To address these gaps, this study applies the Theory of Planned Behaviour to examine how environmental attitudes, subjective norms and perceived behavioural control influence guests' intentions to choose green hotels in Malaysia. By incorporating environmentally specific sub-dimensions of attitude, such as perceived severity of environmental problems, environmentally conscious living and perceived inconvenience, this study offers a more detailed and contextually relevant understanding of the factors shaping sustainable accommodation choices. The findings provide both theoretical insight and practical guidance for policymakers and hotel managers seeking to strengthen Malaysia's transition towards environmentally responsible tourism.

2. LITERATURE REVIEW

Environmental sustainability has become an increasingly prominent focus within hospitality research due to the significant ecological footprint associated with hotel operations. Existing studies consistently show that hotels are major consumers of water, energy and disposable products, contributing substantially to waste generation and carbon emissions (Jones et al., 2016; Bohdanowicz and Martinac, 2020). As environmental concerns intensify, global hospitality organisations have responded by implementing initiatives such as energy-efficient technologies, water conservation systems, green procurement and waste-reduction programmes (Chan, 2021; Stylos and Zwiegelaar, 2019). This has stimulated growing interest in the concept of green hotels, which integrate environmentally responsible practices into core operational and service activities (Green Hotel Association, 2020).

Many studies have investigated consumers' environmental attitudes, willingness to pay for green services, perceived value and satisfaction with environmentally friendly practices (Han and Hyun, 2018; Rahman and Reynolds, 2019). Others have explored the role of environmental knowledge, eco-labels, and corporate social responsibility messages in shaping guest responses to green hotels (Teng et al., 2015; Zainuddin et al., 2020). The collective findings show that environmentally conscious travellers tend to value sustainability initiatives and demonstrate positive attitudes toward eco-friendly accommodation. However, this body of research is dominated by studies conducted in East Asian contexts, where sustainability awareness tends to be higher and environmental behaviour more socially embedded.

In contrast, research in developing countries such as Malaysia remains relatively limited, despite growing national interest in sustainable tourism. Early Malaysian studies tended to focus on general environmental attitudes (Kasim, 2004) or broad consumer perceptions without applying a behavioural framework (Rezai et al., 2013). More recent work recognises the importance of sustainability but continues to treat attitude as a global construct rather than unpacking its environmental subcomponents (Mohamed et al., 2020). As a result, there is limited understanding of the specific psychological factors that influence Malaysian consumers' decisions to choose green hotels. Importantly, very little is known about how Malaysian travellers perceive the severity of environmental problems, the inconvenience of adopting eco-friendly behaviours, or the extent to which they incorporate environmental consciousness into daily decision-making, factors that international studies suggest significantly influence green choices (Chen and Tung, 2010; Han et al., 2010).

To address these gaps, researchers have increasingly used the Theory of Planned Behaviour (TPB) to explain pro-environmental decisions. TPB posits that intention is shaped by attitude, subjective norms and perceived behavioural control (Ajzen, 1991), making it one of the most widely applied frameworks in sustainable consumption research (Bamberg and Schmidt, 2001; Chen and Tung, 2010). In the context of hospitality, TPB successfully predicts intention to choose green hotels across multiple cultural contexts (Han and Kim, 2010; Han et al., 2010). However, TPB applications in Malaysia typically employ simplified measures of attitude and rarely integrate environmentally specific subdimensions. This limits the explanatory power of TPB, as general attitudes may not fully capture beliefs that directly influence green hotel decisions.

Therefore, is how distinct environmental attitudes, such as perceived severity of environmental problems, environmentally conscious living and perceived inconvenience, interact with social norms and perceived behavioural control in shaping Malaysian travellers' intentions to stay in green hotels. These constructs have been validated internationally as strong predictors of eco-friendly behaviour (Han et al., 2010; Mishra et al., 2014), yet their relevance in the Malaysian context remains underexplored. Moreover, little is known about how Malaysian guests interpret

social expectations and perceived control when considering green hotel choices.

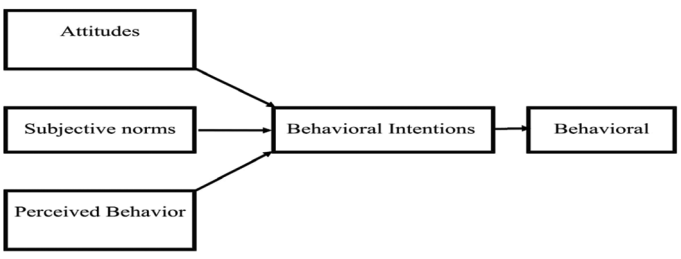
This study contributes to the literature by addressing these gaps through an environmentally specific application of TPB. By incorporating subdimensions of environmental attitude and examining their influence alongside subjective norms and perceived behavioural control, the study provides a more nuanced and contextually grounded understanding of Malaysian consumers' green hotel intentions. This approach deepens theoretical engagement with TPB, advances empirical knowledge in a developing-country context and offers practical insights for policymakers and hotel operators seeking to strengthen demand for environmentally responsible accommodation in Malaysia.

2.1. Conceptual Framework

The Theory of Planned Behaviour (Figure 1) offers a well-established foundation for understanding pro-environmental decision-making, particularly in tourism and hospitality contexts. According to TPB, behavioural intention is shaped by three determinants: attitude toward the behaviour, subjective norms and perceived behavioural control (Ajzen, 1991). Prior studies demonstrate that TPB effectively predicts environmentally responsible behaviour such as recycling, sustainable purchasing and green hotel visitation (Bamberg and Schmidt, 2001; Chen and Tung, 2010; Han and Kim, 2010). Its suitability for the current study lies in its ability to integrate both individual-level beliefs and social, contextual influences when examining consumers' willingness to select green hotels.

In line with calls for greater specificity in measuring environmental attitudes (Han et al., 2010; Chen and Tung, 2010), this study conceptualises attitude through three subdimensions that directly relate to environmentally responsible hotel decisions. The first subdimension, perceived severity of environmental problems, reflects individuals' evaluations of the seriousness and urgency of environmental degradation. Prior research shows that as the perceived severity increases, individuals become more motivated to adopt sustainable behaviours, including the selection of green hotels. The second subdimension, environmentally conscious living, captures the extent to which sustainability is integrated into daily lifestyle choices. Evidence suggests that individuals with a strong environmental lifestyle orientation tend to prefer eco-friendly services and demonstrate higher willingness to support green hotels (Han and Hyun, 2018). The third subdimension, perceived inconvenience of being environmentally friendly, reflects beliefs that adopting sustainable practices may require additional effort, discomfort or sacrifice. Such perceptions have been found to reduce intention to select eco-friendly options

Figure 1: Theory of planned behavior (Ajzen, 1991)



(Mishra et al., 2014). Together, these subdimensions allow for a more contextually grounded and environmentally specific operationalisation of attitude within the Malaysian context.

Subjective norms represent perceptions of whether important others, such as family members, peers or colleagues, approve or expect the behaviour (Ajzen, 1991). In collectivist or relationship-oriented cultures, subjective norms exert a particularly strong influence on consumption behaviour, including choices related to environmental sustainability. Previous studies have found that supportive social norms significantly strengthen guests' intentions to choose green hotels (Han et al., 2010). Within Malaysia's cultural context, where social approval carries considerable weight, subjective norms are expected to play an important role in shaping green hotel decisions.

Perceived behavioural control reflects individuals' perceptions of their ability to perform the behaviour, taking into account the availability of resources, knowledge and opportunities. In the hospitality setting, perceived behavioural control may involve beliefs about the convenience, accessibility, affordability and usability of green hotels (Chen and Jeong, 2009). Research consistently shows that greater perceived behavioural control increases intention to engage in eco-friendly consumption (Han and Kim, 2010). Given the limited visibility of certified green hotels in Malaysia, examining perceived behavioural control is critical for understanding whether consumers feel capable of choosing environmentally friendly accommodation.

Together, these constructs form the conceptual framework guiding this study. By integrating environmentally specific attitudinal components with subjective norms and perceived behavioural control, the framework extends the application of TPB in a developing-country context and addresses key gaps in previous Malaysian studies. This more detailed theoretical model strengthens understanding of the psychological mechanisms underpinning guests' intentions to select green hotels.

Based on previous studies, the current study presents the proposed model to explain the relationship between variables. A review of the literature identified the variables and their theoretical linkage, which were used in the proposed framework.

As noted earlier the proposed model was adopted the model by Ajzen (2001); Han et al.(2011), their model finding provided the guide for hypothesizing the relationship in this study. However, the original framework was modified according to the construct related to this study.

The hypothesis which are testing for this study are:

H_1: There is a positive relationship exists between hotel guests' attitude and their behavioral intention toward selecting environmentally friendly hotels.

H_1a: There is a positive relationship exists between hotel guests' perceived severity of environmental problems and their behavioral intention toward selecting environmentally friendly hotels.

H_1b: There is a positive relationship exists between hotel guests' environmentally conscious living and their behavioral intention toward selecting environmentally friendly hotels.

H_1c: There is a positive relationship exists between hotel guests' perceived inconvenience of being environmentally friendly and their behavioral intention toward selecting environmentally friendly hotels.

H_2: There is a positive relationship exists between subjective norms and hotels guests' behavioral intention toward selecting environmentally friendly hotels.

H_3: There is a positive relationship exists between perceived behavioral control and hotels guests' behavioral intention toward selecting environmentally friendly hotels.

The modification to the framework were made with the purpose of achieving the study objectives ad further gaps found in the study by Hessup (2011). As mentioned above, this study considering the five predictors of consumer behavior (Figure 2). Because of the importance of attitudes by focusing more in environmental concerns examined to customer.Hence, other factors in TPB model also examined.

As mentioned before (Han et al., 2011) study was to investigate the relationship of severity of environmental problems and inconvenience of being environmentally friendly as a part of attitude's dimension for examined the behavioral intention of guests in general hotel by using the online survey while the current study intended to examine the related constructs in the context of the green hotel industry.

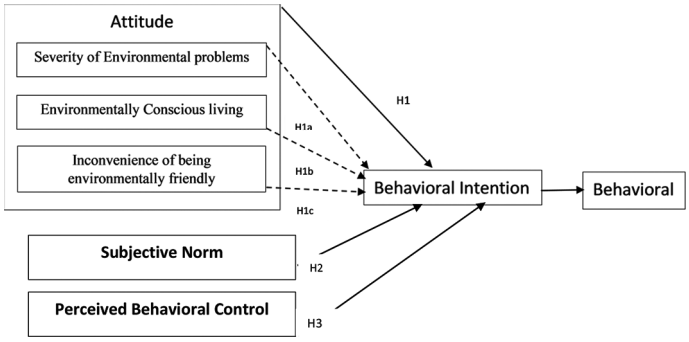
2.2. The Relationship between Attitude, Subjective Norm, Perceived Behavior and Behavioral Intention

Consumer behavior intention with using theory of planned behavior are major concepts widely studied in tourism and hospitality industry. The relevance of these constructs being derived from their guest behavior. More specially, it was seen that higher guest's intention with regret to a certain environmental concerns of attitude the more he/she would tend to rate it positively. TPB assumes attitude toward a behavior, subjective norm, and perceived behavioral control are three conceptually independent determinants of behavioral intention. The first important determinant of behavioral intention is attitude, which can be described as "the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" (Ajzen, 1991, p.188).

Subjective norm is postulated as a second determinant of behavioral intention. Ajzen (1991) defined subjective norm as "the perceived social pressure to perform or not to perform the behavior" (p. 188). In other words, subjective norm is the perceived opinions of significant others who are close/important to an individual and who influence his/her decision-making (e.g., relatives, close friends, co-workers/colleagues, or business partners) Hlee et al. (2020).

The third determinant of behavioral intention is perceived behavioral control. Perceived behavioral control can be described as "the perceived ease or difficulty of performing the behavior" (Ajzen, 1991, p. 122). In particular, perceived behavioral control assesses the perception of how well one can control factors that may facilitate/constrain the actions needed to deal with a specific situation.

Figure 2: Proposed conceptual framework



3. METHODOLOGY

Based on the literature review mentioned, quantitative research method is believed as the proper method to be applied in the current study. After choosing the proper research method, the research process framework for the study was outlined. It is important to determine the research objectives and questions that would be the guideline of the study framework (Veal, 2006).

To examine the hypotheses of the study, the researcher designed an empirical quantitative research study, employed a non-probability sampling method and the self-report survey questionnaire for collecting data and the used the AMOS as a Structural Equation Modeling was employed in order to analyze the data. The key point of this research is to verify the determinants which predict behavioral intention towards choice of green hotels by applying the theory of planned behavior as well as investigating the influence of perceived value, on the consumers behavioral intention towards choice of green hotels in other hand, how price playing a moderator role between behavioral intention and behavior. Hypotheses testing was applied to examine the relationships between the four main independent variables; attitude toward green behaviors, subjective norm, perceived behavioral control, behavioral intention towards choice of green hotels. After obtaining the answers, a review and recommendations for relevant parties were discussed.

3.1. Sample Size and Data Collection

Different methods have been developed and introduced for measuring sample size. For example, Krejcie and Morgan (Krejcie and Morgan, 1970) mentioned that a sample size of 384 respondents is adequate if a population size exceed 100,000.

(Hair et al., 2006) suggested a sample size needs to be a minimum of five times larger than the number of variables for factor analysis. As a rule, larger sample sizes are highly preferred. A sample size between 200 and 400 is normally recommended and accepted as a critical sample size (Hair et al., 2006).

Burns and Bush (2006) recommended that for calculation of sample size researchers should consider, the variability in the population, the level of confidence and the accuracy required. Based on Burns and Bush formula (confidence interval formula) in order to achieve ±5% accuracy at 95% confidence interval, the sample size will be N = Z2 (pq)/e2 = 1.962 (50 × 50)/52 = 384.

This study employed Structural Equation Modeling (SEM) for analyzing the hypothesis of the study and it is strongly suggested that the adequate sample size for SEM is between 150 and 400 (Hair et al., 2006b).

Consequently, the population of this study is big and since the total number of tourists who visit green hotels and stayed there more than one night at the time of the survey is unknown, confidence interval formula by (Cohen 1994) was used to determine the sample size.

$$n = \left(\frac{z^2 (pq)}{e^2} \right)^2$$

Where: n = Sample size
Z = Standard error (1.96 at 95% of confidence level) associated With chosen confidence level (95%)
P = Estimated variability in the population 50/50
q = (100-p)
e= acceptable sample error ±5%

$$\text{Therefore } n = \left(\frac{1.96^2 * 0.5 * 0.5}{0.05^2} \right)^2 = 384$$

Convenience sampling, a non-probability sampling technique was employed in this study because accurate statistics of the number of tourists visiting green hotels could not be easily ascertained at the time of the survey and also the respondents were highly reachable through this method. Therefore, selection of respondents and portion of distribution of this study was based on green hotels in Malaysia.

The data collection process was begin in March and ended in June 2016. Copies of the questionnaire were distributed to guests who visited green hotels in Kuala Lumpur, Johor, Penang, Sabah, Sarawak, Kedah and Selangor. In order to reduce biases, the data collection process was conducted in the morning, afternoon and evening continuously during the survey period. Participation in this study was on a voluntary basis. The respondents were informed that this research was for educational purposes and that their responses would be completely anonymous. In order to be qualified to participate in the survey, voluntary respondents were screened based on if they (1) guests who visited that hotel (2) could understand English, Bahasa and Arabic since the instrument was in this three languages and (3) had stayed in green hotels more than one night. Tourists who had no prior experience of green hotels, and did not know those three languages were excluded from the survey. This was to ensure that although convenience sampling was selected, the sample of respondents was indeed the correct individuals to provide the relevant data needed.

In tandem to achieve the required sample size and ensure the sample was sufficient to represent the population,460 questionnaires were distributed by taking into considerations that there might be some failure to return the questionnaires with missing or invalid returned questionnaire, which unusable for analysis purposes. These 460 questionnaires were distributed to green hotel guests in those region that discussed in Table 1 and sample chosen to answer this survey was based on convenience sampling technique that will be explained further details in next section.

3.2. Items/Scale Measurement

The first section of the questionnaire evaluated for theory of planned behavior dimensions (attitude, subjective norms, and perceived behavior). This section included 27 questions which slightly modified from a few sources (Chen and Jeong, 2009; Han, 2015; Han et al., 2010; Mishra et al., 2014).The items that chosen in this study had higher Cronbach's Alpha (above 0.7) that explained in Table 2.

3.3. Response Rate

A total of 460 questionnaires were initially distributed among international tourists or guests who stayed in green hotels for more than one night in selected hotels of the distributed questionnaires, 364 useable questionnaires were returned. The returned questionnaires were screened for unusable surveys, that is, either blank or only partially completed with major portions, and 35 questionnaires were excluded from the analysis. With 329 returned and useable questionnaires out of 460, the response rate was 71.5% (Table 3).

3.4. Data Analysis

The main statistical procedure for evaluation the research hypothesis was structural equation modeling (SEM) which focuses on two steps (Anderson and Gerbing 1988),first validating the measurement model and fitting the structural model. The former is accomplished primarily through confirmatory factor analysis, while the latter is accomplished primarily through path analysis with latent variables. In this research first the measurement model was evaluated using CFA and in the next step the path model was applied to test the research hypothesis.

3.5. Testing of Measurement Model

The data obtained from survey questionnaires were subjected to quantitative analysis. SPSS (Statistical Packages for the Social Science) version 21 and AMOS (Analysis of Moment Structures) version 21 software package were used as statistical tools for data analysis. Preliminary analysis was run to screen missing data, outliers, normality and multi collinearity. Subsequently, investigation of the research hypotheses and questions was done through the statistical tests. The analytical methods comprised Structural Equation Modeling (SEM) and multiple group analysis which were carried out to investigate research objectives.

Table 1: The proportion of sample size

City	Proportion%	N
Kuala Lumpur	32.12	148
Johor	14.50	67
Pinang	13.43	62
Sabah	13.41	62
Sarawak	10.31	47
Kedah	7.44	34
Selangor	8.80	40
Total	100	460

Table 2: Scale items, source and reliabilities of TPB model

Source	Scale items	Cronbach's alpha
	Attitude	
Han, 2010	• Severity of environmental problems	
	• I have adequate supply of electricity that I do not have to worry about it	0.90
	• I am too concerned about the pollution I am causing	0.8
	• If environmental conditions continue in their present direction, we will soon experience a major ecological problem.	0.84
	• I prefer to stay in a hotel with green products or services to reduce environmental damages	0.89
	• Hospitality operations should consider the environment	0.78
	• Earth is a closed system where everything will eventually return to its normal condition; hence, I see no need to be concerned about its present state	0.76
	• Recycling will reduce pollution in the hotel industry.	0.79
Han, 2015	• Environmentally conscious living	
	• When I stay in a hotel, I consider how my stay will affect the environment and the other hotel guests	0.86
	• I think people should prefer environmentally friendly products	0.87
	• Using environment-friendly hotel products should become a lifestyle	0.81
	• Environmental problems may directly affect my daily life.	0.91
Mishra et al., 2014	• Inconvenience of being environmentally friendly	
	• Using public transportation in order to control pollution is much more trouble than it is worth	0.94
	• Electricity conservation is too much trouble to me	0.89
	• Staying in green hotel has so much trouble for me	0.76
	• Water conservation is inconvenient for me	0.81
	• Keeping separate piles of garbage for recycling is too much trouble.	-
	Subjective norms	
Han et al., 2010	• When I stay in a hotel, I consider how my stay will affect the environment and the other hotel guests	0.92
	• I think people should prefer environmentally friendly products	0.96
	• Using environment-friendly hotel products should become a lifestyle	0.89
	• Environmental problems may directly affect my daily life.	0.86
	Perceived behavioral control	
Chen and Jeong, 2009	• Whether I stay in a green hotel when traveling is completely up to me.	0.88
	• I can stay in a green hotel when traveling if I choose to	0.92
	• I know how to use facilities in a green hotel	0.79
	• Staying in a green hotel is convenient for me	-
	• I have money to stay in a green hotel when traveling	0.87
	• I know the location of green hotels in other countries	0.92
	• I have time to stay in a green hotel when traveling.	0.93

Table 3: Response rate

Total questionnaire distributed	Returned questionnaire	Excluded questionnaire	Usable questionnaire
460	364	36	329

The measurement model specifies the rules governing how the latent variables are measured in terms of the observed variables, and it describes the measurement properties of the observed variables. That is, measurement models are concerned with the relations between observed and latent variables. Such models specify hypotheses about the relations between a set of observed variables, such as ratings or items, and the unobserved variables or constructs they were designed to measure.

The measurement model is important as it provides a test for the reliability of the observed variables employed to measure the latent variables. A measurement model that offers a poor fit to the data suggests that at least some of the observed indicator variables are unreliable, and excludes the researcher from moving to the analysis of the structural model.

Prior to test the measurement model individual models were fitted. Individual item reliability can be assess by evaluating the individual item loadings with values >0.7, which indicates adequate indicator reliability or correlation with each construct (Henseler et al., 2009; Götz et al., 2010). However, Hair et al. (2010) further suggest the acceptable factor loading (outer loading) of 0.4 if the sample size is 200 or more. Early, author has suggest to use the new developed scales which is 0.50 or higher should be retain in the measurement model. Thus, the outer loadings below 0.50 should be removed from the measurement models since it indicates this indicator have less contribution towards these factors. According to the results three items including IOB.5, SN.6 and PBC.7 were excluded from measurement models due to low loading factors (<0.5).

This procedure can be known as uni-dimensionality procedure. Reflective measurement models such as current model should be assessed with regard to their reliability and validity. It is necessary to examine the internal consistency reliability, indicator reliability, convergent validity and discriminant validity.

3.6. Individual Model (First-order CFA)

Prior to testing the overall measurement model, individual models were fitted. Individual item reliability can be assessed by evaluating the individual item loadings with values >0.7,

indicating adequate indicator reliability or correlation with each construct (Henseler et al., 2009; Götz et al., 2010). However, Hair et al. (2010) further proposed the acceptable factor loading (outer loading) of 0.4 if the sample size is 200 or more. Previously, the author suggested the use of newly developed scales, in which 0.50 or higher should be retained in the measurement model. Thus, the outer loading <0.50 should be removed from the measurement models because it implies that this indicator has less contribution toward these factors. Table 4 shown the Goodness of fit indices for individual constructs.

3.7. Structure Model Analysis (Path Analysis)

The path analysis is the second main step of SEM analysis after fitting the measurement model. The structural model can be applied by specifying the relationships among the variables. The structural model provides details on the links between the variables. It shows the specific information of the association between the independent or exogenous variables and dependent or endogenous variables (Hair et al., 2006; Ho, 2006). Evaluation of the structural model emphasizes firstly on the overall model fit, followed by the size, direction and significance of the hypothesized parameter estimates, (Hair et al., 2006).

Path analysis is a statistical analysis method based on linear regression. By means of the method, this method divides the correlation of the variables in three effects in the framework of structural equations system as follow. Table 5, summarise the result of hypotheses testing.

4. DISCUSSION

The purpose of this study was to examine how environmental attitudes, subjective norms, and perceived behavioural control shape Malaysian hotel guests' intentions to choose green hotels, drawing on the Theory of Planned Behaviour. The findings largely support the TPB model, but also reveal important nuances in how Malaysian consumers interpret environmental responsibility and evaluate green hotels. These insights extend existing green hotel research in three major ways: (1) by unpacking the multidimensionality of environmental attitudes, (2) by clarifying the social and situational contingencies that shape pro-environmental intention, and (3) by demonstrating how the Malaysian context produces distinctive patterns that depart from TPB assumptions.

4.1. The Differential Effect of Environmental Attitude Dimensions

Consistent with previous TPB-based studies (Han and Kim, 2010; Rahman and Reynolds, 2019), attitude emerged as a strong predictor of behavioural intention. However, the disaggregated analysis of attitude dimensions reveals a more complex picture. Perceived severity of environmental problems significantly increased intention, indicating that Malaysian consumers respond strongly to ecological threat awareness. This supports Bamberg and Schmidt's (2003) argument that environmental concern intensifies moral responsibility and activates pro-environmental behavioural intention.

In contrast, environmentally conscious living did not significantly influence intention. This contradicts the assumptions of prior green consumption studies, which position eco-consciousness as a key antecedent of sustainable purchase behaviour (Kim and Choi, 2005; Zainuddin et al., 2020). The finding suggests that, in the Malaysian context, general lifestyle orientation does not automatically translate into green hotel choices. One explanation is that pro-environmental habits may be disconnected from travel-related decision-making, which is often shaped by comfort, time, and price sensitivities. This underscores the need to differentiate between general environmental identity and context-specific decision strategies, supporting arguments for more situationally grounded behavioural models in hospitality (Filimonau and Delysia, 2019).

The negative effect of perceived inconvenience further reinforces the situational nature of green hotel choice. When sustainability is perceived as effortful or restrictive, intention declines, aligning with findings that green consumption in hospitality is highly sensitive to perceived behavioural effort (Teng and Lu, 2016). This result challenges the assumption, implicit in much TPB literature, that attitude uniformly promotes green behaviour. Instead, attitudes must be understood as ambivalent: concern for the environment coexists with discomfort toward behavioural sacrifice.

4.2. The Continued Relevance, and Limits, of Subjective Norms

Subjective norms significantly predicted behavioural intention, affirming the social influence component of TPB and echoing earlier findings in Asian contexts, where collectivist norms often strengthen pro-environmental decision-making (Han, 2015; Olya and Al-ansi, 2018). Social expectations from family, friends, and colleagues help legitimise green hotel choices, indicating that sustainable consumption is not interpreted solely as an individual moral decision but also as a socially validated one.

However, the moderate strength of this relationship suggests that normative influence operates alongside other psychological and situational drivers rather than dominating them. This nuance challenges earlier Malaysian studies that positioned subjective norms as the dominant predictor of green purchase intention (Mohamed et al., 2020). The findings instead indicate that while social expectations matter, Malaysian travellers rely heavily on personal judgements of environmental impact and logistical feasibility.

4.3. Perceived Behavioural Control as an Enabling but not Decisive Factor

Perceived behavioural control significantly predicted intention, consistent with prior TPB applications in hospitality (Han and Kim, 2010; Chen and Tung, 2014). However, the strength of its effect was weaker than attitude and subjective norms. This indicates that capability and opportunity facilitate green hotel adoption, but do not independently motivate it. PBC functions more as an enabler than a driver: when consumers believe they know how green hotels operate, can locate them, and can afford them, intention increases, but only modestly.

Table 4: Goodness of fit indices for individual constructs

Construct	Df	CMIN (χ^2)	P-value	χ^2/df	AGFI	CFI	IFI	TLI	RMSEA
SEP	4	9.461	0.051	2.365	0.957	0.992	0.992	0.97	0.065
ECL	2	8.711	0.013	4.356	0.932	0.985	0.985	0.955	0.101
IOB	2	2.816	0.245	1.408	0.979	0.999	0.999	0.996	0.035
SN	5	8.282	0.141	1.656	0.970	0.997	0.997	0.990	0.045
BI	3	11.243	0.010	3.748	0.933	0.994	0.994	0.987	0.092
B	9	14.697	0.100	1.633	0.965	0.994	0.994	0.989	0.044
PBC	8	13.979	0.082	1.747	0.961	0.996	0.996	0.985	0.048

Table 5: Testing the hypothesis

Hypothesis	Path	β	P-value	Result
H_1: A positive relationship exists between hotel guests' attitude and their behavioural intention toward selecting green hotels.	AT-->BI	0.461	<0.001	Supported
H_1a: A positive relationship exists between hotel guests' perceived severity of environmental problems and their behavioural intention toward selecting green hotels.	SEP-->BI	0.527	<0.001	Supported
H_1b: A positive relationship exists between hotel guests' environmentally conscious living and their behavioural intention toward selecting green hotels.	ECL-->BI	0.05	0.32	Not Supported
H_1c: A positive relationship exists between hotel guests' perceived inconvenience of being environmentally friendly and their behavioural intention toward selecting green hotels.	IOB-->BI	-0.15	0.006	Not Supported
H_2: A positive relationship exists between subjective norms and hotels guests' behavioural intention toward selecting green hotels.	SN-->BI	0.195	0.012	Supported
H_3: A positive relationship exists between perceived behavioural control and hotels guests' behavioural intention toward selecting green hotels.	PBC-->BI	0.152	0.015	Supported

This finding contributes to TPB literature by suggesting that in the Malaysian context, informational and financial access play secondary roles compared to environmental concern and social influence. Thus, enhancing guests' sense of control (e.g., clear instructions on green facilities, price transparency, ease of booking) may strengthen intention, but will not substitute for strong environmental attitudes.

5. CONCLUSION IMPLICATIONS AND LIMITATIONS

This study set out to examine how Malaysian hotel guests form intentions to select green hotels by applying an extended Theory of Planned Behaviour model. By disaggregating attitude into environmentally specific components, the study advances understanding of how travellers evaluate sustainability within the hotel context. The findings indicate that perceived severity of environmental problems is the most influential predictor of intention, highlighting the critical role of ecological concern in motivating pro-environmental choices. In contrast, environmentally conscious living and perceived inconvenience do not operate uniformly, suggesting that intention is shaped less by general lifestyle orientation and more by context-specific assessments of relevance and effort. Subjective norms and perceived behavioural control also exert significant influence, demonstrating that social expectations and perceived capability continue to structure behavioural intention in hospitality settings.

These insights contribute theoretically by refining the attitudinal pathway in TPB and by clarifying how environmental beliefs and perceived behavioural constraints operate in an emerging-market context. Rather than treating green hotel choice as a straightforward expression of environmental values, the study shows that intention is contingent on the salience of environmental threats, social endorsement, and perceived ease of action. Practically, the results underscore the need for hotels and policymakers to strengthen environmental communication, minimise perceived inconvenience, and leverage social influence to encourage sustainable accommodation choices.

The study's reliance on self-reported intention and a single respondent group suggests opportunities for future work. Research that examines actual booking behaviour, includes hoteliers' perspectives, or incorporates price sensitivity and past experience would further enrich understanding. As sustainability becomes increasingly integral to Malaysia's tourism development, identifying the psychological and contextual conditions that enable green hotel adoption remains a critical avenue for research and practice.

5.1. Theoretical Contributions

This study makes several theoretical contributions that directly address the gaps identified in the existing literature on green hotel consumption and the application of the Theory of Planned Behaviour (TPB) within hospitality contexts. Prior studies on green hotel choice have tended to measure general attitudes toward the environment (Han and Kim, 2010; Han et al., 2010) or broad pro-environmental values (Rezai et al., 2013), offering limited insight into how specific types of environmental attitudes shape behavioural intention. By disaggregating attitude into perceived severity of environmental problems, environmentally conscious living, and perceived inconvenience (adapted from Han, 2015; Mishra et al., 2014), this study shows that only certain attitude components meaningfully predict intention. In particular, perceived severity emerges as the strongest attitudinal predictor, reinforcing earlier work linking environmental concern to behavioural intention (Bamberg and Schmidt, 2001; Chen and Tung, 2010). This extends TPB by demonstrating that the content of attitude, not just its valence, is central to explaining intention in sustainability-related choices.

A second contribution lies in clarifying the roles of subjective norms and perceived behavioural control in a developing-market context. Although TPB posits that both constructs influence intention (Ajzen, 1991), green hotel studies have rarely examined these determinants in countries where environmental practices are inconsistently adopted and consumer familiarity with green hotels remains limited (Kasim, 2004; Mohamed et al., 2020). The findings show that both subjective norms and perceived behavioural control significantly shape Malaysian travellers' intentions, supporting TPB assumptions (Chen and Jeong, 2009) while highlighting the importance of social approval and perceived capability in markets where sustainability is still emerging. This advances theoretical understanding by demonstrating that TPB determinants may vary in strength depending on cultural expectations and market maturity.

Finally, this study contributes updated empirical evidence from Malaysia, where research on green hotel behaviour remains limited despite the country's growing tourism industry and increasing sustainability pressures (World Travel and Tourism Council, 2023; Department of Statistics Malaysia, 2023; Mensah, 2022). By integrating environment-specific beliefs into the TPB model and situating the analysis in a Malaysian context, the study responds to calls for context-sensitive behavioural research in hospitality (Han et al., 2010; Hlee et al., 2020) and provides a more nuanced explanation of how environmental attitudes and social-cognitive factors jointly shape travellers' intention to choose green hotels.

5.2. Managerial Implications

The findings provide several practical implications for hotel operators, tourism authorities, and policymakers working to promote sustainable accommodation in Malaysia. First, the strong influence of perceived severity of environmental problems suggests that hotels should communicate more explicitly about the environmental impact of hotel operations. Clear messages about energy use, water consumption, and waste generation can heighten environmental concern, which previous research has shown to be a key driver of pro-environmental intention (Bamberg and Schmidt, 2001; Han and Kim, 2010). Hotels may incorporate such communication into booking platforms, in-room materials, and digital media to strengthen environmentally oriented attitudes.

Second, the significance of subjective norms indicates the value of leveraging social influence. Prior studies show that social approval and normative expectations can motivate consumers to select sustainable options (Han et al., 2010; Rahman and Reynolds, 2019). Hotels can highlight eco-certifications, guest participation rates, and visible sustainability initiatives to normalise green behaviour. Endorsements from well-known environmental bodies or inclusion in recognised green hotel listings can further reinforce positive subjective norms.

Third, enhancing perceived behavioural control is essential for encouraging green hotel choice. TPB research consistently emphasises that behaviour is more likely when individuals feel capable of performing it (Ajzen, 1991; Chen and Jeong, 2009). Hotels can support this by reducing perceived inconvenience, an element that showed no positive effect in the current study, suggesting a need for improvement. Simplifying recycling options, providing clear instructions for green features, and ensuring easy access to sustainable amenities can reduce barriers and make sustainable choices more intuitive and effortless for guests.

Collectively, these strategies can enhance the determinants of intention identified in this study and support the broader development of green hospitality in Malaysia, where adoption remains uneven despite rising environmental pressures (Kasim, 2004; Mohamed et al., 2020; World Travel and Tourism Council, 2024).

5.3. Limitations and Future Research

Although this study provides important insights, several limitations should be acknowledged. First, the analysis focuses on behavioural intention rather than actual behaviour. While intention is a strong predictor of behaviour in TPB research (Ajzen, 2001; Eagly and Chaiken, 1993), real booking choices may be influenced by additional factors such as price, promotions, or convenience. Future studies could incorporate actual booking data or longitudinal designs to strengthen behavioural predictions.

Second, the study includes only hotel guests and does not capture the perspectives of hotel managers or employees, whose actions shape the design and delivery of green practices (Mensah, 2022). Including practitioners in future research could offer a more comprehensive understanding of how sustainability initiatives are communicated and implemented.

Third, the model does not examine moderating influences such as price sensitivity, past experience with green hotels, or travel purpose. Prior research suggests that such variables may influence pro-environmental decisions (Hlee et al., 2020; Han and Kim, 2010). Expanding the model to include these elements may enrich explanatory power.

Fourth, the use of convenience sampling, while common in hospitality research (Kasim, 2004; Mohamed et al., 2020), limits generalisability. Future work could apply probability sampling or comparative cross-regional designs to strengthen representativeness.

Finally, cultural and contextual factors may shape TPB determinants differently across markets. Comparative studies across Southeast Asian or developing destinations would help validate the stability of the model and provide insight into how sustainability expectations evolve with market maturity.

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