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### Investigating the determinants of green consumption intention

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#### Abstract

The current paper aims to analyze factors affecting green consumption intention based on the extended theory of planned behavior. The proposed model is analyzed using regression analysis with data from 295 participants. The results indicate that attitude towards buying green products, behavioral control, social influence, and knowledge about green products are four factors that have significantly positive influences on consumers' intention of purchasing green products. However, in contrast to some previous studies, environmental concern has no direct relationship with consumers' green consumption intention. Incredibly, this paper contributes to the ecotourism destinations by encouraging green consumption to prevent the natural environment intention (i.e., eco-souvenir, eco-friendly plastic, organic foods) and build a natural destination image.

**Keywords:** Social Influence, Green Consumption Intention, Environmental Concern, Ecotourism, Destination Image

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## 1. Introduction

The world's emerging economies, such as Vietnam, are facing several environmental issues, including deforestation, soil degradation, water, air pollution, and loss of biodiversity due to their rapid urbanization and industrialization. One of the most direct causes of these issues is greenhouse gas emissions from consumer goods production (McKechnie *et al.*, 2011). Undoubtedly, promoting green consumption is one of the pressing acts to minimize climate change's consequences and implement sustainable development goals. Green consumption can satisfy people's basic needs while preserving the functions and workings of any natural ecosystem. Thus, it helps protect the environment we are living in and our next generations' future.

According to several previous studies, such as Leonidou *et al.* (2013) and Peloza *et al.* (2013), "green consumption" is becoming popular research in developed nations. Currently, the findings of Liu *et al.* (2017) reveal that green consumption has increased the studies on customers' behaviors. Furthermore, many previous pieces of research explore the environmental concern and green consumption intention of consumers in developing and developed countries. For example, Yu *et al.* (2017) investigate the "Taiwanese undergraduate students' pro-environmental towards green products in the fight against climate change".

Furthermore, Peloza *et al.* (2013) state that "even the most recent researchers have just started to explore the factors that help to explain green consumption behaviors, many of these studies focused only on explaining behavioral intention". Hence, to respond to the calls of future studies, several pieces of research focus on culture and values (e.g., Pepper *et al.*, 2009), sociodemographic characteristics (e.g., Diamantopoulos *et al.*, 2003), and customer intention (e.g., Wu and Chen, 2014). However, the research on green consumption in Vietnam has little attention. Therefore, this study explores some of the factors affecting intention towards consuming green products in Vietnam.

The objective of this research focuses on clarifying the factors affecting green consumption intention using the extended theory of planned behavior as the framework to measure the change of consumer behavior from intention to action. The research questions of this paper are: (i) What are the factors affecting green consumption intention in the context of Vietnam, (ii) Which factor is the most important. This study also provides meaningful insights into the green marketing literature on segmenting customers. Moreover, the findings would help policymakers, academic researchers, and practitioners understand and promote consumer behavior change towards sustainability.

The rest of this paper is organized as follows. Section 2 contains the literature review and hypothesis development. Section 3 presents the description of the data and the estimation strategies. Section 4 shows the main empirical results, and Section 5 concludes the paper.

## **2. Literature review and hypothesis**

### ***2.1 Green consumption***

According to the Organization for Economic Cooperation and Development (OECD), green products can be encouraged to reduce environmental damage. Meanwhile, Lin and Huang (2012) defined “green products as products used from fewer resources and having a lower impact and risk on the environment, while also preventing the generation of waste that is already in its form”. Adawiyah (2017) states that green product concepts are related to sustainable production and supply chain management, the environment, technology, and practice.

One of the most comprehensive definitions is the Green Option Matrix (GOM) proposed by Dangelico and Pontrandolfo (2010). They create a tridimensional matrix based on when, why, and how much the goods are green. By examining the environmental concern, green products are categorized into pollution/waste focus, material focus, or energy focus. For example, a green product with a material-focus factor uses natural materials for sustainable development; a green product that focuses on energy could produce energy from renewable sources and minimize waste and reducing pollution caused by other products.

Along with green products, green consumption is considered a trend of the 21st century. According to UNEP (2009), green consumption is defined as “the use of services and related products which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life-cycle so as not to jeopardize the needs of future generations”.

### ***2.2 Attitude towards green consumption and green consumption intention***

According to the theory of reasoned action, “behavior is a function of prominent information or beliefs related to the behavior” (Ajzen and Madden, 1986). Beliefs combine behavioral beliefs and normative beliefs. Straughan and Roberts (1999) also found that “people who think their efforts contributing to solving ecological problems, are more actively engaged in environmentally friendly behaviors”. Therefore, it can be concluded that consumers have good attitudes about green goods. This attitude pushes their decision to purchase green ones that have mostly resulted in their assessment.

In this respect, “the more individuals think that their efforts can solve environmental problems, the more likely they are to perform environmentally conscious behaviors in everyday life, shaping the positivity towards ecologically conscious behaviors and developing green consumption intentions” (Kim and Han, 2010). From these researches mentioned above, the following hypothesis is proposed:

*H1: Attitude towards green consumption positively influences green consumption behavior.*

### ***2.3 Behavioral control and green consumption intention***

As stated in the theory of reasoned action of Fishbein and Ajzen (1975), “the intention to carry out a given act is determined by the attitude toward the behavior and subjective norms, and the degree to which the intent is executed under the conscious control of the individual”.

Ajzen (1991) further develops the theory of planned behavior by adding an individual's self-determination and perception (i.e., perceived behavioral control, which distinguishes theory of planned behavior from its predecessor). Behavioral control shows the degree to which an individual thinks the behavior is under their control. Thus, when forecasting variables that affect individual intention and behavior, perceived behavioral control is considered to have a significant influence. "The more attitudes towards the behavior, the more support from subjective rules to participate in the behavior, the more the ability to control the behavior is perceived to the behavior; the more customers intend to perform their behavior" (Fielding *et al.*, 2008, Nguyen and Ha, 2017; Nguyen, 2020). Therefore, it can be proposed that the consumers' behavioral control will affect their purchase intention (Chen and Chang, 2012).

*H2: Behavioral control positively influences green consumption behavior.*

## **2.4 Social influence and green consumption intention**

According to the theory of reasoned action of Fishbein and Ajzen (1975), the "customer intent is a function of two components; one person by nature and the other reflecting social influence can be called subjective norms". The subjective norm is defined as the "social pressure that causes an individual to participate in a particular behavior" (Fishbein and Ajzen, 1975). The influence of society happens when "individuals change their thoughts, feelings, or behavior in response to society or their surroundings" (Turner, 1991). Consumers living in society will be influenced by his/her surrounding community, especially in the case of green consumers. Chen-Yu and Seock's (2002) results showed that "many times, it has been observed that people manipulate or modify their thoughts and actions to fit in with other groups or societies".

From the theory of reasoned action (Fishbein and Ajzen, 1975), subjective norms can be formed by perceiving common beliefs from people or social factors that influence consumers (acquaintances such as family and friends, the government, and the media). The degree to which the traditional belief factors are subjective to the buying trend of consumers depends on (i) the level of support/opposition to consumer purchases, and (ii) the motive of consumers following the wishes of influential. The extent to which people are involved in consumer intention and what motivates consumers to follow relevant people are two fundamental factors for the subjective evaluation benchmark. The stronger the level of intimacy with the people involved, the greater the influence on their buying decision. The greater the confidence of consumers in the relevant people, the greater their buying intention will be.

Social influence can be categorized into different components through cultural and peer pressure and socialization, media, and other organizations (Moschis and Churchill, 1978). Meanwhile, governmental influence shows the degree to which a person's thoughts and behaviors are subjective to the intervention of the government. In some countries, the government might be expected to leave consumer choices under the markets' power. However, evidence suggests that government intervention is crucial for designing and shaping the context within which consumers act (Wolff and Schönherr, 2011). About the relationship between social influence and green purchasing intention, Caruana (2007) suggests that "green buying is an expression of consumers' social norms as well as their values and beliefs".

Furthermore, research has already shown “peer influence is the most important determinant in predicting green behaviors among youth in Hong Kong” (Lee, 2010). From these results, it is suggested that normative social influence can positively affect the green consumption intention of consumers. Thus, the hypothesis H3 is proposed as follows:

*H3: Social influence positively influences green consumption intention.*

### **2.5 Environmental concern and consumers’ green consumption intention**

Over the last twenty years, environmental concern has continued to grow. The definition of environmental concern varies from an individual since its meaning is a broad term describing the variety of behaviors to reduce the harmful influence on the natural environment.

Several researchers have endeavored to classify consumers based on their environmental beliefs and attitudes. Environment concern was first defined in 1972 and is seen as “individual showing their concern about environment”. According to Jiménez-Sánchez and Lafuente (2010), there is a “the multidimensional definition and behavioral orientation of concern about the environment, in addition to considering different types of environmental behaviors, also incorporates other psychological factors or constructs that are relevant to them: beliefs, values, attitudes, knowledge and other factors”.

Many researchers see environmental concern as a general attitude (Bamberg, 2003) which proposes the attitudes according to specific situations. Researches from Samarasinghe (2012) and Pandey (2012) suggest environmental concern as a factor that has a positive influence on consumer’s intention to buy a green product. This can be concluded that environmental concern has positively impacted purchase intention (Ariffin *et al.*, 2016; Chi, 2021a). Therefore, it is logical to assume that those who have the intention to buy green products will have to be concerned and conscious about the environment. Having the interest, consumers will have a noticeable change from behavioral intention to consumption intention for the sake of the environment. The following hypothesis is suggested:

*H4: Environmental concern significantly influences the intention towards green products.*

### **2.6 Knowledge towards green products and green consumption intention**

“Consumer knowledge of green products is a key role in driving green consumers’ buying behavior” (Asha and Rathiha, 2017). The awareness of green products is one’s understanding of interrelated factors, including models, features, distribution channels, etc. Consumers who are aware of green products can distinguish green products from other traditional non-green products; as well as acknowledge green products as additional useful features of an environmentally friendly product environment. They can locate reliable shops and stores where they supply green products. If one needs to use green products, one should be aware of the ways to identify green attributes that decide whether a product is green or not. The consumer should be aware of the features of green products (Asha and Rathiha, 2017).

Businesses use many methods to connect with their green customers who want to buy more environmentally friendly goods or products. For traditional consumers who want to

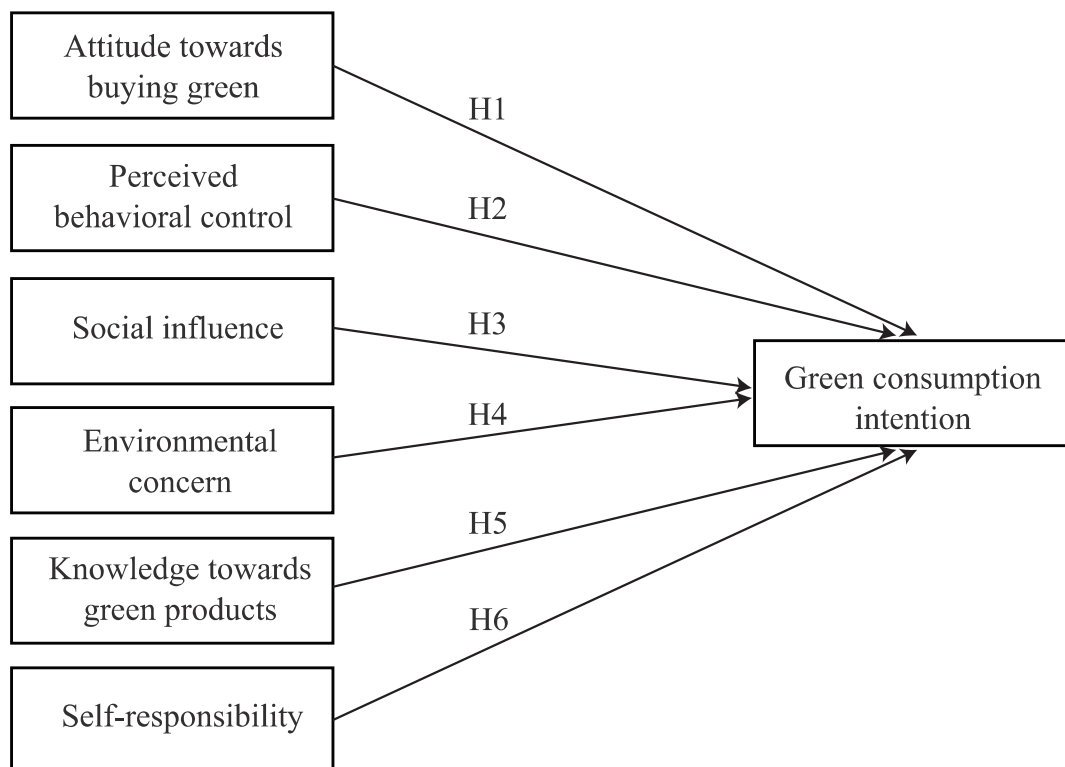
protect the environment, companies will use different methods and tools to promote eco-friendly products by offering different programs, such as discounts and coupons. Consumers, therefore, can gain more benefits and create a bigger market share. Consumers always believe that the value of personal benefits and importance to the products they receive is the protection of the environment by minimizing pollution. Hessami and Yousefi (2013) also shows that knowledge about green products positively affects consumers' consumption intention.

*H5: Knowledge about green products significantly influences green consumption intention.*

### **2.7 Self-responsibility and consumers' green consumption intention**

Behavioral intention is defined as “internal, self-controlling, self-regulating, and self-disciplined behaviors which are initiated by moral judgment and responsibility” (Eckhardt *et al.*, 2010). Consumers not only participate in the values of behavior but also decide to give a choice about their choosing decision. The study of Michael *et al.* (2015) regarding consumer responsibility for sustainable consumption suggests that “consumers' responsibility can be a better determinant of persistent consumption intention and behavior” and that “sustainable attitude and a sense of responsibility towards sustainable consumption have a positive impact on behaviors”. Yu *et al.* (2017) also show the relationship between self-responsibility and the increase in green product purchasing intention. Self-responsibility has a relationship with intentions to purchase green products. Accordingly, the following hypothesis is developed:

*H6: Self-responsibility significantly influences green consumption intention.*



**Figure 1.** The authors' proposed framework

**Source:** Suggested by the authors

### 3. Methodology

Based on the literature review about green consumption and the previous studies, the authors compiled a set of questions to collect data for analysis. The questionnaire is divided into 6 sections. The first section measures consumers' attitudes towards green products, which consist of 4 questions. The second section measures consumers' behavioral control, which consists of 4 questions. The third section measures the extent to which consumers are affected by social influence. The fourth part includes the consumers' environmental concern, which has 3 questions. The fifth part measures consumers' knowledge of green products, which have 4 items. The last section part shows the consumers' environmental self-responsibility.

The scales used to analyze the factors are the scales that were used in previous studies. The authors compiled the observed factors and modified them for more compatibility with the Vietnam context. The measuring scale is the Likert scale with 1 representing "totally disagree" and 5 representing "totally agree". More details about the scales are presented in the table below:

**Table 1.** Questionnaires items

Scales	Observed variables	Sources	
Attitude towards buying green products (AT)	AT1	I really like the idea of buying green products	Kim and Han (2010); Ajzen (1991)
	AT2	I find the idea of buying green products really wise	
	AT3	I find the idea of buying green products really favorable	
	AT4	I find the idea of buying green products really admirable	
Perceived behavioral control (BC)	BC1	I find it easy to perform green consumption	Ajzen (1991)
	BC2	I can buy green products if I want to	
	BC3	I feel I have enough resources (time, money, etc) to perform green consumption	
	BC4	I have time to research and consider buying green products as an alternative to traditional products	
Social influence (SI)	SI1	All of the people important to me use green products	Ajzen (1985)
	SI2	All of the people important to me advise me to use green products	
	SI3	The media (radio, newspaper, TV, etc) provides much information regarding green products	
	SI4	The government is recommending people to use green products	
Environmental concern (EC)	EC1	Humans are destroying the environment	Nguyen et al. (2019); Chi (2021a)
	EC2	I'm worry about the pollution of the environment	
	EC3	It is complicated when I think about the balance of the environment	

**Table 1.** Questionnaires items (*continued*)

Scales	Observed variables	Sources	
Knowledge about green products (KL)	KL1	I can distinguish green products from normal traditional products	Hessami and Yousefi (2013)
	KL2	I know reliable distributors of green products	
	KL3	I am confident I have enough knowledge and awareness about green products	
Self-responsibility (SR)	SR1	I am happy to use green products for supporting the natural environment.	Yadav and Pathak (2017)
	SR2	Individuals make any efforts to prevent the environment	
	SR3	I consider the environmental issue when making a purchase	
	SR4	When I use green products, I think it will benefit myself and the community	
Green consumption intention (IN)	IN1	Soon, I am willing to buy green products for myself and my family	Yadav and Pathak (2017)
	IN2	I intend to use green products	
	IN3	I intend to make an effort to buy green goods	

**Source:** The authors' compilation

Previous studies show that many factors are affecting the green consumption intention of consumers. However, in different contexts and cultures as well as research objects, not all factors can prove their role and suitability; some even produce contradictory results in dissimilar research. Thus, the pilot study will examine the appropriateness of elements in the conceptual model and formulate a well-suited questionnaire in terms of Vietnam conditions and language. This preliminary research is carried out by having 10 lecturers at Foreign Trade University look for questionnaires.

According to Tabachnick (2013), "the minimum sample size is employed by the formula  $n = 50 + 8 * m$  ( $m$  is the number of independent constructs) in conducting multivariate regression analysis". In this study, the minimum sample size is 98 observed samples. However, the sample size for the survey is determined at 250 observations. Thus, the sampling method is convenient.

Regarding the number of samples, to achieve a minimum of 250 observations, the authors set a target for the survey to be 350. The survey was conducted for three months (June 2020 - August 2020) at two big cities (Hanoi and Quang Ninh). Data were collected by directly approaching responders at supermarkets and shopping malls. Regarding the survey results, after surveying 350 people directly, the results obtained 295 valid responses. Therefore, the response rate is 84.28%.



#### 4. Results and discussion

Concerning demographic information, the respondents are from 16 to over 60 years. However, most of them are young consumers (77% of respondents age 16 to 40 years) and are females (64%). About 81% of respondents have a university education or higher. The exploratory factor analysis (EFA) was employed to assess reliabilities and validities, according to Podsakoff *et al.* (2003) and Chi (2021b).

**Table 2.** Results of EFA

Construct		Factor loading	Cronbach's Alpha
Attitude towards buying green products (AT)	AT1	0.846	0.815
	AT2	0.812	
	AT3	0.772	
	AT4	0.773	
Perceived behavioral control (BC)	BC1	0.822	0.784
	BC2	0.759	
	BC3	0.734	
	BC4	0.723	
Social influence (SI)	SI1	0.887	0.779
	SI2	0.912	
	SI3	0.679	
	SI4	0.743	
Environmental concern (EC)	EC1	0.778	0.751
	EC2	0.738	
	EC3	0.711	
Knowledge about green products (KL)	KL1	0.738	0.812
	KL2	0.724	
	KL3	0.765	
Self-responsibility (SR)	SR1	0.762	0.625
	SR2	0.865	
	SR3	0.786	
	SR4	0.794	
Green consumption intention (IN)	IN1	0.901	0.776
	IN2	0.776	
	IN3	0.765	

**Source:** The authors' calculation

The "Pearson-product moment Correlation coefficient" is used to measure the linear relationship between proposed constructs. From Table 3 below, it can be seen that all observed factors can significantly and positively affect green consumption.

**Table 3.** Correlations matrix

	IN	AT	BC	KL	SN	EC
IN	1					
	295					
AT	0.397**	1				
	0.000					
	295	295				
BC	0.520**	0.364**	1			
	0.000	0.000				
	295	295	295			
KL	0.332**	0.268**	0.337**	1		
	0.000	0.000	0.000			
	295	295	295	295		
SN	0.343**	0.076	0.333**	0.127*	1	
	0.000	0.192	0.000	0.029		
	295	295	295	295	295	
EC	0.148*	0.357**	0.139*	0.101	0.015	1
	0.011	0.000	0.017	0.083	0.804	
	295	295	295	295	295	295

**Source:** The authors' calculation

Having Kaiser-Meyer-Olkin measure of sampling adequacy between 0.5 and 1 is a requirement before doing Exploratory factor analysis as the sample is proven to be adequate for factor analysis. Furthermore, it is required that the significance of Barlett's Test of Sphericity being less than 0.5 to accept that there may be a statistically significant interrelationship between variables. Therefore, the authors' significance of 0.00 satisfies the requirements.

Six of the extracted factors have a Total Initial Eigenvalues greater than 1, with a cumulative percentage of variance at 66.017%, satisfying the requirement that this value must be greater than 50%. In short, these six extracted factors can explain 66.017% of the variability of the variables. After using factor loading of  $\geq 0.5$  and the Principal Components extraction method, the results were shown in Table 4 below. According to the results in the table, the observed variable SR 2 was disqualified and therefore removed from the research model. On the other hand, the results from the first analysis suggested that observed variables SR1 and SR3 should be combined into the factor AT.

After extracting the disqualified observed factors SR2 and rerun Bartlett's test in SPSS, the results were shown in the tables below. The results of the factor analysis show that the total variance extracted is equal to 65.277% ( $> 50\%$ ), KMO  $> 0.5$ , and Sig.  $< 0.05$  so EFA analysis

is appropriate. The analytical results show that after eliminating observed variables that do not meet the requirements, the initial 6 factors with 26 observed variables were grouped into 5 factors with 23 factors.

**Table 4.** Test final analysis

<b>KMO and Barlett's Test</b>							
Kaiser - Meyer - Olkin Measure of Sampling Adequacy						0.831	
Barlett's Test of Sphericity						"Approx. Chi-Square"	2767.905
						Df	253
						Sig.	0.00
<b>Pattern matrix final analysis</b>							
	<b>Factors</b>						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
AT2	0.793						
AT1	0.781						
AT3	0.734						
AT4	0.733						
SR1	0.584						
SR3	0.579						
BC3		0.755					
BC2		0.699					
BC4		0.697					
BC1		0.685					
SI3			0.824				
SI4			0.783				
SI1			0.685				
SI2			0.684				
KL3				0.851			
KL1				0.836			
KL2				0.789			
EC1					0.820		
EC3					0.799		
EC2					0.779		
IN2						0.761	
IN3						0.759	
IN1						0.745	

**Source:** The authors' calculation

After conducting an exploratory factor analysis and preliminary evaluation of the reliability of the scale, the authors made amendments to the proposed factors in the hypothesis as below:

“Attitude towards buying green products-AT” includes 5 observed variables AT1, AT2, AT3, AT4, SR1, SR3. The attitude towards green products now not only reflects the mere interest of young green products but also shows what they feel when using the products, which is to help protect the environment. Adding more variables to the factor helps it express more comprehension and dimensions of the attitude of consumers towards green products.

“Behavioral control-BC” includes 4 observed variables BC1, BC2, BC2, BC4 which show the extent to which consumers feel comfortable and easy to perform the green consumption behaviors.

“Knowledge about green products-KL” comprises of 3 observed variables KL1, KL2, KL3, which indicate consumers’ knowledge about green products and green consumption.

“Social influence-SI” consists of 4 observe variables SI1, SI2, SI3, SI4. This reflects the degree to which young consumers change or alter their purchasing decision in response to the environment around including acquaintances, governmental policies, and the media.

The last factor, “Environmental concern-EC”, has three observed variables EC1, EC2, EC3 which show how consumers are conscious about environmental problems.

The regression model is employed to portray the proposed hypotheses using the method Enter. After analyzing Pearson correlation, five independent factors (AT, BC, SI, KL, and EC) correlate with the dependent factor (IN).

**Table 5.** Results of the final regression analysis

Model Summary		ANOVA <sup>a</sup>		Coefficients <sup>a</sup>			
R <sup>2</sup>	Adj. R <sup>2</sup>	Sig.	F	Model	Unstandardized Coefficients B	Standardized Coefficients Beta	Sig.
				(Constant)	0.383		0.759
				AT	0.370	0.067	0.000
0.393	0.385	0.000 <sup>b</sup>	46.922	BC	0.295	0.054	0.000
				SI	0.193	0.047	0.000
				KL	0.110	0.044	0.014

**Source:** The authors’ calculation

After the second regression analysis is run, all four variables of AT, BC, SI, and KL are qualified as explanatory factors for the change of green consumption intention of consumers (IN). The adjusted R<sup>2</sup> coefficient showed a value of 0.385 which means that in 100% of the variation of the dependent variable, the satisfaction is 38.5%.

Also, when looking at the “Sig.” column, the value is 0.000, which specifies the statistical significance of the regression model that was analyzed. P is lower than 0.05, indicating that this proposed framework significantly predicts the proposed variable. From all the above tests, the proposed model chosen was suitable. The authors propose the following model:

$$\text{Green consumption intention} = 0.383 + 0.370*AT + 0.295*BC + 0.193*SI + 0.110*KL$$

In conclusion, customers’ attitude towards buying green products has the highest impact (0.370) on green consumption intention in Vietnam, followed by perceived behavioral control (0.295), social influence (0.193), and knowledge towards green products (0.110).

The study examined the factors that affect intention for purchasing green products based on the theory of planned behavior. Factors put into analysis was the attitude towards buying green products, behavioral control, social influence, environmental concern, and knowledge of green products. The results revealed that consumers’ attitudes towards buying green products, behavioral control, social influence, and knowledge affect consumption intention, except for environmental concerns.

In the research, attitude towards green products is revealed to be the strongest indicator of forming green consumption intention, which is in line with Maichum *et al.* (2017). Consumers having environmental concerns are expected to have a favorable attitude towards green products. The research results also show that purchase intention is influenced by a positive attitude towards buying green products, especially when consumers are aware of environmental protection.

The research findings showed that behavioral control is revealed to be the critical predictor of purchasing intention. The result is in line with the research of Verma and Chandra (2018), which investigated visit intention to the green hotels with the sample size of 295 undergraduates and postgraduates. Therefore, it can be concluded that perceived behavioral control is important for predicting green consumption intention. Regarding literature, behavioral control refers to a person’s beliefs that are considered within their control. It reflects the degree of difficulty and barriers for people when they think to be action. In many ways, when people can control their actual behavior, they will be expected to fulfill their intentions.

The current research also showed that social influence is proven to impact the customers’ intention to buy green products in Vietnam. These findings are similar to the results of Adawiyah (2017). Some recent studies conducted in collectivist cultures also reported that social influence greatly affects green purchase intention and behavior (Chan and Lau, 2000; Bagozzi *et al.*, 2000). Therefore, it can be suggested that social influence plays a significant role in customers’ purchasing decisions. As Vietnamese society bears characteristics of a collectivist society, people are strongly influenced by relationships around them (i.e., family, friends, colleagues, etc.). Besides, the Vietnamese government has made several attempts to promote green products through policies and propaganda, which consequently affect consumers’ intention to buy green products. The media also play an important part in promoting green consumption intention when the concept of green marketing has become more popular between companies and corporations.

Knowledge of green products is considered as one of the determining factors of consumers' green consumption, which is in accordance with the research of De Koning *et al.* (2015). However, regarding environmental concerns, it has no impact on green consumption intention. This finding is in contradiction with previous studies such as Maichum *et al.* (2017).

## 5. Conclusion

Regarding the significance of promoting green purchasing intention among consumers in an emerging market such as Vietnam, the current paper provides an important understanding of consumers' green consumption. Based on the research results and the current context of Vietnam, the authors propose some recommendations and practical implications for the government, policymakers, and marketers to increase green consumption frequencies and efficiency.

The research presents some contributions theoretically and practically. Firstly, this study provides meaningful insights into the green marketing literature on segmenting customers. With more promising buying powers, Vietnamese consumers of the 21st century also possess much more consciousness and knowledge about health and the environment as well as related contextual concerns and purchasing barriers, which requires the markets to come up with reasonable marketing strategies. Moreover, according to the study's findings, environmental concern does not directly lead to green consumption intention, which contradicts some previous studies. This can be used as a preliminary basis by other studies on the market sector for further understanding green consumption in the Vietnamese context.

In practice, the results also give practical recommendations to marketers and governments, and institutions in increasing green consumption by removing the barriers to green purchasing, stimulating favorable attitudes, utilizing social influence, and increasing knowledge about the field. Consumers will be the key consumption force soon, and thereby it is critical to learn the way they behave according to the change of social contexts and environmental contexts. Especially, this paper contributes to ecotourism destinations by encouraging green consumption intention (i.e., eco-restaurant, organic foods) to prevent the natural environment and build a nature destination image.

Even though the research has successfully developed a framework to study factors that affect the green consumption of consumers, it is still restricted by some limitations. Firstly, the study uses the method of convenience sampling within a limit of time and scope, thereby the results might not represent the whole population. Some other studies that inspect the influence of prices and the willingness to pay factors are researches from Biswas (2015) or Zhu *et al.* (2013). Future research has to expand with a larger number of consumers from various majors and explore the gap between intention and green consumption behavior and the factors affecting that gap for more practical understanding and practices.

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## References

- Adawiyah, W.R. (2017), "Determinants of green marketing quality practices among small medium enterprise (SMEs)", *EKUITAS (Jurnal Ekonomi dan Keuangan)*, Vol. 1 No. 2, pp. 240 - 258.
- Ajzen, I. (1985), "From intention to actions: a theory of planned behavior", in Kuhl, J. and Beckman, J. (Eds), *Action control: from cognition to behavior*, New York: Springer-Verlag, pp. 11 - 39.
- Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50, No. 2, pp. 179 - 211.
- Ajzen, I. and Madden, T.J. (1986), "Prediction of goal-directed behavior: attitudes, intentions, and perceived behavioral control", *Journal of Experimental Social Psychology*, Vol. 22 No. 5, pp. 453 - 474.
- Ariffin, S., Yusof, J., Putit, L. and Shah, M. (2016), "Factors influencing perceived quality and repurchase intention towards green products", *Procedia Economics and Finance*, Vol. 37 No. 16, pp. 391 - 396.
- Asha, P. and Rathihha, R. (2017), "Consumer awareness towards green products", *International Journal of Management*, Vol. 8 No. 5, pp. 8 - 14.
- Bagozzi, R., Shuzo Abe, N.W. and Bergami, M. (2000), "Cultural and situational contingencies and the theory of reasoned action: application to fast food restaurant consumption", *Journal of Consumer Psychology*, Vol. 9 No. 2, pp. 97 - 106.
- Bamberg, S. (2003), "How does environmental concern influence specific environmentally related behaviors? A new answer to an old question", *Journal of Environmental Psychology*, Vol. 23 No. 1, pp. 21 - 32.
- Biswas, A. and Roy, M. (2015), "Leveraging factors for sustained green consumption behavior based on consumption value perceptions: testing the structural model", *Journal of Cleaner Production*, Vol. 95 No. 5, pp. 332 - 340.
- Caruana, R. (2007), "A sociological perspective of consumption morality", *Journal of Consumer Behavior*, Vol. 6 No. 5, pp. 287 - 304.
- Chan, R. and Lau, L. (2000.), "Antecedents of green purchases: a survey in China", *Journal of Consumer Marketing*, Vol. 20 No. 49, pp. 338 - 357.
- Chen, Y.S. and Chang, C.H. (2012), "Enhance green purchase intentions: the roles of green perceived value, green perceived risk, and green trust", *Management Decision*, Vol 50 No.3, pp. 502 - 520.
- Chen-Yu, J.H. and Seock, Y.K. (2002), "Adolescents' clothing purchase motivations, information sources, and store selection criteria: a comparison of male/female and impulse/non-impulse shoppers", *Family and Consumer Sciences Research Journal*, Vol. 31 No. 1, pp. 50 - 77.
- Chi, N.T.K. (2021a), "Understanding the effects of eco-label, eco-brand, and social media on green consumption intention in ecotourism destinations", *Journal of Cleaner Production*, Vol. 321 No. 4, pp. 1 - 21.
- Chi, N.T.K. (2021b), "Innovation capability: the impact of e-CRM and COVID-19 risk perception", *Technology in Society*, Vol. 67 No. 4, pp. 101- 125.
- Dangelico, R.M. and Pontrandolfo, P. (2010), "From green product definitions and classifications to the green option matrix", *Journal of Cleaner Production*, Vol. 18 No. 16, pp. 1608 - 1628.

- De Koning, J.I.J.C., Crul, M.R.M., Wever, R. and Brezet, J.C. (2015), "Sustainable consumption in Vietnam: an explorative study among the urban middle class: sustainable consumption in Vietnam", *International Journal of Consumer Studies*, Vol. 39 No. 6, pp. 608 - 618.
- Diamantopoulos, A., Schlegelmilch, B.B., Sinkovics, R.R. and Bohlen, G.M. (2003), "Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation", *Journal of Business Research*, Vol. 56 No. 6, pp. 465 - 480.
- Eckhardt, G.M., Belk, R. and Devinney, T.M. (2010), "Why don't consumers consume ethically?", *Journal of Consumer Behaviour*, Vol. 9 No. 6, pp. 426 - 436.
- Fielding, K.S., McDonald, R. and Louis, W.R. (2008), "Theory of planned behavior, identity and intentions to engage in environmental activism", *Journal of Environmental Psychology*, Vol. 28 No. 4, pp. 318 - 326.
- Fishbein, M.A. and Ajzen, I. (1975), *Belief, attitude, intention, and behavior: an introduction to theory and research*, Addison-Wesley Publishing Company.
- Hessami, H.Z. and Yousefi, P. (2013), "Investigation of major factors influencing green purchasing behavior: interactive approach", *European Online Journal of Natural and Social Sciences*, Vol. 4 No. 2, pp. 584 - 596.
- Jiménez-Sánchez, M. and Lafuente, R. (2010), "Defining and measuring environmental concern", *Revisit International de Sociologic*, Vol. 68 No. 3, pp. 731 - 755.
- Kim, Y. and Han, H. (2010), "Intention to pay conventional-hotel prices at a green hotel - A modification of the theory of planned behavior", *Journal of Sustainable Tourism*, Vol. 18 No. 8, pp. 997 - 1014.
- Lee, K. (2010), "The green purchase behavior of Hong Kong young consumers: the role of peer influence, local environmental involvement, and concrete environmental knowledge", *Journal of International Consumer Marketing*, Vol. 23 No. 1, pp. 21 - 44.
- Leonidou, C.N., Katsikeas, C.S. And Morgan, N.A. (2013), "'Greening' the marketing mix: do firms do it and does it pay off?", *Journal of the Academy of Marketing Science*, Vol. 41 No. 2, pp. 151 - 170.
- Lin, P.C. and Huang, Y.H. (2012), "The influence factors on choice behavior regarding green products based on the theory of consumption values", *Journal of Cleaner production*, Vol. 22 No. 1, pp. 11 - 18.
- Liu, Y., Segev, S. and Villar, M.E. (2017), "Comparing two mechanisms for green consumption: cognitive-affect behavior vs theory of reasoned action", *Journal of Consumer Marketing*, Vol 34 No. 4, pp. 442 - 454.
- Maichum, K., Parichatnon, S. and Peng, K.C. (2017), "Factors affecting purchase intention towards green products: a case study of young consumers in Thailand", *International Journal of Social Science and Humanity*, Vol. 7 No. 5, pp. 306 - 356.
- McKechnie, J., Zhang, Y., Ogino, A., Saville, B., Sleep, S., Turner, M. and MacLean, H.L. (2011), "Impacts of co-location, co-production, and process energy source on life cycle energy use and greenhouse gas emissions of lignocellulose ethanol", *Biofuels, Bioproducts, and Biorefining*, Vol. 5 No. 3, pp. 279 - 292.
- Michael, L., Marcus, P. and Tim, H. (2015), "Exploring consumer responsibility for sustainable consumption", *Journal of Marketing Management*, Vol. 31 No. 13, pp. 1 - 23.



- Moschis, G.P. and Churchill, G.A. (1978), "Consumer socialization: a theoretical and empirical analysis", *Journal of Marketing Research*, Vol. 15 No. 4, pp. 599 - 609.
- Nguyen, H.S. and Ha, M.D. (2017), "Family size, increasing block tariff and economies of scale of household electricity consumption in Vietnam from 2010 to 2014", *External Economics Review*, Vol. 2017 No. 101, pp. 1 - 11.
- Nguyen, H.V., Nguyen, C.H. and Hoang, T.T.B. (2019), "Green consumption: closing the intention-behavior", *Sustainable Development*, Vol. 27 No. 1, pp. 118 - 129.
- Nguyen, T.T.H. (2020), "The effect of brand image, perceived quality and brand experience on customer loyalty: an empirical investigation in the telecommunication industry in Vietnam", *Journal of International Economics and Management*, Vol. 20 No. 3, pp. 60 - 74.
- OECD. (2009), "Sustainable manufacturing and eco innovation: towards a green economy", *Policy Brief*, pp. 1 - 8.
- Pandey, J. (2012), "Factor influencing green purchasing behavior", *International Journal of Marketing Management*, Vol. 2 No. 2, pp. 68 - 85.
- Peloza, J., White, K. and Shang, J. (2013), "Good and guilt-free: the role of self-accountability in influencing preferences for products with ethical attributes", *Journal of Marketing*, Vol. 77 No. 1, pp. 104 - 119.
- Pepper, M., Jackson, T. and Uzzell, D. (2009), "An examination of the values that motivate socially conscious and frugal consumer behaviors", *International Journal of Consumer Studies*, Vol. 33 No. 2, pp. 126 - 136.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879 - 892.
- Samarasinghe, R. (2012), "The influence of cultural values and environmental attitudes on green consumer behavior", *International Journal of Behavioral Science*, Vol. 7 No.1, pp. 83 - 98.
- Straughan, R.D. and Roberts, J.A. (1999), "Environmental segmentation alternatives: a look at green consumer behavior in the new millennium", *Journal of Consumer Marketing*, Vol. 16 No. 6, pp. 558 - 575.
- Tabachnick, W.J. (2013), "Nature, nurture and evolution of intra-species variation in mosquito arbovirus transmission competence", *International Journal of Environmental Research and Public Health*, Vol. 10 No. 1, pp. 249 - 277.
- Turner, J.C. (1991), *Social influence*, Brooks/Cole Publishing Company.
- UNEP. (2009), "Sustainable consumption and production policies", *UN Environment*, Available at <https://www.unenvironment.org> (Accessed 15 May, 2020).
- Verma, V.K. and Chandra, B. (2018), "An application of theory of planned behavior to predict young Indian consumers' green hotel visit intention", *Journal of Cleaner Production*, Vol. 172, pp. 1152 - 1162.
- Wolff, F. and Schönherr, N. (2011), "The impact evaluation of sustainable consumption policy instruments", *Journal of Consumer Policy*, Vol. 34 No. 1, pp. 43 - 66.
- Wu, S.I. and Chen, Y.J. (2014), "The impact of green marketing and perceived innovation on purchase intention for green products", *International Journal of Marketing Studies*, Vol. 6 No. 5, pp. 81 - 123.

- Yadav, R. and Pathak, G.S. (2017), "Determinants of consumers' green purchase behavior in a developing nation: applying and extending the theory of planned behavior", *Ecological Economics*, Vol. 134, pp. 114 - 122.
- Yu, T.Y., Yu, T.K. and Chao, C.M. (2017), "Understanding Taiwanese undergraduate students' pro-environmental behavioral intention towards green products in the fight against climate change", *Journal of Cleaner Production*, Vol. 161 No. 10, pp. 390 - 402.
- Zhu, Q., Li, Y., Geng, Y. and Qi, Y. (2013), "Green food consumption intention, behaviors, and influencing factors among Chinese consumers", *Food Quality and Preference*, Vol. 28 No. 1, pp. 279 - 286.