Inter-relationships among green consumption values, attitude towards green consumption, and green consumption intention: Evident from Vietnam

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ABSTRACT

This study was conducted to investigate the relationships among green consumption values, attitude towards green consumption, and green consumption intention among Vietnam youth. The study first reviewed previous research and developed hypotheses related to the research objectives. This research applied both qualitative and quantitative research methods. The study used survey data sets collected through quantitative research with questionnaires answered by 303 Vietnamese youth, Data were collected via internet questionnaires. Structural Equation modeling (SEM) was used to test the study hypotheses. The findings from the study indicated that green consumption values had a significant positive effect on attitude towards green consumption, Behavior inhibition system, and Behavior activation system in ascending order. Second, attitude towards green consumption and behavioral activation systems had a significant positive effect on green consumption intention. Finally, behavioral activation systems and Behavior inhibition system had a significant positive effect on attitude towards green consumption. Based on the study's empirical analysis, some implications were proposed to help the government and enterprises on how to bridge the gap between people's green consumption values and their actual behavior. Previous research investigating green consumption intention formed through the perceptions of green consumption values, attitude towards green consumption, behavioral activation system, and behavioral inhibition system ultimately determines the influence of consumers' green consumption intention is rare. The main contribution of this study is to fill this gap.

Keywords: Green consumption values, Green consumption intention, Attitude towards green consumption, Behavioral activation system, Behavioral inhibition system.

Introduction

Experts have predicted that the global population will have reached about 9 billion people by 2050 and 10.1 billion people by 2100 [1]. Due to population growth, there will be increased demand for natural resources, including raw materials, water, energy and fertile land. Therefore, the environment is under considerable pressure [2]. The middle-income group is also rising, indicating an increase in consumption behavior and in demand

for more luxury products. Moreover, in the twenty-first century, global consumption of materials will grow octuple; by the end of 2050, international resource demand is predicted to threefold, calling for a much souring use of natural resources [3, 4].

Growing concern is dedicated to environmental and green issues such as excess consumption of natural resources, ozone exhaustion, global warming, and air and water pollution which severely endanger human life [5-7]. The majority of marketers agree that green consciousness among consumers will increase and that such a significant change in public perception and attitudes must eventually influence every aspect of a company [8]. Green consumption is recently a dominant topic and has also been at the top of the international public administration agenda for over 20 years since the United Nations Conference on Environment and Development [9]. Indeed, policy makers, governments and, recently, companies are all conscious of the risks and implications regarding the overexploitation of environmental resources and are applying actions and programmes (Horizon, 2020; United Nations Environment Program) in order to deal with these problems. In the past two decades, consumers have become more aware of the impact caused by consumption on the environment, thereby increasing consumption of green products [10]. Nevertheless, consumers seem not to be thorougly aware of the importance of adopting a set of different behaviours [11-14]. In addition, as the new concept of green consumption has appeared in many academic literature since 2006, the field of green consumption research is still incomplete [15].

Therefore, a deeper understanding of consumer green consumption values and green consumption behavior has become imperative for both policy makers and marketers interested in promoting sustainability development [16, 17]. Therefore, many related studies have been carried out to understand the aspects related to green consumption intention and behavior [18-20]. Drawing concern from both academics and professionals, accordingly, it is common to some literature reviews investigating the state of the art in this field of research. Of the available reviews, both seem rather adjacent to the work. An article entitled: “Green Marketing Consumer-level theory review”, [21-25] provides an abstract of all theories put forward in the literature regarding green consumers, and sorts them into six categories: Values and Knowledge, Beliefs, Attitude, Intentions, Motivations, and Social Confirmation. Remarkably, the review has highlighted the current gap between intention and action and suggest behavioral insights including behavioral intentions and noneconomic green influencers to abridge the discrepancy. The other review is made by [26-30], who identify factors influencing the green purchase behavior, differentiating between individual (emotions, habits, perceived behavioral control, perceived consumer effectiveness, values and personal norms, trust, and knowledge, among others) and situational (price, product availability, subjective norm/social norm and reference group, product attributes and quality, store related attributes, brand image, and eco-labelling, among others) factors. In their review, [31-35] demonstrate each volatility together with the direction of its impact on the green purchase intention and/or behavior. While these two reviews give an extensive summary of the theories and variables implied in green consumption, more focus is placed on green behavior than on the green gap [36]. In general, green purchase research classifies purchasers into two types: those who buy, and those who don’t. Simultaneously, green gap research takes opinion and objective into consideration, thereby distinguishing the groups of consumers.[37-43], based on previous studies, has proposed the preconditions for green consumption intention, which are green consumption value, behavioral activation system, behavioral inhibition system, attitude towards green consumption and the association with green consumption. Do these factors really affect the green consumption intention of Vietnamese youth? This study was conducted aimed at answering this questions.

Literature review

Green consumption values

Green consumption values signify the tendency to express the value of environmental protection through one's purchases and consumption behaviors [44]. Particularly, this tendency is defined as a consumer's general advantage of the net interest of a purchase depended on his environmental needs, green desires and sustainable expectations [45]. It can also be considered the reflection of ecological protection by various measures due to values in an individual to save the nature. As a result, green consumption values play a key role in shaping an individual's pro-environmental behaviour [46]. The marketing literature on green consumption consists of various studies showing that green consumption values serve as a crucial factor in affecting environmental behaviour [44, 47, 48]. Occasionally, it is evidenced that the attitude moderates the correlation between values and behaviour [49-51]. In the world, there have been many studies that have also demonstrated the relationship between green consumption intention and attitude/intention towards green consumption and suggested that green consumption value has an important influence on attitude towards green consumption and green consumption intention. indicated that green consumption value had a positive effect on buying intention towards organic clothing of young Indian consumers aged 20-40 years old.

Behavioral approach system (BAS)

Moreover, striving for happiness and avoiding pain is the most crucial characteristic of human beings. [52, 53] put forward a behavioral motivation theory (Reinforcement Sensitivity Theory), illustrating the behavioral approach system (BAS) and the behavioral inhibition system (BIS). While BAS represents one's sensitivity to rewards and positive stimuli, initiating attitudes that generate positive or pleasurable desires, BIS refers to one's sensitivity to punishment cues and negative stimuli, restraining behaviors which create unpleasant results to avoid them [54, 55]. [56, 57] discovered that the activation approach (BAS, or approach motivation) was interconnected with left-lateralized middle frontal gyrus activation and that the region responded to stimuli associated with expectations, harvests, and pleasure. Contrawise, avoidance (BIS, or avoidance motivation) was associated with right-lateralized middle frontal gyrus activation and that the region responded to stimuli associated with disappointment, loss, and pain. As a result, BAS and BIS are not linked to the same part of the nervous system, indicating that both systems could, potentially, be initiated simultaneously.

The behavioral activation system is a neuropsychological system involved in the pursuit of an individual's goals, leading to exhilarating and hopeful experiences [58-60]. Behavioral activation systems are closely related to consumer behavior. Based on the regulatory focus theory of, it has been found that the behavioral trigger system can govern the way a person pursues goals and can be either a fixed tendency or change in different situations [61, 62]. This demonstrates that there are specific situations that will trigger a behavioral trigger system. studied the impact mechanism of behavioral activation system on emotional consumption behavior in retail industry, and found that behavioral activation system was related positive way to emotional shopping motivation. Specifically, the behavioral activation system is positively related to consumption intention for several reasons as follows. suggested that heightened awareness activates the behavioral activation system; In the context of environmental consumption, consumers will feel highly

aware of helping to reduce environmental degradation, thereby activating their behavioral activation system and their goal of environmental improvement will lead to green consumption attitudes and intentions. Consumer intentions can help consumers gain ethical recognition, as well as positive feedback from people, helping them to perceive the positive value of their behavior; Consumers' expectations when they bring about an environmental improvement by a particular behavior in the future activate the behavioral activation system, and ultimately lead to consumption intention.

Behavioral inhibition system (BIS)

The behavioral inhibition system is closely related to consumer behavior. Based on the regulatory focus theory [62], it has been found that the behavioral inhibition system can govern the way a person pursues goals, and it can be either fixed or variable tendencies from situation to situation [61, 62]. This demonstrates that there are specific situations that will trigger the behavioral inhibition system. studied the mechanism of action of the behavioral inhibition system on emotional consumption behavior in the retail industry and found that the behavioral inhibition system was positively related to emotional shopping motivation. In the relationship between behavioral inhibition system and green consumption attitude and intention, consumers may feel helpless in the face of environmental changes, thereby activating the behavioral inhibition system [63]; it can help consumers avoid behaviors that could cause further negative effects on the environment, and get them to take action to prevent such consequences; Environmental consumption behavior is one of the ways to prevent the consequences caused by environmental change, thereby causing consumers to increase their consumption intention.

Attitude towards green consumption

Attitude is defined by [64-66] as one's positive/negative judgement of a particular behavior. [67-69] also refers to attitude as the positive or negative evaluation of an object, action, issue, or person. declared that estimation of attitude should be carried out in two aspects: cognition and emotion. While fondness represents the emotional aspect, evaluation represents the cognitive aspect. [70-73] showed that the measuremnet of attitude should include three aspects: cognition, emotion, and behavior [53, 74, 75]. argued that instrumental assessment (valuable or not) and empirical assessment (delightful or not) are the two assessment systems affecting the tendency of attitude.

Attitude towards green consumption is the level of concern of consumers, who are aware of environmental issues, believe and are willing to contribute by their actions to reduce negative impacts on the environment [76]. planned behavior theory suggests that an individual's behaviors and attitudes can influence an individual's intentions, leading to individual behaviors. Attitudes sometimes act as a mediator for the relationship between values and behavior [49-51]. Positive environmental attitudes are more likely to participate in the behavior [77]. Research by has demonstrated that attitude plays a role in motivating consumer action. Consumers' awareness of environmental issues also affects environmental protection attitudes. Consumer attitudes influence environmental protection behavior and green consumption behavior [78]. In addition, attitude towards the environment is also found to have a significant influence on consumption intention [79]. also argues that attitude is acting as a moderating factor in the relationship between green consumption value and green consumption intention.

When the partakers have a commitment to accomplish their objectives, they will take measure to achieve a specific motive. Without that motivation, there will be no futher

action. Individuals with an aim to start up are better prepared for the enterprising process than those without one [80, 81]. The correlations between intention and behavior in green consumerism have been researched thoroughly. For instance, hardly any studies have indicated that there is positive link between the tendency to buy organic products and behavior towards organic products purchase [81-84]. [34, 85-87] declared that students' environmentally-related behavior improves when they have a tendency to protect the environment. also stated that younger purchasers have more tendency to buy green products. Based on these earlier researches, when partakers have greater inclination to behave in a particular manner, they presumably perform that manner [88].

Under the premises of theory and based on the empirical findings presented above, this study proposes hypothesis as follows:

H1: Green consumption values are related positively to Behavioral activation system.

H2: Green consumption values are related positively to Behavioral inhibition system.

H3: Green consumption values are related positively to attitude towards green consumption.

H4: Behavioral activation system is related positively to attitude towards green consumption.

H5: Behavioral inhibition system is related positively to attitude towards green consumption.

H6: Behavioral activation system is related positively to green consumption intention.

H7: Behavioral inhibition system is related positively to green consumption intention.

H8: Attitudes towards green consumption are related positively to green consumption intention.

Based on literature review, the conceptual framework can be depicted as in Figure 1.

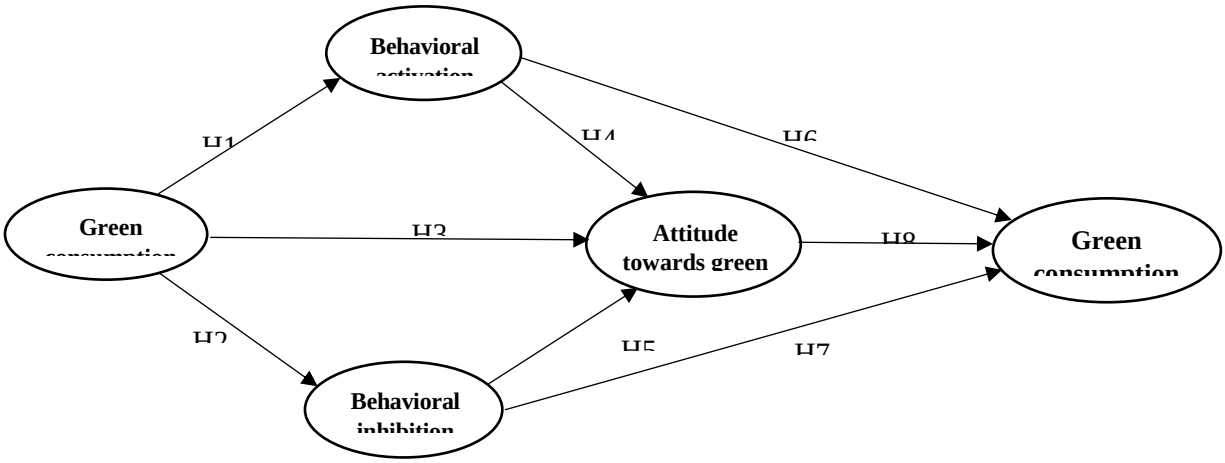


Figure 1. Theoretical research model.

Methodology

Measurement

We evaluated all constructs (Green consumption values, Behavioral activation system, Behavioral inhibition system, Attitude towards green consumption, green consumption intention) applying a survey questionnaire was developed with figures adapted from earlier researches. Slight alterations were adopted to the measures to fit the research's setting. While diverse survey instruments were available to measure all potential variables, these scales have never been evaluated in the present condition (i.e., Vietnam youth). Therefore, first, diverse scales for each construct were made based on some pertinent studies and then were adjusted to suit the study's context. The figures were then evaluated according to standard scale development guidelines [89]. All construct figures (measures) were evaluated on a five-point Likert scale, which ranges from 1 "strongly disagree" to 5 "strongly agree", to calculate the research variables. As this research was caried out in Vietnam, all items were translated into Vietnamese and back to English for vetting. Modifications could be made to the Vietnamese translation if necessary.

Therefore, Green consumption values was measured with five items by proposed. Similarly, Behavioral activation system, Behavioral inhibition system was assessed using five items and sevent items developed by. While attitude towards green consumption was measured with three items by [90]. Finally, green consumption intention was measured with three items proposed by [91].

Data collection and analysis

To test the study hypotheses, a web-based survey was conducted. The main survey questionaire used a convenience sample of all students from universities in Hanoi, Vietnam. More specifically, the data collection was conducted by 5 reminders. Reminders will send questionnaires online to selected respondents, or on university student groups. The survey was conducted from December 15, 2020 to January 10, 2021.

Of 347 returned questionnaires, 303 questionnaires were kept for the analysis of data, whereas 44 questionnaires were discarded because of missing values or extreme outliers. According to, the SEM analytics used to examine the study hypotheses require a sample size between 150 and 400. Of the respondents, 114 (37.6%) were male and 189 (62.4%) were female, and most incom under 3 million VND (52.1%). A total of 79.9% of the respondents were university students (Table 1).

The data analysis used SPSS 22.0 and AMOS 20. A two-step approach was used, as recommended by Anderson and Gerbing (1988). To begin, confirmatory factor analysis (CFA) was used to evaluate the measurement model fit and factor structure of each scale. Second, to test the study hypotheses, structural equation modeling (SEM) with maximum likelihood estimation was applied. Skewness-kurtosis tests were performed since SEM required normality assumptions. In general, data has univariate normality if the absolute value of skewness-kurtosis is less than -1/+1. The skewness and kurtosis values for all items in the research range from -1 to 1.

Table1

Respondent profiles (N = 303)

Sociodemographic variables		N	Percentage (%)
Gender	1. Male	114	37.6
	2. Female	189	62.4
Income (VND)	Under 3 millions	158	52.1
	From 3 – under 5 Millions	75	24.8
	From 6 – under 10 Millions	45	14.9
	From 10 – under 15 Millions	14	4.6
	16 million and over	11	3.6
Education	Students	242	79.9
	Staff	61	20.1

Source: Own calculations

Results and discussions

Measurement model

Following the first data analyses, CFA was carried out to test the measurement model's unidimensionality, reliabilities, and validities. The measurement model performed well over a wide range of fit indices. Particularly, measures of Incremental Fit Index [IFI], Tucker-Lewis Index [TLI], Goodness of Fit Index [GFI], and Comparative Fit Index [CFI] near to 1.00 are considered acceptable, while a value of Root Mean-squared Residual [RMR] less than 0.05 is considered acceptable [92]. The acceptable range for the Root Mean Squared Error of Approximation [RMSEA] is between 0.04 and 0.08 [93]. The CFA findings demonstrated adequate model fit for all of these criteria: x2 (303) = 386.504, p =.000; Normed x2 (CMIN/DF) = 1.757, p = 0.000; RMR = 0.038, GFI =.898, RMSEA = 0.050, IFI = 0.966, TLI = 0.960, CFI = 0.965 [93, 94]. Furthermore, all standardized factor loadings for the scales were larger than 0.6 ($p < 0.001$), and the composite reliabilities of the five scales were between .870 and .938 (Table 2), all larger than 0.7 [95]. Moreover, Cronbach alpha coefficients were measured for each scale, varying between 0.870 and 0.936 [95]. The average variance extracted (AVE) for each scale was used to assess convergent and discriminant validity (Table 2). The AVE values, all exceeding 0.5, ranged from 0.574 to 0.720, demonstrating unidimensionality and convergent validity. The average variance extracted (AVE) for each scale was compared to the squared correlation between all pairs of variables to evaluate discriminant validity. The squared correlation was larger than the AVE for each variable, demonstrating adequate discriminant validity (Bagozzi, Yi, & Nassen, 1998).

Table2

Summary of the measurement model

Constructs	Number of items	Cronbac's Alpha	Extraction sums of squared loading (%)	CR	A.V.E
Green consumption values	5	0.870	74.252	0.870	0.574
Behavioral activation system	5	0.900		0.900	0.644
Behavioral inhibition system	7	0.936		0.938	0.685
Attitude towards green consumption	3	0.873		0.873	0.696
Green consumption intention	3	0.883		0.885	0.720

Structural model

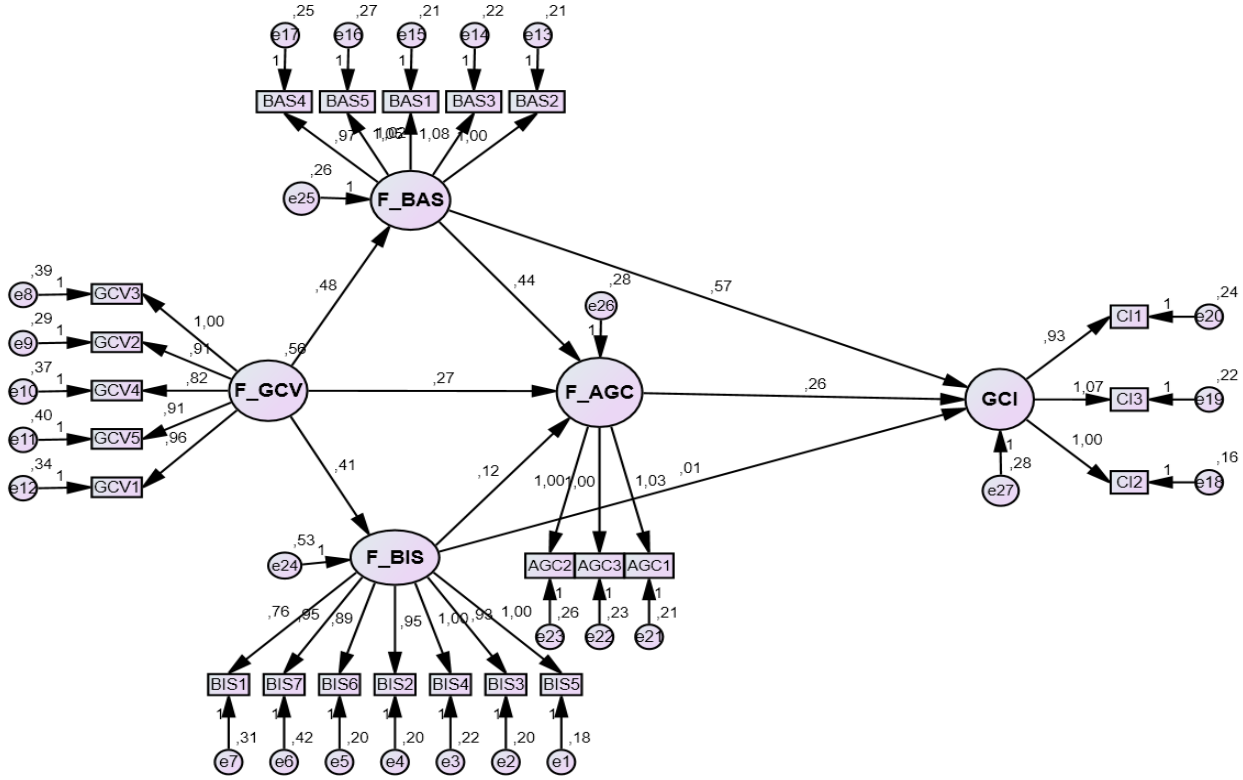
SEM was used to assess the conceptual model and study hypotheses. The model fit was acceptable: x^2 (303) = 509.579, p = 0.000; Normed x^2 (CMIN/DF) = 2.295, p = 0.000; RMR = 0.087, GFI = 0.873, RMSEA = 0.065, IFI = 0.940, TLI = 0.932, CFI = 0.940 [93, 94].

Subsequently, the hypothesized relationships were examined. The green consumption value had a significant effect on Behavioral activation system (ß = 0.480, t = 8.600, p < 0.001). Thus, hypothesis 1 was supported. Hypothesis 2 was supported with the result that the green consumption values is significantly related with Behavioral inhibition system (ß = 0.409, t = 6.175, p < 0.001). Hypothesis 3 was supported with the result that the green consumption values is significantly related with attitude towards green consumption (ß = 0.274, t = 3.839, p < 0.001). The results of the first three hypotheses demonstrated the importance of green consumption values in shaping positive role both the behavioral activation system, behavioral inhibition system, and attitude towards green consumption. This significant causality implies that consumers who perceive that green consumption values is inportant roles more favorable attitudes towards green consumption, behavioral activation system, and behavioral inhibition system.

There was also a significant relationship between Behavioral activation system and attitude towards green consumption (ß = 0.436, t = 5.445, p < 0.001). Thus, hypothesis 4 was supported. Hypothesis 5 was supported with the result that the Behavioral inhibition system is significantly related with attitude towards green consumption (ß = 0.409, t = 6.175, p < 0.001).

Accordingly, hypothesis 6 and hypothesis 8 were supported. Behavioral activation system had effect on consumers' green consumption intention (ß = 0.575, t = 7.022, p < 0.001). There was also a significant relationship between atitude towards green consumption and consumers' green consumption intention (ß = 0.263, t = 3.612, p < 0.001). Contrary to the predicted relationship, the results of the SEM indicated that there was no evidence of a positive relationship between behavioral inhibition system and green

consumption intention; therefore, H7 was not supported (ß = 0.013, t = 0.273, p = 0.785). (Table 3 summarizes the findings, and Fig. 2 shows the results with structural path model).



Structural path model.

Table 3

Estimated path coefficents.

Hypotheses			Estimate	S.E.	C.R.	P	Results
BAS	<---	GCV	.480	.056	8.600	***	H1: Supported
BIS	<---	GCV	.409	.066	6.175	***	H2: Supported
AGC	<---	GCV	.274	.071	3.839	***	H3: Supported
AGC	<---	BAS	.436	.080	5.445	***	H4: Supported
AGC	<---	BIS	.117	.051	2.289	.022	H5: Supported
GCI	<---	BAS	.575	.082	7.022	***	H6: Supported
GCI	<---	BIS	.013	.049	0.273	.785	H7: Not supported
GCI	<---	AGC	.263	.073	3.612	***	H8: Supported

*Note: ***p < 0.001; GCI: Green consumption Intention; AGC: Attitude towards green consumption; GCV; Green consumption values; BAS: Behavioral activation system; BIS Behavioral inhibition system.*

Source: Own calculations

Multigroup analysis

After finding support for the main effects, the next step was to incorporate the recommended moderator factors into the model to gain additional insights. The values of the moderator factors were used to calculate median splits in this study. Moreover, multiple group analyses were also done using a hierarchical technique, comparing two sub-samples chosen based on gender.

In the first stage, an overall Chi-square difference for each of the moderator variables was determined. In terms of technical comparison, a model with equality constraints is compared to a model with variable parameters. The null hypothesis in this test is that the moderator factors have no influence on the six parameters. Table 4 indicated a rejection to these hypotheseses for each of the moderator variables (2 = 34.219, DF =8). Following that, limitations were applied to evaluate the model's invariance across different subgroups. The equivalence of measurement weights was investigated in a second stage, according to, who suggest a hierarchical technique in multigroup analysis [96]. Since these models are nested, the general model will always have a lower 2-value than the restricted model because the general model has one degree of freedom less than the restricted model [97]. Remarkable differences in Table 5 suggest a support in the hypotheses of the moderator effect.

Table 4

Fit Indices for Invariance Tests.

Model	x2	Df	P	RMSEA
Invariable	915.826	452	0.000	0.058
Variable	881.607	444	0.000	0.057
χ2 difference	34.219	8	0.000	0.001

Source: Own calculations

Table 5

Hypothesis Testing Results for Applicability of Conceptual Framework

			Estimate		S. E.		C.R.		P	
			Male	Female	Male	Female	Male	Female	Male	Female
BAS	<--	GCV	0.542	0.358	0.088	0.067	6.171	5.314	***	***
BIS	<--	GCV	0.487	0.264	0.104	0.083	4.673	3.172	***	0.002
AGC	<--	GCV	0.521	0.032	0.116	0.080	4.479	0.404	***	0.686
AGC	<--	BAS	0.378	0.508	0.114	0.108	3.320	4.704	***	***
AGC	<--	BIS	0.018	0.182	0.076	0.066	0.243	2.762	0.808	0.006
GCI	<--	AGC	0.576	0.016	0.134	0.084	4.296	0.187	***	0.851
GCI	<--	BIS	0.123	-0.042	0.081	0.059	1.520	-0.718	0.129	0.473
GCI	<--	BAS	0.246	0.726	0.134	0.107	1.836	6.763	0.066	***

*Note: ***p < 0.001; GCI: Green consumption Intention; AGC: Attitude towards green consumption; GCV; Green consumption values; BAS: Behavioral activation system; BIS Behavioral inhibition system.*

Source: Own calculations

Table 5 shows a moderating effect of gender for eight parameters. These results suggest that the influence of green consumption values on behavioral activation system and behavioral inhibition systems of customers is significantly higher for male than for female. Multigroup analysis for the influence of green consumption values on attitude towards green consumption and the influence of attitude towards green consumption on green consumption intention show only one moderating effect towards male. Meanwhile, the influence of behavioral inhibition systems on attitude towards green consumption and the influence of behavioral activation systems on green consumption intention show only one moderating effect towards female. Additionally, the influence of behavioral activation systems on attitude towards green consumption of customers is significantly higher for female than for male.

Conclusions

This study has indicated empirical evidence on the relationship between green consumption values, attitudes towards green consumption, and green consumption intentions. Research results also demonstrate that green consumption values have an significant influence on attitude towards green consumption, behavioral activation system, and behavioral inhibition system. Behavioral activation system and behavioral inhibition system have influence on attitude towards green consumption. Meanwhile, attitudes towards green consumption and behavioral activation system have an influence on young people's green consumption intention. The behavioral inhibitory system factor has not been proven to affect green consumption intentions of Vietnamese youth. This study provides a distinctive and valuable knowledge concerning behaviour of consumers in emerging economies for niche products. This research adds to the traditional theory of green consumption behavior as well as serves as a reference for governments and companies on how to bridge the gap between people's green consumption values and their green consumption behavior. Research results have suggested some solutions to promote green consumption intention among young people.

In particular, for the government, it is possible to first propose policies to help people improve the their green consumption values such as promoting education on green consumption, thereby promoting environmental knowledge, combining public advertising, awarding prizes to individuals/organizations with environmental protection activities, etc. Second, the government can encourage businesses by offering preferential policies in the business of these products. green products, promoting the development of environmentally friendly products. At the same time increase the supply of these products.

For businesses, first of all, it is necessary to improve products and services in an environmentally friendly direction. Then, businesses need to put out appropriate communication activities to inform about the positive impacts of products on the environment so that consumers know to form their consumption values. increasing the intention to consume green products. In the sales environment of the enterprise, it is advisable to add incentives aimed at activating the impulse to reach consumers, so that they can feel the benefits brought by the product. Because buying green products is not only a passive choice based on the marketing and stimulation activities of the manufacturer, but also the initiative of the consumer.

The research also revealed that attitude towards green consumption results in green consumption intention. Therefore, marketers should consistently attempt to affect individualistic attitude by diverse promotional campaigns. It is necessary for the marketers to make significant effort to influence consumers' mindset that while environmentally friendly products is more expensive, the cost is worth since it has significant advantages for the environment and human beings.

For consumers, it is important to form green consumption values, improve the behavioral activation system. At the same time, it is necessary to improve attitudes towards green consumption, which can be enhanced by their own attitudes as they can promote environmental improvement through their own pro-environmental behaviors and help for the development of a green sports society and environmental protection.

This research has a few drawbacks. This research is restricted to Vietnamese young consumers between the ages of 18 and 25. The current study focused on teenagers who lived in a particular region: Hanoi, and thus could not be applied to other sectors. Hypotheses may be tested across various age groups, ethnicities, and product categories in this study. Further research may be conducted by evaluating the model with actual behaviour through experimental design. Several other factors, such as behavioral activation and inhibition systems, were investigated by brain neuron cognitive systems connected to participants' brains, but due to the restrictions of the conditions in which the study was conducted, it was difficult to incorporate them into the green product purchase scenario. Future research can also investigate the moderating effects of factors including income, age, region, etc. This may provide important knowledge in the field.

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