Factors Influencing Vietnamese Consumers' Decisions Regarding Green Hotels

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Abstract: Environmental issues remain a central concern in modern society, especially because of the rapid expansion of the tourism industry post-Covid, leading to increased pollution levels. The concept related to green tourism and hospitality emerged to satisfy consumer expectations in utilizing services while maximizing environmental conservation. Despite plenty of studies related to investigation factors affect green related products and services in hospitality industry. There is an insufficiency of comprehensive examination of client attitudes and behavior intention regarding green hotels, especially inside the Vietnamese market. This study seeks to examine the diverse aspects influencing customers' decision-making process toward green hotels. A quantitative approach was implemented to gather data from individuals who either sought or had previously used hotels when traveling in Viet Nam. A total of 269 legitimate responses were acquired. The study subsequently utilized Structural Equation Modelling (SEM) to analyze the proposed hypotheses. The findings confirm significant aspects that influence customers' decision-making process towards environmentally friendly options.

Keywords: Green hotels, Green visit intention, Cognitive factors, Social factors, Green tourism

1. Introduction

The growing demand for sustainable tourism has significantly reshaped the hospitality industry, with environmentally conscious practices becoming a cornerstone of consumer expectations. This research paper explores the multifaceted factors influencing customer choices regarding green hotels, focusing specifically on Vietnam's evolving hospitality market. By addressing the gap in understanding consumer perceptions and behaviors toward eco-friendly lodging, the study aims to provide valuable insights that can enhance sustainable tourism practices and promote environmental stewardship.

The hospitality industry, recognized for its significant environmental footprint, has been under increasing scrutiny for its contribution to water contamination, greenhouse gas emissions, and waste generation. In response, many hotels globally have adopted green practices, such as energy conservation, waste reduction, and eco-friendly certifications. Despite these efforts, as rapidly developing market economy, Vietnam faces challenges in implementing and maintaining consistent environmental standards within its hospitality sector. While customers globally exhibit a growing preference for sustainable travel, little is known about the specific motivations, barriers, and demographic influences that shape the preferences of Vietnamese consumers toward green hotels.

This research aims to fill this critical knowledge gap by examining the key determinants that drive customer intentions toward environmentally friendly hotels. Leveraging theories such as Ajzen's Theory of Planned Behavior and the Engel-Kollat-Blackwell Model of Consumer Behavior, the study delves into socio-demographic and psychographic factors influencing customer attitudes and decision-making processes. Additionally, the research highlights the challenges and opportunities for hotels in Vietnam to align their operations with customer expectations while fostering environmental conservation.

This research contributes to the scholarly discourse on sustainability, by seeking to inform hoteliers, policymakers, and industry stakeholders about effective strategies to enhance green hospitality practices. Ultimately, it underscores the role of customer-centric sustainability initiatives in fostering a more environmentally responsible tourism industry and ensuring long-term economic growth.

2. Literature Review

Theoretical Framework and Research Gap

The Theory of Planned Behavior (TPB), an extension of the Theory of Reasoned Action (Fishbein & Ajzen, 1975), explains intentional behavior based on attitude, subjective norms, and perceived behavioral control (Ajzen, 1985). It is particularly effective for predicting sustainable behaviors, such as visiting green hotels (Han, 2015;

Kim & Han, 2010). Studies have expanded the TPB by incorporating variables like moral obligation and environmental concern to better capture green consumer behavior (Chang et al., 2014). Behavioral intention, influenced by perceived control, plays a crucial role in shaping actual behavior (Ajzen, 1991).

Consumer Behavior Theory complements TPB by focusing on psychological factors (e.g., motivation), individual traits (e.g., lifestyle), and societal influences (e.g., family), which collectively shape purchasing decisions (Engel et al., 1995). These theories together provide a strong framework for understanding consumer intentions and behavior in environmentally friendly contexts, such as green hotel visits.

2.1 Hypotheses Development

Green Perceived Value (GPV)

Green perceived value refers to the benefits customers associate with environmentally sustainable products or services (Chen & Chang, 2012). Consumers are more likely to engage in eco-friendly actions when they perceive higher value in green solutions (Kim & Choi, 2017). Thus, customers who recognize tangible environmental benefits in green hotels, such as energy efficiency and waste reduction, are more inclined to visit them.

H1: Green Perceived Value positively influences Intention to visit Green Hotels.

Green Perceived Quality (GPQ)

GPQ represents consumers' assessment of the environmental quality of green hotels (Chen & Chang, 2012). Higher perceived quality, reflecting strong sustainability practices, enhances consumer purchase intentions (Wu & Chen, 2014). Therefore, consumers who perceive green hotels as delivering superior eco-friendly quality are more likely to visit them.

H2: Green Perceived Quality positively influences Intention to visit Green Hotels.

Green Perceived Risk (GPR)

GPR is the perceived uncertainty or potential negative consequences of choosing eco-friendly products (Lee & Shin, 2010). High perceived risks, such as doubts about environmental claims or facility quality, discourage eco-friendly choices (Wu et al., 2015).

H3: Green Perceived Risk negatively influences Intention to visit Green Hotels.

Perceived Behavioral Control (PBC)

PBC reflects an individual's confidence in their ability to perform a behavior (Ajzen, 1991). Consumers with greater perceived control over accessing and engaging with green hotels are more likely to visit them (Tan et al., 2017).

H4: Perceived Behavioral Control positively influences Intention to visit Green Hotels.

Perceived Consumer Effectiveness (PCE)

PCE refers to individuals' belief in their ability to contribute to environmental preservation through consumption decisions (Moisander & Pesonen, 2002). Consumers with higher PCE are more likely to engage in sustainable behaviors, including choosing green hotels (Vermeir & Verbeke, 2008).

H5: Perceived Consumer Effectiveness positively influences Intention to visit Green Hotels.

Environmental Knowledge (EK)

EK measures consumers' understanding of environmental issues and the impacts of their actions (Kollmuss & Agyeman, 2002). Higher environmental knowledge enhances eco-friendly decision-making and increases the likelihood of visiting green hotels (Wang et al., 2018).

H6: Environmental Knowledge positively influences Intention to visit Green Hotels.

Subjective Norm (SN)

Subjective norms capture the influence of social pressure or approval from significant others (Ajzen, 1991). Positive social influence from peers or family enhances the intention to visit eco-friendly hotels (Han et al., 2010).

H7: Subjective Norm positively influences Intention to visit Green Hotels.

Collectivism (COL)

Collectivism emphasizes prioritizing group well-being over individual interests (Triandis, 1995). Individuals with collectivist tendencies are more likely to choose green hotels as a means of contributing to societal welfare (Schultz et al., 2005).

H8: Collectivism positively influences Intention to visit Green Hotels.

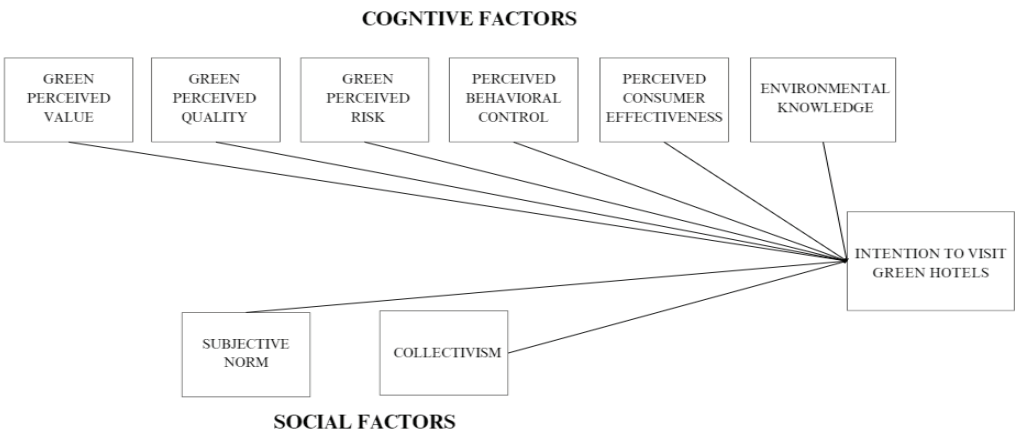

Figure 1: Theoretical Framework of Cognitive Factors and Social Factors on Intention to visit green hotels

This framework provides a comprehensive model for exploring green hotel visitation intentions and contributes to the broader understanding of sustainable consumer behavior.

Research Gap

While TPB-based studies have explored green behaviors, limited research focuses on consumer attitudes in Vietnam. This study fills this gap by analyzing consumer intentions towards green hotels within a Vietnamese cultural and market context.

3. Methodology

3.1 Overview

This study employs a quantitative approach grounded in the Theory of Planned Behavior and Theory of Consumer Behavior to explore factors influencing customers' intention to visit environmentally friendly hotels. The methodology incorporates a survey-based design, using structured questionnaires to collect data, which is analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). This approach is particularly suited for examining complex frameworks and testing hypotheses derived from extensive literature.

3.2 Research Design

The research adopts a positive paradigm, emphasizing hypothesis testing and the validation of causal relationships through deductive reasoning. Quantitative methods were chosen for their ability to identify patterns and explain variable relationships using statistical evidence. Surveys were employed as the primary method for data collection due to their efficiency in gathering information from large populations. By enabling interaction with diverse participants and addressing multiple variables simultaneously, the survey methodology supports the study's objective of testing relationships within the conceptual framework.

3.3 Research Process

The research process began by identifying the problem and defining objectives based on a thorough review of the market environment and prior studies. A conceptual framework was then developed, outlining the hypothesized relationships between variables. Data collection involved creating a structured survey questionnaire, which was distributed online using social media platforms. The data collected were analyzed using SmartPLS 4.0 software, with findings refined and interpreted in the final stage. The systematic approach ensures a structured progression from problem identification to statistical validation of the hypotheses.

3.4 Sampling and Data Collection

The target population includes Vietnamese consumers in Ho Chi Minh City who have used or plan to use hotel services. A non-probability convenience sampling method was used due to resource and time constraints,

allowing the inclusion of participants who were accessible and aligned with the study's objectives. Screening questions ensured participants' relevance, filtering out those with no prior or intended experience with hotels. A total of 269 valid responses were collected, exceeding the minimum sample size of 80 required for SEM analysis, as determined by the '10-times rule' (Hair et al., 2022). Data collection was conducted through online surveys shared across social media platforms, with questions translated into Vietnamese to enhance accessibility.

3.5 Questionnaire Design

The survey instrument consisted of two key sections. The first section assessed the primary variables in the research framework, including constructions such as GPV, GPQ, GPR, PBC, PCE, EK, SN, COL, and IN, with measurement items adapted from prior studies (e.g., Han et al., 2010; Chen & Chang, 2012). These items were rated on a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The second section collected demographic information such as gender, age, education level, and work experience. This dual-structured design allowed for a comprehensive analysis of both the research variables and participant characteristics.

3.6 Data Analysis

The data were analyzed using SPSS 26.0 and SmartPLS 4.0, with the latter chosen for its capacity to handle complex structural models and both reflective and formative constructs. The analysis followed a two-step process. First, the measurement model was evaluated for reliability and validity, using Cronbach's Alpha, composite reliability (CR), and Average Variance Extracted (AVE) to ensure internal consistency and construct validity. Next, the structural model was assessed to validate hypotheses, employing R^2 values to measure explanatory power, path coefficients to evaluate relationships, and Q^2 values to test predictive relevance. Effect sizes (f^2) were calculated to determine the impact of independent variables, while the Variance Inflation Factor (VIF) ensured that multicollinearity was not a concern.

4. Findings and Discussion

Respondent Demographics

Out of 300 surveys distributed, 269 valid responses were collected, yielding an 89.7% response rate. The sample displayed a gender imbalance, with females representing 73.2% and males comprising 26.4% of the respondents. The majority (83.3%) were aged between 19 and 25 years, followed by 7.1% aged 26-32, 5.2% aged above 39, and smaller proportions of respondents below 18 (2.6%) or aged 33-39 (1.9%). Educationally, 90.3% of respondents attended college or university, while 7.1% had a high school education or lower, and the remainder pursued postgraduate studies. Most participants (79.6%) were students, while 13.0% were office workers, with businesspeople and individuals in other professions making up 3.7% each. Income levels showed that 68% of respondents earned less than 5 million VND monthly, with 34.2% earning below 3 million and 33.8% earning 3-5 million. Higher-income groups (5-10 million and 10-20 million VND) accounted for 17.5% and 10.8%, respectively, while only 3.7% earned above 20 million VND. These demographics reflect a sample skewed toward younger, highly educated individuals with relatively low income, which should be considered when interpreting the results.

Table 1: Respondents Demographic

Demographic Factor		Frequency	Percentage (%)
Gender	Male	71	26.4
	Female	197	73.2
Age	<18 years old	7	2.6
	19-25 years old	224	83.3
	26-32 years old	19	7.1
	33-39 years old	5	1.9
	>39 years old	14	5.2
Educational background	High school or under	19	7.1
	College or University	243	90.3
	Master or Higher	7	2.6
Occupation	Student	214	79.6
	Office worker	35	13
	Businessmen	10	3.7
	Others	19	3.7
Income	<3 mil	92	34.2
	3-<5 mil	91	33.8
	5-<10 mil	47	17.5
	10-<20 mil	29	10.8
	>20 mil	10	3.7

Measurement Model Evaluation

The reliability and validity of the measurement model were assessed through factor loadings, composite reliability (CR), and Average Variance Extracted (AVE) following guidelines by Hair et al. (2022). Factor loadings revealed that most constructions met the threshold of 0.7, with five items removed due to insufficient values. Specifically, two items from Green Perceived Risk, one from Environmental Knowledge, and two from Collectivism were excluded, leaving 30 items for the final model.

Table 2: Outer Loadings

Constructs	Items	Outer Loadings
Green Perceived value	GPV1	0.750
	GPV2	0.750
	GPV3	0.772
	GPV4	0.765
	GPV5	0.735
Green Perceived Quality	GPQ1	0.879
	GPQ2	0.828
	GPQ3	0.807
	GPQ4	0.825
	GPQ5	0.853
Green Perceived Risk	GPR1	0.843
	GPR2	0.799
	GPR4	0.822
Perceived Behavioral Control	PBC1	0.876
	PBC2	0.827
	PBC3	0.749
Perceived Consumer Effectiveness	PCE1	0.849
	PCE2	0.860
	PCE3	0.761
Environmental Knowledge	EK2	0.816
	EK3	0.821
	EK4	0.733
Subjective norm	SN1	0.817
	SN2	0.952
	SN3	0.933
Collectivism	COL1	0.872
	COL2	0.925
Intention to visit Green hotels	IN1	0.851
	IN2	0.821
	IN3	0.801

(Source: Author, 2024)

Composite reliability values for all construct exceeded the threshold of 0.7, confirming internal consistency reliability. The Cronbach's Alpha values were also within acceptable ranges, further supporting the consistency of the measurement model. Notably, CR values did not exceed 0.90, preventing redundancy and preserving the content validity of the constructs. AVE values for all constructs ranged from 0.569 to 0.815, exceeding the minimum threshold of 0.5, thus confirming convergent validity. These results indicate that the constructs reliably measured their intended variables and explained over 50% of the variance in their indicators.

Table 3: Results of Internal Consistency

	Cronbach's Alpha	Composite Reliability
GPV	0.811	0.869
GPQ	0.897	0.922
GPR	0.760	0.862
PBC	0.761	0.859
PCE	0.763	0.864
EK	0.707	0.833
SN	0.904	0.929
COL	0.766	0.894
IN	0.764	0.864

(Source: Author, 2024)

Discriminant validity was evaluated using the Fornell-Larcker criterion, cross-loadings, and Heterotrait-Monotrait Ratio (HTMT). The Fornell-Larcker results showed that the square root of each construct's AVE was greater than its correlations with other constructs, indicating clear differentiation between constructs. Cross-loadings further confirmed that indicators loaded higher on their assigned constructs than on others. HTMT values, ranging from 0.056 to 0.714, were below the 0.90 threshold, providing additional evidence of discriminator validity.

Structural Model Assessment

The structural model was assessed to evaluate its predictive power and the relationships between variables. The R^2 value for the dependent variable, Intention to Visit Green Hotels, was 0.600, indicating that the independent variables collectively explained 60% of the variance in intention. This value signifies a substantial level of explanatory power, as it falls within the range of 0.50 to 0.75, as suggested by Hair et al. (2022). The Q^2 value of 0.577 confirmed the model's predictive relevance, demonstrating that the framework provides meaningful insights into the dependent variable.

Table 4: Outcome of the f^2 value sizes

Predictor Construct	Value	Level of effect
GPV -> IN	0.179	Medium
GPQ -> IN	0.132	Small
GPR -> IN	0.049	Small
PBC -> IN	0.085	Small
PCE -> IN	0.058	Small
EK ->IN	0.170	Medium
SN -> IN	0.016	None
COL -> IN	0.000	None

(Source: Author, 2024)

Effect sizes (f^2) were calculated to evaluate the strength of each independent variable's influence. Green Perceived Value and Environmental Knowledge demonstrated moderate effects on the intention to visit green hotels, while Green Perceived Quality, Green Perceived Risk, Perceived Behavioral Control, and Perceived Consumer Effectiveness showed small but significant effects. Conversely, Subjective Norm and Collectivism had negligible effects, indicating their limited influence in this context.

Hypothesis Testing

Table 5: Hypothesis Testing

Hypothesis	Relationship	Path Coefficients	T-Values	P-Values	Decision
H1	GPV -> IN	0.287	5.630**	0.000	Supported
H2	GPQ -> IN	0.241	5.679**	0.000	Supported
H3	GPR -> IN	-0.141	3.650**	0.000	Supported
H4	PBC -> IN	0.195	4.494**	0.000	Supported
H5	PCE -> IN	0.165	3.621**	0.000	Supported
H6	EK -> IN	0.289	5.809**	0.000	Supported
H7	SN -> IN	0.094	1.731	0.899	Not Supported

Hypotheses were tested using the nonparametric bootstrap method with 2,000 subsamples, ensuring robust statistical results without assuming normal data distribution. The results revealed that:

H1 (Green Perceived Value): Supported, with a significant positive effect on intention.

H2 (Green Perceived Quality): Supported, indicating that perceived quality positively impacts intention.

H3 (Green Perceived Risk): Supported, with a significant negative effect on intention.

H4 (Perceived Behavioral Control): Supported, showing a strong positive influence on intention.

H5 (Perceived Consumer Effectiveness): Supported, with a positive effect.

H6 (Environmental Knowledge): Supported, demonstrating a significant positive effect.

H7 (Subjective Norm): Not supported, indicating no significant influence.

H8 (Collectivism): Not supported, suggesting a negligible effect.

These results confirm that constructs like Green Perceived Value, Green Perceived Quality, and Environmental Knowledge are key drivers of intention to visit green hotels. Conversely, the lack of support for Subjective Norm and Collectivism highlights their limited role in this context.5. Conclusion

5. Discussion

The findings of this study provide significant insights into the factors influencing consumers' intention to visit green hotels, with several hypotheses supported by the results. Green Perceived Value was found to positively impact visit intention, aligning with previous research (Kim & Choi, 2017). Consumers who recognize the environmental and personal benefits of green hotels, such as energy efficiency and waste reduction, are more likely to choose these accommodations. Similarly, Green Perceived Quality was positively associated with intention, though its effect was less pronounced. While some customers prioritize the environmental initiatives of hotels, many still value traditional factors like comfort, convenience, and service quality more highly.

Green Perceived Risk demonstrated a negative but moderate influence on visit intention. Concerns about the reliability of green practices, though present, are mitigated by certifications, positive word-of-mouth, and government endorsements. Perceived Behavioral Control also positively influenced intention, as consumers with confidence in their ability to locate, book, and afford green hotels were more likely to express intent to

stay. However, the limited availability of green hotels and potential booking inconveniences could reduce the overall impact of this factor.

Perceived Consumer Effectiveness was shown to positively affect visit intention, reflecting consumers' belief that their individual actions contribute to environmental sustainability. However, this effect was tempered by the collective nature of environmental benefits, which may reduce consumers' ability to see direct outcomes of their actions. Environmental Knowledge emerged as a key driver, with knowledgeable consumers showing stronger intentions to visit green hotels due to their awareness of the environmental benefits and authenticity of green practices.

In contrast, Subjective Norms and Collectivism did not significantly influence visit intention. The lack of impact of subjective norms may reflect the absence of social pressure to prioritize sustainable accommodations, particularly among young, cost-conscious individuals. Similarly, the weak effect of collectivism could be attributed to the individualistic tendencies of the predominantly urban sample, where personal preferences outweighed group-oriented values.

6. Limitations and Future Research

This study was limited to Vietnam due to time and financial constraints, restricting its generalizability to other cultural contexts. The sample was skewed toward younger, low-income participants, potentially biasing results related to budget and experience. Future research should expand to diverse regions and demographics for broader applicability.

Additionally, reliance on self-reported data and pre-existing scales may have constrained the depth of insights, particularly on social factors. Future studies could adopt qualitative methods, such as interviews, to explore consumer motivations and perceptions in greater detail, providing a more comprehensive understanding of sustainable tourism behaviors.

7. Conclusion

This study successfully achieved its objectives by examining the relationships between factors such as green perceived value, quality, and risk, perceived behavioral control, consumer efficacy, environmental knowledge, subjective norms, collectivism, and the intention to visit green hotels. By analyzing customer perceptions and their evaluations of green initiatives, the research provides valuable insights into consumer preferences, motivations, and concerns. These findings enable hotels to tailor their sustainability efforts to better meet customer expectations.

Furthermore, understanding the influence of demographic factors like age, gender, and income, alongside psychographic elements such as environmental values and lifestyle, offers a comprehensive view of what drives eco-conscious accommodation choices. These insights provide actionable recommendations for hospitality stakeholders, helping them improve sustainability practices and effectively attract environmentally conscious travelers. This approach not only enhances customer satisfaction but also supports the broader sustainability goals of the hospitality industry.

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