

INTEGRATING TPB, VAB AND GENERATION THEORY IN STUDYING THE GREEN TOURISM BEHAVIOR OF GENERATION Z: A STUDY IN VIETNAM

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Abstract: The objective of this study is to identify and analyze factors that influence Generation Z's green travel behavior. Through a literature review and analysis of secondary data, the study approached Theory of planned behavior (TPB) and theory of values, attitudes and behavior (VAB), generational theory. On that basis, the research has identified two groups of factors that influence the intention to choose green tourism and the influence of the intention to choose green tourism on the green travel behavior of Generation Z (Gen Z) including (1) Factors that directly affect the intention to choose green tourism: Attitudes toward , subjective norm towards and perceived control; (2) a group of factors that directly affect the attitudes toward the intention to choose green tourism and indirectly affect the intention to choose green tourism include: Environmental concern, action for the environment, Ego perception. A survey based on a sample of 270 domestic and international tourists of Gen Z participating in green tourism experiences at famous tourist destinations in Vietnam. Collected data were cleaned and SmartPLS software was used to evaluate the fit, reliability and SEM structural model to test the relationship of the research model. The research results confirm that all direct relationships between variables are statistically significant and all research hypotheses are accepted at the confidence level from 80.6% to 93.5%. These findings provide empirical evidence of the influential relationships and are the basis for proposing some implications for destination management organizations, tourism businesses and other stakeholders to more effectively promote green tourism consumption behaviors of tourists in general and Generation Z in particular.

Keywords: Behavioral intention, Green Tourism, generation Z, TPB, VAB

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INTRODUCTION

The current state of climate change and environmental degradation significantly influences people's intentions and objectives for travel (Zhou et al., 2019). This has resulted in a growing interest in eco-friendly tourism (Wang, 2015), prompting a shift in the trend of tourism development and selection to align with environmental preservation goals and provide health and well-being benefits for travelers (Gossling et al., 2012). Green tourism has emerged and evolved to cater to tourists' desire for sustainable and eco-conscious experiences. Presently, travelers increasingly opt for destinations where natural environments are conserved and the tourist landscape remains unpolluted. According to Chia-Jung and Pei-Chun. (2014), they posit that travelers are prepared to pay a premium for eco-friendly travel places of interest, lodging options, and services. As a consequence of this, green tourism has been developing effortlessly in many nations across the world. It has outstanding attributes particularly when it comes to protecting biodiversity, safeguarding local cultures, and boosting health.

In today's landscape, research regarding travel trends across different generational groups seems to be a significant concern and holds a crucial role for managers and tourism providers seeking to align policies with market demands. Generation Z embodies youthful, contemporary individuals striving to be global citizens, heavily influenced by media, technology, and up-to-date information. Previous studies on Gen Z's travel behavior reveal their inclination towards seeking adventure, enjoyment, and a break from daily routines (Haddouche and Salomone, 2018).

They are also recognized for their environmental awareness, with some showing sensitivity towards biodiversity (Sakdiyakorn et al., 2021) and a preference for nature-centric solutions at tourist destinations (Giachino et al., 2021). There's growing evidence that sustainability concerns are increasing among young people, including their interest in eco-friendly tourism (Cini and Passafaro, 2019). However, conflicting values and uncertainties regarding environmental issues have also been observed among young travelers (Litvin and Chiam, 2014). Thus, research into the values and attitudes of young tourists towards green travel has yielded contrasting findings.

In the past twenty years, numerous studies have indicated a predominant focus on older adults among green consumers (Roberts, 1996). Notwithstanding, the increasing levels of education among young people, there is a growing awareness of

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environmental issues within this demographic. Therefore, they have become more popular in global studies examining consumers' environmentally conscious purchasing behavior, especially in Asian countries (Lee, 2008; Chen and Chai, 2010). Growing in popularity as a strategy to decrease carbon emissions, mitigate environmental deterioration, and lessen adverse effects on the environment and tourism-related activities is the concept of green tourism, also known as sustainable tourism. Therefore, visitors are urged to start taking the environment into account when choosing their destinations because they are significant participants in the tourism sector. On top of that, prior research indicates that visitors' attitudes, intentions, and behaviors when visiting a destination are influenced by their values, views, or beliefs (Aji et al., 2021; Shan et al., 2020).

When researching factors affecting green tourism intention (Shin et al., 2022; Ulker-Demirel and Ciftci, 2020), conducted an overview of empirical articles on green tourism and pointed out that the theory of planned behavior (TPB) has become a widely used framework for investigating behavior in tourism research over the past two decades. The TPB theoretical model has identified influencing factors including attitudes, subjective norms, green beliefs, and environmental knowledge. Similarly, theory of values, attitudes and behavior (VAB) is used by researchers in predicting tourism consumer behavior related to sustainability in terms of values, attitudes, and sustainable behaviors (Leiserowitz et al., 2006) and willingness to pay more for green products (Shin et al., 2017) and environmentally friendly products (Kim et al., 2020).

However, when studies apply separate approaches to each theory such as TPB or VAB, there are still certain limitations. If the TPB model reveals some limitations when it does not take into account variables such as threat, mood or past experience that affect behavioral intention and motivation, the VAB model also does not cover all factors that affect environmental attitudes, which are personal factors such as: Personality, lifestyle, habits.

Vietnam is a country with rich and diverse natural, cultural and historical tourism resources, creating ideal conditions for green tourism development. With a target in mind toward 2050, Vietnam's National Strategy on Green Growth incorporates green consumption as one of its most significant tenets for the years 2021–2030. This strategy identifies the tourist industry as one that needs funding and focus on environmentally friendly and sustainable development. However, the environment and infrastructure in Vietnam are under pressure from factors such as climate change, rising sea levels and overcrowding at major tourist destinations. Currently, there are many cases of widespread littering, especially plastic waste, including plastic bags, and the awareness of some tourists and local communities about green tourism is still limited.

Therefore, the goal of this study is to find ways to reduce the limitations of previous studies by expanding the research framework on green tourism choice behavior through integrating VAB into TPB and placing it in the context of green travel. Generational theory to identify factors affecting Gen Z's choice intention and green travel choice behavior.

LITERATURE REVIEW

1. Theory of Planned Behavior

Theory of Planned Behavior (TPB) is a theory in the field of psychology and behavioral science that studies how people plan and control their behavior. The TPB is also a popular social psychological model in the hospitality, tourism, and leisure management literature due to its feasibility, testability, and methodological appropriateness. TPB theory was developed from the Theory of Reasoned Action (TRA) of (Ajzen and Fishbein, 1975). According to TRA, the intention to perform a behavior is influenced by two factors: attitude toward the behavior and subjective norms. With this view, TRA believes that behavioral intentions can be performed or not performed completely under the control of reason. This limits the application of TRA theory to the study of certain behaviors. Due to that TPB was created in order to overcome these TRA restrictions. According to TPB, the intents of individuals are what drive people and have a significant impact on how they behave. It pinpoints three primary variables that influence behavioral intentions: one's attitude toward the behavior, the subjective norms that surround it, and one's perception of behavioral control. Regardless of intention, external influences can potentially directly influence or hinder behavior. In addition, this is dependent upon how much behavior is actually under personal control and how well perceived behavioral control represents actual behavioral control.

According to Ajzen (1991), attitudes toward behavior reflects how someone assesses whether a particular behavior is favorable or unfavorable. This evaluation includes beliefs about the behavior and judgments about its outcomes. Subjective norms encompass social pressures that influence whether a behavior is performed or not. These norms are shaped by both beliefs about what others think (normative beliefs) and the motivation to conform to those beliefs. Perceived behavioral control is also critical in TPB, representing individuals' perceptions of how easy or difficult it is to engage in the behavior of interest.

The advantageous characteristics of the Theory of Planned Behavior (TPB) in examining the factors influencing human intentions and behaviors have led to its growing appreciation and widespread application in sustainability studies. (Mancha and Yoder, 2015) used this model to confirm customers' green behavioral intentions. It still has drawbacks, though, in that it ignores other factors like fear, threats, emotions, or prior experiences that can influence intents and behavioral motivations.

2. Value, Attitude, and Behavior Theory

The Value Attitude Behavior (VAB) theory, developed by (Homer and Kahle, 1988), comprises three main factors: (1) Values, (2) attitudes, and (3) behaviors. The first factor within this framework is values, which are foundational beliefs influencing individuals' actions, thoughts, and emotions (Rokeach, 1972). Values serve as fundamental standards guiding consumer decision-making processes (Bjoerk, 1998). According to (Kang et al., 2015), the value represents a desirable criterion shaping individual decisions and behaviors. Notable dimensions of value identified in the research include: Environmental concern (HK, 2012), environmental action (HK, 2012; Bertrand and William, 2011), self-image (Bertrand and William, 2011), and attitudes toward environmentally friendly products (Cheah and Phau, 2011). The second component in the VAB model is attitude, as described by Ajzen (1991), which pertains to the extent to which an

individual holds a positive or negative appraisal or assessment of a particular behavior. The significance of the value-attitude process in influencing intention or behavior is notably underscored in environmental conduct (Lee, 2011). This encompasses factors like attitudes toward green advertising, attitudes toward environmental concerns, and attitudes toward the socio-ecological benefits outlined in the conceptual framework of this study. Ultimately, the behavioral aspect within the model pertains to consumers' environmentally conscious actions.

In this study, the VAB model was chosen because it emphasizes that values are central to shaping an individual's attitudes towards specific behaviors (Homer and Kahle, 1988). Kim and Choi (2005) underscored that the VAB model is useful for understanding predictive factors of environmentally conscious behavior and their interrelationships concerning environmental concern and green purchasing behavior within a societal context. Moreover, the VAB model is widely used to study consumer behavior across various fields worldwide, particularly within environmental psychology contexts (Lee, 2011; Cheung and To, 2019). Recently, Kim (2024) explored VAB theory in an expanded context with perceptions of AI and social and personal norms to examine the potential link between sustainability and space tourism.

3. Generation theory and characteristics of generation Z

The origin of generation came from Karl (1952), who defined a generation as a social class or cultural position that might have an effect on an individual's awareness. According to Karl (1952), noteworthy historical events have an especially profound effect on generations. However, Karl (1952) was unaware of each generation's cyclical character. As a consequence, generation theory is credited with being developed and popularized by Strauss and Howe (1991), who determined a generation as a group of people who were born within a roughly 20-year window (covering a stage of life) and who had comparable upbringings and formative experiences. Individuals within each group are distinguished from previous generations by the common values, attitudes, and beliefs that are shaped by these shared experiences and events (Brosdahl and Carpenter, 2011). Up to this point, human generational cycles have been ascertained by a variety of techniques thus far. According to Ozkan and Solmaz (2015), Gen Z encompasses those born from 2000 to 2010, or from 1996 to 2010 (De Cooman and Dries, 2012), and from 2005 to 2018 (Federal State Statistic Service, 2018). However, for the purposes of this study, Gen Z is defined as individuals born between 1996 and 2010 (De Cooman and Dries, 2012).

In recent years, Gen Z has been considered the main responsible person in society for changes in their travel behavior, which can lead to significant changes in the travel market (Skinner et al., 2018). Carneiro and Eusébio (2015) identify this as one of the important markets because behavioral trends have begun to be shaped by these citizens.

According to previous research, Gen Z travelers demonstrate a preference for seeking adventure, enjoyment, and breaking away from their daily routines (Haddouche and Salomone, 2018). They are drawn to experiential travel, prioritize safety and commitment to local tourism (Monaco, 2018). Gen Z is also recognized for their environmental awareness; they are proactive, innovative, and actively engage in responsible travel practices (Monaco, 2018). They are noted as a group sensitive to biodiversity and climate change concerns (Robinson and Schänzel, 2019), showing a keen interest in natural-based solutions at travel destinations (Giachino et al., 2021). In addition, Mandić's (2024) study also emphasized the emotional, behavioral, cognitive, and sense of unity in Generation Z's choice of green tourism products in the connection between connection with nature and environmentally friendly travel behavior.

GREEN TOURISM AND FACTORS AFFECTING GREEN TOURISM BEHAVIOR OF GEN Z

1. Green tourism

As prescribed by the International Association of Ecotourism (TIES), green tourism is characterized as conscientious travel to natural environments, with an emphasis on preserving the ecosystem, supporting local communities, and incorporating educational components. As outlined by Dodds and Joppe (2001), green tourism is conceptualized across four terms: (1) Environmental responsibility, involving the protection, conservation, and enhancement of natural environments to ensure the sustained viability of ecosystems; (2) Fostering local economic resilience, entailing support for local economies, enterprises, and communities to promote economic development and sustainability over the long term; (3) Biodiversity conservation, encompassing the appreciation and preservation of various cultures and their diverse expressions, aimed at safeguarding and celebrating indigenous cultural values; (4) Enhancing tourist experiences through active engagement with natural attractions, interaction with local residents, and gaining insight into local customs and traditions. In other words, green tourism is a multifaceted term that denotes environmental friendliness. On one side, it targets environmentally friendly tourists, while on the other, it involves preparing eco-friendly services for tourists. Businesses in the tourism industry may utilize the principles of green tourism to promote an environment that is more favorable (Budiasa et al., 2019).

2. Factors influencing generation Z's intention to choose green tourism

Currently, researchers have mentioned numerous factors affecting the intention in choosing green tourism (Bixia and Zhenmian, 2013; Boztepe, 2012; Chen et al., 2018). However, in order to select the appropriate influencing factors for the scope of the study, the article will be based on the following two bases:

Firstly, the research will integrate 2 theories including TPB theory (Ajzen, 1991) and VAB theory (Homer and Kahle, 1988) to identify the factors affecting the intention in choosing green tourism. The Theory of Planned Behavior (TPB) by Ajzen (1991) elucidates the direct influence on the intention to select green tourism through three key factors: Attitudes toward the intention to choose green tourism, subjective norm towards the intention in choosing green tourism and behavior control the intention in choosing green tourism. Conversely, theory of Values, Attitudes, and Behaviors by Homer and Kahle (1988) delineates the indirect relationship between the value variable and the intention in choosing green tourism,

mediated by attitudes toward this intention. Consequently, by integrating TPB and VAB theories, the study will investigate two interrelated connections: (1) the direct impact of attitudes, subjective norms, and perceived behavioral control over the intention to select green tourism; (2) the direct impact of the value factor (encompassing concerns for the environment, environmental actions, self-image, and attitudes toward green products) on attitudes toward the intention in choosing green tourism, and its indirect influence on this intention.

Secondly, the factors identified that directly and indirectly affect the intention in choosing green tourism include: attitudes, subjective norms and behavior control and concern for the environment, environmental actions, Ego perception and will be placed in the context of the generation theory (Strauss and Howe, 1991) to show the characteristics of Gen Z. Thus, based on two bases for selecting groups of influencing factors, the study has delineated two categories of factors as follows: (1) Direct influencers on the intention in choosing green tourism encompass attitudes toward green tourism, subjective norms regarding this choice, and behavior control over this intention; (2) Factors directly impacting attitudes toward the intention in choosing green tourism, and influencing this intention indirectly, include Environmental concern, environmental action and self-image.

3. Establish research models and hypotheses regarding the factors influencing the green tourism behavior of generation Z

3.1. Factors that directly impact the intention in choosing green tourism

Attitudes to behavior are defined as the individual's positive or negative feelings about performing a particular behavior (Ajzen, 1991). According to the TPB model, attitudes toward actions have a strong and positive influence on the intention to act. This relationship is verified by many studies on green buying behavior (Chan, 2008; Bamberg, 2003).

Hypothesis H1: Attitudes toward the intention in choosing green tourism has a positive influence on the intention in choosing green tourism.

Ajzen (1991) contends that the subjective norm regarding behavior represents the social influence exerted by individuals such as friends, family, and colleagues on an individual's engagement in a specific behavior. According to Kar et al. (2024) networks has a strong impact on tourists' attitudes and motivations. In TPB, this subjective norm holds significant and positive sway over the intention to act (Ajzen, 1991). Studies examining subjective norms for green consumer choice behavior, notably those conducted by (Ha and Janda, 2012; Saleem and Gopinath, 2013), reveal consistent findings. They demonstrate that subjective norms positively and significantly impact the selection of green products.

Hypothesis H2: Subjective norms for the intention in choosing green tourism have a positive influence on the intention in choosing green tourism

Ajzen (1991) argues that perceived behavior control reflects the performance of specific behaviors that are easy or difficult. Behavioural control perceptions have a direct impact on behavioural intention and as such will have a direct impact on real behaviour (Ajzen, 1991). The perception of controlling green consumer choice behavior has been studied by many authors. Typically in these authors are Kumar (2021), Saleem and Gopinath (2013). These works indicate that perceived behavioural control over green consumer choice behavioural intention directly and positively impacts green consumer choice behavioural intention (Saleem and Gopinath, 2013).

Hypothesis H3: Behavioral control over the intention to choose green tourism has a positive influence on the intention in choosing green tourism

3.2. Factors that directly impact attitudes toward the intention of selecting green tourism and impact the intention of choosing green tourism indirectly

Concern for the environment represents a sentiment characterized by anxiety, passion, concern for environmental outcomes (Yeung, 2004; Antonides and Van Raaij, 1998; Maloney et al., 1975). This concern does not directly influence the intention to engage in green consumption behavior but rather affects it indirectly through attitudes toward green consumption intentions (Arslan et al., 2012) contend that environmental awareness influences decisions regarding green consumption by shaping attitudes toward green products and purchasing, with resulting effects being favorable.

Hypothesis H4: Concern for the environment has a positive effect on attitudes toward green tourism choices

According to Bamberg (2003), environmental action encompasses ecological, conservation, and eco-friendly actions. The capacity to take appropriate action to protect ecosystems, repair the environment, and reduce environmental pollution is known as environmental action. It also involves being able to identify and explain the extent of environmental contamination. Ajzen (1991) proposes that attitudes toward particular activities have an indirect effect on specific behaviors rather than a direct one. The impact of environmental concern, as a general attitudes toward the environment, on particular behaviors since attitudes toward certain behaviors for the environment should be considered an indirect way to comprehend the environment (Bamberg, 2003). This is reinforced by Arslan et al. (2012); Bertrand and William (2011) argue that environmental action is the intermediate variable between attitude and behavior.

Hypothesis H5: Environmental Action has a Positive Effect on Attitudes Toward Green Tourism Intentions

The ego represents the entirety of an individual's beliefs, thoughts, and emotions about themselves when compared to others within a specific social setting (Onkvisit and Shaw, 1987). According to ego theory, consumer goods and services reflect the consumer's ego image, as these items are utilized to bolster and enhance one's self-image (Grubb and Grathwohl, 1967). The broader social ego's influence can also be understood as social influence. Consequently, many studies have incorporated ego image into the TPB attitude model (Cook et al., 2002), demonstrating that the social ego image is a significant predictor of behavior attitudes (Conner and Armitage, 1998). Research by Sparks and Shepherd (1992) and

Sparks and Guthrie (1998) illustrates how the social ego image impacts attitudes toward green purchasing intentions. For Gen Z, the consumption of goods and services serves as a reflection of their social ego image, as this demographic is particularly attuned to the social connotations of consumption due to their strong emphasis on personal image (Churchill and Moschis, 1979). Lee (2008); Urien and Kilbourne (2011) study successfully validates the positive and substantial influence of ego (social) interest on consumers' attitudes toward green purchasing intentions.

Hypothesis H6: The ego's perception positively affects attitudes toward intentions in choosing green tourism

3.3. Impact intention of choosing green tourism on Green tourism behavior

According to Ajzen (1991) Theory of Planned Behavior, an individual's behavior is contingent upon their purpose. The initial component of this theory is behavioral intention, which serves as the motivating factor influencing behavior (Ajzen, 1991). The stronger the intention to engage in a specific behavior, the greater the likelihood of actually performing that behavior. A favorable association has also been seen between customers' intentions and their actual behavior in many research utilizing the TPB in the context of consumer behavior (Peña-García et al., 2020; Li et al., 2021; Rausch and Kopplin, 2021). These studies demonstrate that purchasing intention can be a significant predictor of an individual's behavior by looking at purchase intentions or the use of consumer goods or services in a study by Ibnou-Laaroussi et al. (2020), based on 395 tourists visiting tourist destinations, was also demonstrated that tourists' intentions to support sustainable green tourism were positively correlated with their behavior.

Hypothesis H7: Intentions in choosing green tourism has a Positive Effect on Green tourism behavior

From the analysis and development of hypotheses, the research model of the factors affecting the intention to choose green tourism of the Gen Z is proposed as follows (Figure 1)

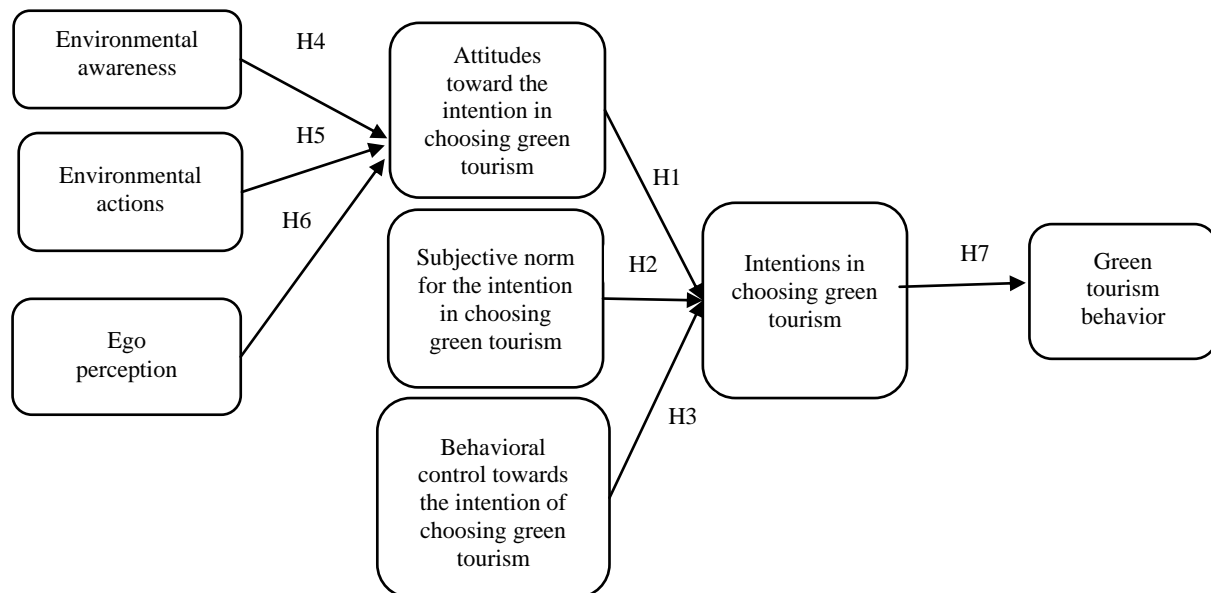


Figure 1. Model of factors affecting the Green tourism behavior of the Gen Z (Source: Author's proposal)

METHOD RESEARCH

a. Research context

Vietnam is among the nations with the most potential for creating green tourism models. Its advantages include being situated in the perfect tropical monsoon climate belt, having a varied topography that includes hills, plateaus, and long coastlines, having a rich cultural-historical heritage with unique features, having a variety of abundant ecosystems, and serving as a gathering place for numerous ancient forests that are currently listed for conservation. According to statistics from travel apps, Generation Z travelers have searched for Asian destinations online more frequently than before the pandemic, up more than 50%, and Vietnam is one of the most popular vacation destinations for Generation Z. They note that Vietnam, and Southeast Asia in general, fulfill all of Gen Z's desires and needs when it comes to travel.

In the current trend, as tourists' concern for environmentally friendly consumption behavior continues to rise, the development of green tourism products has been emphasized by some destinations, travel companies, and hotels. However, within the scope of this study, the focus will be limited to typical green tourism destinations in the three geographical regions of Vietnam, specifically: Hanoi, Danang and Phu Quoc to conduct the investigation and survey. These selections are based on the characteristics of tourism resources, green tourism products, and annual tourist arrivals.

b. Questionnaire

In order to simplify the process of gathering and analyzing data, a questionnaire of thirty-one scales was established, borrowed, and improved upon from credible earlier studies. The majority of the scales utilized in the survey were taken from research conducted elsewhere. The research team sought the advice of 15 specialists and researchers in the domains of social sciences and tourism to guarantee appro. Furthermore, a preliminary survey comprising seventy

samples was carried out to improve the questionnaire's phrasing and guarantee comprehensibility. After receiving feedback from experts and responders, a few questions were changed, and the final version of the questionnaire had three sections: an introduction outlining its aim, the questions' content, and demographic data. A Likert scale was employed with 5 levels (level 1: completely disagree, level 5: completely agree).

c. Date collection

The study participants consisted of international and domestic gen Z tourists with intentions to choose green tourism at various tourist destinations in Vietnam. A purposive non-random sampling method was utilized, and data collection took place over a period of 5 months from November 2023 to March 2024. A total of 315 surveys were distributed through both direct and indirect methods via the Google Forms application. The total number of valid questionnaires received from the two survey methods was 270, achieving a rate of 85.71% in which, 52.6% of the ratio is male and 47.4% is female. The largest percentage of respondents, 46.3%, are in the age range of 26 to 28 years old. They are followed in age order by 23 to 25 years old, 33.7%, and the remaining 20% are in the age range of 18 to 22 years old. The collected data were processed using Smart PLS software version 4.0.9.2.

RESEARCH RESULT

1. Model measurement evaluation

Firstly, the authors estimated convergence through factor loadings of each factor and coefficients of Cronbach's Alpha (CA), composite reliability (CR), and average variance extracted (AVE) of each variable.

According to Hair et al. (2019), for reflective measurement models, it is necessary to consider evaluation based on standards of internal consistency reliability, convergence validity, and discriminant validity. The evaluation results of the measurement model are presented in the following (Table 1).

Table 1. The estimation results of the reflective measurement model (Source: Results from the SmartPLS analysis by the authors)

Construct	Indicator	Outer loading	Cronbachs alpha	Composite Reliability	Average Variance Extracted	R-square	VIF
Attitudes toward the intention in green tourism	ATT1	0.897	0.828	0.928	0.823	81,1%	3.524
	ATT2	0.905					3.662
	ATT3	0.917					4.268
	ATT4	0.909					4.121
Behavioral control towards the intention of green tourism	BCT1	0.841	0.834	0.935	0.792		2.366
	BCT2	0.909					3.768
	BCT3	0.874					2.864
	BCT4	0.906					3.901
	BCT5	0.917					4.197
Environmental actions	EAC1	0.861	0.817	0.920	0.801		2.251
	EAC2	0.917					3.548
	EAC3	0.897					3.568
	EAC4	0.904					3.557
Environmental awareness	EAW1	0.890	0.811	0.911	0.789		3.171
	EAW2	0.908					3.537
	EAW3	0.879					2.674
	EAW4	0.877					2.575
Ego perception	EPE1	0.889	0.734	0.806	0.657		1.971
	EPE2	0.900					2.129
	EPE3	0.609					1.208
Green tourism behavior	GTB1	0.900	0.812	0.914	0.849	65,9%	2.664
	GTB2	0.938					3.657
	GTB3	0.925					3.274
Intentions in choosing green tourism	INT1	0.873	0.895	0.896	0.762	87%	2.683
	INT2	0.902					3.189
	INT3	0.840					2.079
	INT4	0.875					2.461
Subjective norm for the intention in green tourism	SUB1	0.885	0.909	0.911	0.785		3.530
	SUB2	0.889					3.608
	SUB3	0.891					2.911
	SUB4	0.878					2.776

1.1. Evaluate internal consistency reliability

The following data analysis results reflect the internal consistency reliability. The reliability indices through Cronbach's Alpha coefficient, composite reliability coefficient of latent concepts all fall within the recommended threshold by Hair et al. (2019), ranging from a minimum of 0.734 to a maximum of 0.909. Thus, the measurement model of this study achieves internal consistency reliability as both the alpha coefficient and composite reliability meet the requirements (above 0.7).

1.2. Evaluation of the convergent validity of the scale

To evaluate the level of convergence of latent structures, the authors selected the average variance extracted (AVE) index. Each variable is considered to have good convergence when the variation of the latent structure explains at least 50% of the variance of the observed variable or has an extracted variance coefficient greater than 0.5. The AVE results of each variable shown in (table 1) indicate that the convergence value (represented by the AVE value of latent concepts) is good. Indeed, this value ranges from 0.657 to 0.849, all greater than 0.5 and meeting the convergence value conditions. Thus, the measures in the model with the main sample achieve the necessary convergence accuracy.

1.3. Evaluation of the discriminant of the scale

The discriminant value indicates the uniqueness or differentiation of a structure when compared to other structures in the model. According to Ringle et al. (2015), the Heterotrait Monotrait Ratio method is recommended for determining the discriminant validity of latent variables. According to Garson (2016), the discriminant value between two related latent structures is proven when the HTMT coefficient is < 1. The table below shows that the HTMT coefficient of each structure is all lower than 1 (with the highest value reaching only 0.973 < 1). Therefore, the criterion for discriminant value has been established for HTMT (Table 2). In summary, from the above results, the authors conclude that the measures used in the research model have achieved excellent internal consistency reliability, convergent validity, and discriminant validity. Therefore, all 8 measures of these latent structures are used for analysis in the structural equation model.

Table 2. Discriminant Validity Assessment using HTMT Criterion Source: Results from the SmartPLS analysis by the authors

	ATT	BCT	EAC	EAW	EPE	GTB	INT	SUB
ATT								
BCT	0.903							
EAC	0.904	0.862						
EAW	0.885	0.903	0.805					
EPE	0.902	0.824	0.844	0.780				
GTB	0.864	0.797	0.824	0.750	0.994			
INT	0.973	0.944	0.928	0.896	0.931	0.897		
SUB	0.946	0.868	0.889	0.823	0.906	0.953	0.984	

2. Evaluation of SEM Structural Model

The results of testing the relationships between latent structures are shown in Figure 2. The structural model was bootstrapped with a sample size of N = 5,000 to specifically estimate the relationships between latent variables. Path coefficient values for endogenous latent variables were used to analyze the model at a significance level of 1%. The PLS-SEM model testing results for all bootstrap samples provide mean values and standard errors for each path coefficient. T-test statistics and P-values indicate the statistical significance of relationships in the research model (Figure 2).

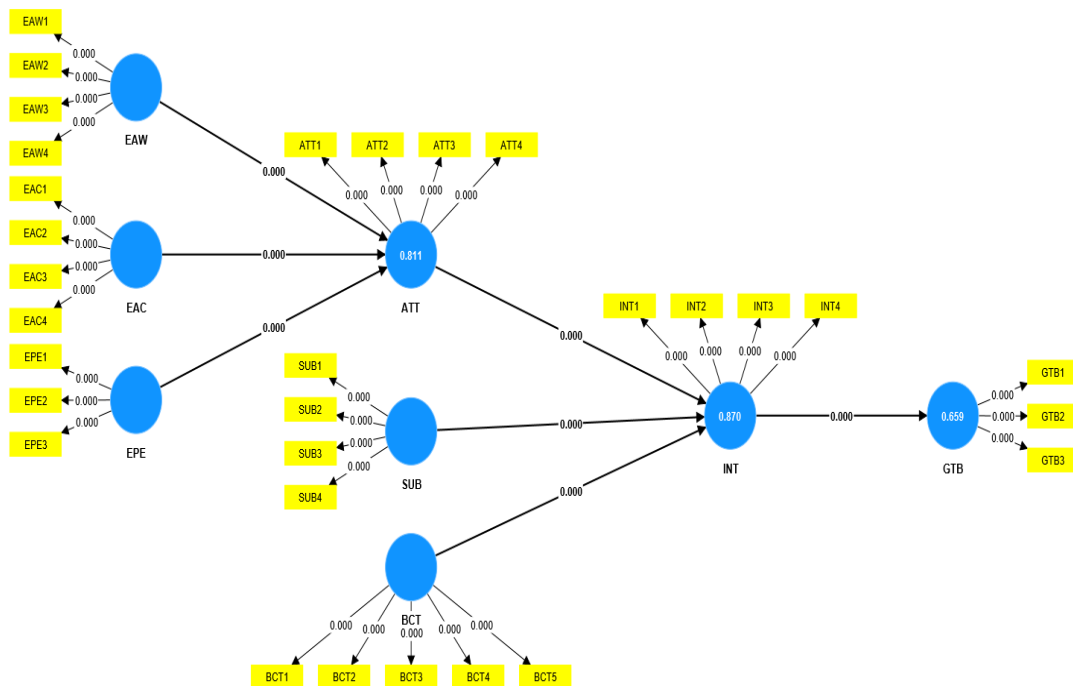


Figure 2. Estimated Results of SEM Structural Model (Source: Results from the SmartPLS analysis by the authors)

The Table 3 of results indicates that all direct relationships between variables are statistically significant, and all research hypotheses are accepted at a 95% confidence level (the P-value of the relationships is less than 0.05). This shows that all main effects in the model are confirmed to be statistically significant. In addition to the R² coefficients for

evaluating the internal structure, the change in R^2 value when an exogenous variable is excluded, expressed through Cohen's effect size measure (called f^2), is also used to assess the importance of the excluded variable on the endogenous variable. If the value is $0.15 > f^2 \geq 0.02$, it indicates that the exogenous variable has a small effect on the endogenous variable; $0.35 > f^2 \geq 0.15$ indicates a moderate effect, and if $f^2 \geq 0.35$, it indicates a large effect of the exogenous variable on the endogenous variable (Cohen, 2013). If $f^2 < 0.02$, it is considered to have no impact.

Testing for multicollinearity:

The issue of multicollinearity in the model needs to be checked using the variance inflation factor (VIF). According to Hair et al. (2019), in SEM structural models, multicollinearity issues can be serious when the VIF value is higher than 5, and it can occur when the VIF value is between 3 and 5, ideally the value of this coefficient should be less than 3.

Table 4 provides the results of multicollinearity testing – the outer model. The results show that the variance inflation factor (VIF) indicates no violation of the assumption of multicollinearity, as all coefficients are within an acceptable range of VIF values lower than 5. Therefore, the structural model does not suffer from multicollinearity.

Table 3. Estimated Results of SEM Structural Model (Source: Results from the SmartPLS analysis by the authors)

	Original sample (O)	Sample mean (M)	P values	Theory conclusion	F- square	Impact level
ATT -> INT	0.282	0.286	0.000	Qualified	0.113	Small impact
BCT -> INT	0.304	0.316	0.000	Qualified	0.192	Average impact
EAC -> ATT	0.407	0.410	0.000	Qualified	0.311	Average impact
EAW -> ATT	0.358	0.357	0.000	Qualified	0.280	Average impact
EPE -> ATT	0.232	0.229	0.000	Qualified	0.125	Small impact
INT -> GTB	0.812	0.811	0.000	Qualified	1.930	Big impact
SUB -> INT	0.401	0.384	0.000	Qualified	0.278	Average impact

Table 4. Results of Multicollinearity Testing - Inner Model (Source: Results from the SmartPLS analysis by the authors)

	ATT	GTB	INT
ATT			4.397
BCT			3.681
EAC	2.807		
EAW	2.415		
EPE	2.271		
INT		1.000	
SUB			4.434

DISCUSSION AND IMPLICATIONS

This study aimed to understand the influence of various factors on the green tourism consumption behavior of Gen Z travelers at tourist destinations in Vietnam. On top of that, the study discovered direct and indirect relationships influencing Gen Z's intention and behavior towards green tourism by integrating the TPB, VAB theories, and generation theory. By applying SmartPLS software to analyze the data, the research results confirm that all direct relationships between variables are statistically significant, and all research hypotheses are accepted at confidence levels from 80.6% to 93.5%. These findings provide experimental evidence of the relationships between the factors ATT, SUB, BCT, and INT with GTB. This demonstrates that the study has achieved significance both theoretically and practically.

1. Theoretical implications

Based on an overview of research on green tourism behavior, it shows that studies often use TPB theory to identify influencing factors including attitudes, subjective norms, and behavioral control. However, the limitations of only applying the TPB model are identified as not taking into account variables such as psychological characteristics of age or actions, past experiences that affect intention and motivation to act. Therefore, within the scope of this study, the authors sought to reduce the limitations of previous studies by using the VAB research framework to identify additional factors of interest in environment; environmental action and self-image. In Vietnam, previous studies also mainly focused on a TPB theory to study the intention to choose green tourism and green consumption behavior. All of this research is informed by an environmentally friendly or socially responsible perspective of tourists in general. However, each group of tourists of different generations will have different needs, behaviors and self-image expressions. Therefore, another new point in this study is to emphasize the ego image of gen Z tourists in forming green tourism choice and behavior.

Thus, with the integrated research of three theories: TPB, VAB and Generation theory, the study has identified two relationships that directly and indirectly affect the intention to choose and green tourism behavior. The research results show that (Table 3): First, with the direct influence relationship between ATT, BCT and SUB on INT and GTB, the influence of SUB on INT is the strongest, followed by the influence of BCT on INT and weaker is the influence of ATT on INT. Second, in the direct influence relationship of EAC, EAW and EPE on ATT and indirectly on INT, EAC has the strongest influence on ATT, followed by the influence of EAW on ATT, and the weakest is the influence of EPE on ATT. This is consistent with the findings of other researchers (Peña-García et al., 2020; Li et al., 2021; Rausch and Kopplin, 2021).

2. Managerial implications

Based on the results of empirical research on the factors affecting green travel behavior of Generation Z in Vietnam, the study proposes some specific implications as follows:

On the part of managers and policy makers: (1) it is necessary to focus solutions on individual social responsibility towards the environment; (2) Strengthen coordination and cooperation between the government and the community to increase efficiency in promoting social responsibility; (3) develop and promulgate specific documents regulating or guiding how to implement green tourism products oriented towards sustainable tourism destination development; (4) learn from models of domestic and international green tourism destinations and draw lessons in exploiting and developing green tourism.

On the part of tourism businesses: (1) continuously raise awareness and attitudes of Gen Z tourists about green travel options. It is important to emphasize the importance of green consumption for environmental sustainability and human health, aiming to change social attitudes and behaviors towards environmental protection; (2) supporting and educating about environmental protection responsibility in tourism is also very important, especially in Vietnam as a developing country, young people's awareness needs to be educated from an early age to form a positive awareness, saving and protecting tourism resources; (3) Gen Z tourists are increasingly interested in consuming green tourism products and they are influenced by many factors when forming their choice intentions, including forums and communities. Therefore, tourism businesses can create positive influences through social media, influencing members of society such as family, friends, colleagues, and people who are important to young consumers. (4) Young people's intention to choose green tourism products has differences in demographic characteristics.

Therefore, tourism businesses can design action programs suitable for this group. Finally, there needs to be coordination and cooperation between tourism management agencies, tourism businesses and other stakeholders in raising awareness and responsibility for green consumption behavior among tourists.

LIMITATIONS AND NEW RESEARCH DIRECTIONS

This study is one of the first to investigate the influence of various factors on the green tourism consumption behavior of gen Z. The relationship between influencing factors and the intention to choose green tourism with the green tourism consumption behavior of gen Z is based on the integration of three theories: planned behavior theory, value-attitude-behavior theory, and basic human values theory. The study proposes a research model based on the common understanding of previous studies. Despite the significant findings, the study still has some limitations. Firstly, the study was conducted using a purposive non-random sampling method, which may introduce subjectivity to the results, reducing objectivity and generalizability. Moreover, the scope of the study was limited to three typical tourism destinations in the three regions of Vietnam, so the experimental results only allow for some short-term conclusions and implications. Secondly, the study did not examine the differences between international and domestic tourists in their intention to choose and green tourism consumption behavior. Therefore, this could be a new research direction in the future.

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