



Critical factors influencing green consumer behavior: A case study in Vietnam

 Lu Phi Nga¹

 Phan Thanh Tam²⁺

^{1,2}Faculty of Postgraduate Studies, Lac Hong University, Vietnam.

¹Email: phinga@lhu.edu.vn

²Email: tampt@lhu.edu.vn



(+ Corresponding author)

ABSTRACT

Article History

Received: 4 September 2023

Revised: 19 October 2023

Accepted: 30 November 2023

Published: 11 January 2024

Keywords

Behavior
Consumer
Green
Marketing
Vietnam.

JEL Classification:

A14; D12; P46; Q58.

Green shopping is becoming increasingly popular as a way of saving the environment and combating climate change in Vietnam and many other nations across the world. In addition, the agriculture sector, along with other industries such as manufacturing, services, commerce, and environmentally conscious consumption, is being examined in the global shift towards sustainable green consumption. This is in line with attempts to adopt eco-friendly solutions and mitigate climate change. As a result, the study investigated the critical elements influencing individual consumers' green consumer behavior in five Vietnamese provinces and gave management recommendations for improving green consumer behavior. The article technique utilized structural equation modeling (SEM), the statistical package for the social sciences (SPSS), and Amos. In addition, data was collected from 700 green product buyers. The findings of the article identified five essential factors influencing green consumer behavior: green products, the price of green products, green places, green promotion, and green policy. The article provides valuable insights for managers to develop an effective green marketing plan for businesses that sell organic food products. The goal is to encourage customers to embrace environmental consciousness and promote sustainable development. Additionally, the article emphasizes the importance of conveying positive information about green businesses. The value of this study raises awareness of the fact that green consumption is a comprehensive and responsible management process that satisfies, identifies, meets, and predicts the needs of producers, sellers, and consumers while preserving the natural health of the environment and not endangering human health.

Contribution/Originality: This study's contributions aim to shift priorities towards green production and green consumption models and practices. Green manufacturing reduces pollution and greenhouse gas emissions while aiming for long-term growth and providing consumers and businesses with multiple actual economic and intangible benefits.

1. INTRODUCTION

The phenomenon of green consumerism is currently seeing significant growth and has become an inevitable trend in numerous nations worldwide. It initially emerged in rich countries and has swiftly extended its reach to developing nations with a middle-income level or above. This material is seen as a realistic and necessary application of sustainable consumerism in order to lessen society's environmental effects. There are several indications of consumption patterns in Vietnam; many green products and services have begun to be produced in Vietnam, but consumer adoption remains contentious. Furthermore, sustainable development is a vital goal for all

businesses. Green marketing has progressively become the core strategy of many businesses in order to cope with climate change and keep up with the trend of green living (Kumar & Ghodeswar, 2015; Nittala & Moturu, 2021).

Green marketing has progressed not only from traditional marketing, such as green product marketing, but also from brand marketing to a higher level. Furthermore, the basic basis for green marketing includes ethical awareness and some philosophical ideas. The most apparent representation of raising the professional level of green marketing for 'product brands' via particular advantages or the spirit and business ethics of goodwill' towards the company's brands is the application of brand values with the green value element (Ahmed et al., 2020). The role of the brand is also successfully represented through image brand' or messenger solutions. The new aims and trends in marketing today involve propagating green ideals and recognizing green values in society. Green marketing is a never-ending process that requires constant input from suppliers, government restrictions, and the general public. This is necessary so that green marketing methods may be used in the target market and therefore achieve a long-term competitive advantage. Green product policies and plans must be developed and implemented in order to advise and help merchants and consumers make the green shift. As a consequence, the authors investigated key green marketing aspects impacting green consumer behavior in Vietnam in order to discover effective tactics for promoting green consumer behavior in order to achieve long-term green growth.

2. THEORETICAL FRAMEWORK

2.1. Green Consumption Intention (GCI)

Consumer ideas about the chain of consuming behavior are reflected in consumption intention (Ajzen, 1991; Hao et al., 2019). It is defined as a person's motivation in seeing his or her plan/decision to expend effort in completing a certain activity. Because most human acts are voluntary and under the influence of intent, they are predictably predictable. The notion of intention is used in this paper. Behavioral intention denotes a person's willingness to engage in a certain behavior. It is believed to be the behavior's intermediate premise. Thus, green consumption intention refers to the possibility that a customer will prefer to buy a green product/service after considering all elements of the product/service and provider in terms of their ethical principles and standards towards society, the environment, and stakeholders (Ibrahim, Mariapan, Lin, & Bidin, 2021).

2.2. Green Consumption Behavior (GCB)

Green consumption behavior: Based on consumption behavior and the concept of green products, many notions of green consumption behavior have been established (Akehurst, Afonso, & Gonçalves, 2012). In essence, green consumption is a set of behaviors that include purchasing green items and implementing green practices such as conserving, reusing, and recycling, using green packaging, and disposing of garbage. Green consumption is defined as green consumer behavior, an environmental protection habit that involves purchasing environmentally and health-friendly items (Joshi & Rahman, 2015; Sharma, Aswal, & Paul, 2023). Within the scope of this article, the authors believe that green consumption is the habit of purchasing and utilizing ecologically friendly and human health-friendly items, optimizing their use, and avoiding the use of environmentally friendly and disposable products.

2.3. Green Products (PRO)

Green products include home appliances, foodstuffs, cosmetics, and other items made from natural and organic materials or with basic components that are less hazardous to the environment and human health (Adhitiya & Astuti, 2019; Choi & Johnson, 2019). Furthermore, items may have aspects such as ecologically friendly production procedures that do not use hazardous chemicals or those that assist customers in saving energy. As such, a green product is one whose design, production, or strategy makes use of recycled materials and improves environmental impact or lowers hazardous damage to the environment during the course of the product's life cycle. In the midst of

severe environmental degradation and unexpected climate change, green products have a significant influence on green purchasing intentions and actions today. Thus, the authors gave hypotheses H1 and H2 as follows:

H₁: Green products affect green consumption intentions.

H₂: Green products are affecting green consumption behavior.

2.4. The Price of Green Products (PRI)

Consumer willingness to pay is used to establish perceived green product pricing. Customers are now willing to pay extra for environmentally friendly items, with product type and perceived advantages influencing willingness to pay (Ali, Ullah, Akbar, Akhtar, & Zahid, 2019). According to Eze and Ndubisi (2013), consumers are more willing to pay when it is philanthropic or when they believe in the ethical quality of the product, and people who consider themselves to be ethical consumers are more price-sensitive than they are about the honest quality of the product. As a result, the cost of green products, as well as activities connected to environmentally sustainable production and consumption, are receiving increased attention (Chekima, Wafa, Igau, Chekima, & Sondoh, 2016; Huang, Lin, Lai, & Lin, 2014). Thus, the authors gave hypotheses H3 and H4:

H₃: The price of green products affects the green consumption intention.

H₄: The price of green products is affecting green consumption behavior.

2.5. Green Places (PLA)

Green locations (distribution) relate to the process of supplying products and services in an environmentally friendly manner. Green distribution access to shipping routes, the flow of products in the pipeline, the store system, and other such linkages work tirelessly to ensure product availability from point of production to point of consumption. Retailers are increasingly implementing environmental protection measures (Do Paço, Alves, Shiel, & Filho, 2013; Kursan, 2021). They are greening their stores and operations, promoting more ecologically friendly items, introducing initiatives to encourage customers to be more environmentally responsible, and collaborating with channel partners to decrease environmental impact. Thus, the authors gave hypotheses H5 and H6:

H₅: Green places affecting the green consumption intention.

H₆: Green places are affecting green consumption behavior.

2.6. Green Promotion (PROM)

The substance of a green promotion is connected to the message's advertising and the message's reliability. According to Kautish, Paul, and Sharma (2019), most consumers are positive about green advertising, even if the potential of green advertising and brand polishing has not been completely realized. Greenwashing can impair a company's performance. Lee (2017) has shown that green advertising may favorably affect brand and company views. The authors, who researched the influence of green advertising and eco-labeling on consumer purchases, determined that consumers have a good attitude towards green items advertised in print and on television and that positive attitudes towards these products can predict customers' purchase intention. Thus, the authors gave hypotheses H7 and H8:

H₇: Green promotion affects green consumption intention.

H₈: Green Promotion affects green consumption behavior.

2.7. Green Policy (POL)

Green consumption policy is still viewed as a multifaceted study issue that needs to be investigated in current research. Zhu, Li, Geng, and Qi (2013) suggested that with the growth of green marketing, green policy becomes crucial as a tool to differentiate products, as a guarantee for customers, and as a representation of the business's green marketing philosophy. Through green policies, it will bridge the communication gap between products and

people. According to research findings, the ecologically beneficial message of green policies has an impact on consumers. Yu and Lee (2019) noted that green policies may help businesses and consumers achieve certain objectives. Green regulations may boost product sales and image, push producers to explain the environmental effects of their products, make customers more aware of their concerns, and help safeguard the environment. Thus, the authors gave hypotheses H9 and H10:

H₉: Green policy affecting the green consumption intention.

H₁₀: Green policy affecting green consumption behavior.

This study demonstrates a statistical link reflecting the influence of choice on green consumption behavior. Factors changing the relationship between meaning and green consumption behavior may strengthen or weaken the impacts of intention on green behavior (Uddin & Khan, 2016; Wei, Ang, & Jancenelle, 2018). In other words, in a given context, consumption intention has a substantial effect on green consumption behavior, which leads to real green consumption behavior. In contrast, even when one tries to consume green, actual green consumption behavior does not occur. As a result, the authors designated hypothesis H11:

Hypothesis H₁₁: Green consumption intention affects green consumption behavior.

Thus, the proposed paper's research model includes five independent and two dependent variables.

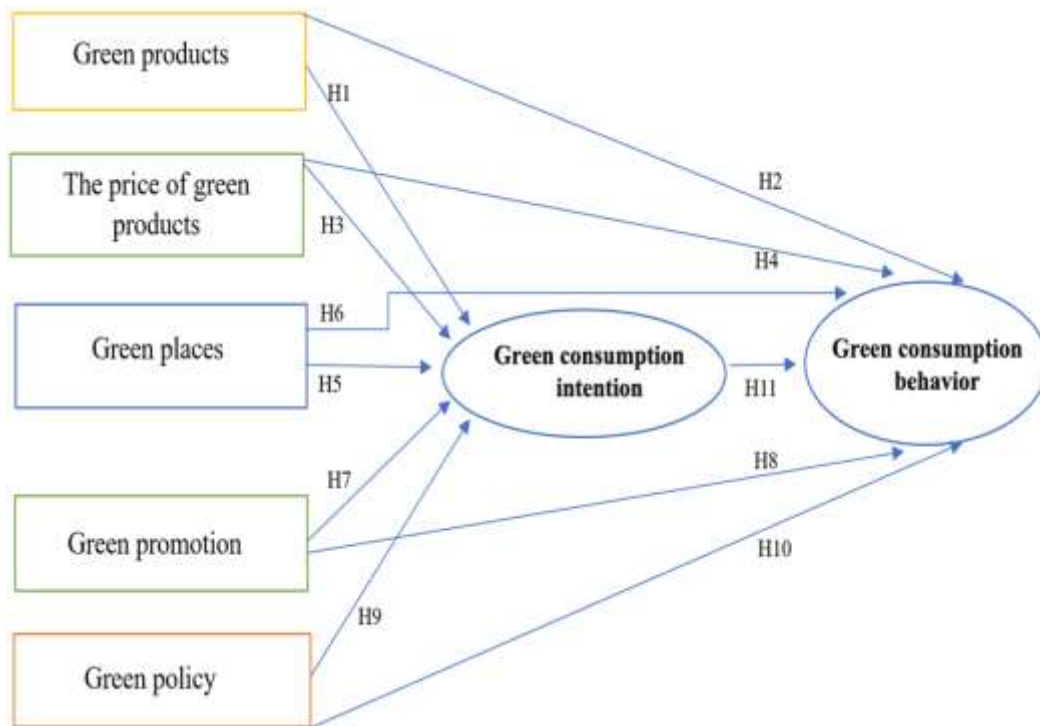


Figure 1. The green marketing affecting the green consumption intention and green consumption behavior.

Figure 1 shows that there are five critical factors in green marketing affecting green consumption intention and green consumption behavior, including (1) Green products (PRO); (2) The price of green products (PRI); (3) Green places (PLA); (4) Green promotion (PROM); and (5) Green policy (POL).

3. RESEARCH METHODOLOGY

The article's research strategy is built on the methodological foundations of dialectical materialism and historical materialism to tackle theoretical and practical concerns stated (Hair, Anderson, Tatham, & Black, 2010). The following actions are taken throughout the research process: constructing a model, testing the model and scale, collecting preliminary data to check the scale's reliability, collecting official data, analyzing factor and testing

the scale's reliability, testing the research model and hypothesis, and finally, the conclusion and management implications.

Interviews with 15 marketing specialists from the city's 15 institutions were conducted using a qualitative research approach. These specialists in Ho Chi Minh City have years of expertise teaching marketing and practicing in significant corporations. This strategy seeks to validate the scales associated with latent variables and learn more about the factors influencing green consumption behavior. In addition to interviewing a focus group of consumers, the qualitative research also involved consultation with 15 consumer sector professionals, such as managers, policymakers, and marketing experts. Vietnamese cities to suggest, comment on, and criticize the topic of the article. The findings of qualitative research are utilized to fine-tune the scale and theoretical models that will be used to develop questions for the study.

Quantitative research approach, survey, and interviews with 700 green product consumers in four provinces and cities: Dong Nai, Ho Chi Minh City, Binh Duong, and Ba Ria-Vung Tau. These are the provinces with the highest number of green product users and supermarkets. To complement secondary data and make analysis and assessment more vivid and real, the paper examines and interviews adult consumers in Vietnam's metropolitan regions, investigating the variables influencing green consumption behavior (Hair et al., 2010).

This method entails creating a questionnaire for the survey and analyzing Cronbach's Alpha utilizing SPSS 20 software to exclude variables with low overall correlation coefficients. For factors, a minimum Cronbach's Alpha coefficient greater than 0.6 is acceptable. The author will also do exploratory factor analysis (EFA) utilizing SPSS.20 software to exclude variables with factor weights less than 0.5 (Factor loading - FL). The other variables (full scale) will be included in the confirmatory factor analysis (CFA) analysis to determine their impact on the factors. The essay then employs the linear structural analysis method (SEM) to evaluate the theoretical model and research hypotheses. Finally, the authors provide their findings and implications for governance (Hair et al., 2010).

Goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), normed fit index (NFI), and so on with values greater than 0.9 are considered excellent fitting models. If these values are equal to 1, we claim the model is perfect (Hair et al., 2010). GFI evaluates the absolute fit of the structural and measurement models to the survey data set (without correcting for degrees of freedom). Adjust the GFI value based on the model's degrees of freedom. The root mean square error of approximation (RMSEA) is a critical indication. It determines the model's level of fit to the population.

Because all 25 observed variables must be included in this investigation, the minimum sample size necessary is $25 \times 5 = 125$ observations. Although the sample size required is just 125 observations, the author opted to generate an initial sample of 700 comments to establish the survey's dependability. The authors were unable to apply this random sample approach that employs the convenience method due to the huge volume of the study, the diversity of categorization criteria, and restricted resources (money, time, accessibility, etc.). Survey time: After four months of the survey, from January 2023 to April 2023, the total number of votes collected was 700. We collected 665 valid votes and put them into processing. After eliminating the unsatisfactory ballots (insufficient information, filling out information that does not ensure objectivity, etc.), the remaining number of votes is 665 to provide the requirements and continue to be used in data analysis.

4. RESEARCH RESULTS AND DISCUSSION

4.1. Difficulties and Challenges in the Green Consumption Trend in Vietnam

Although green consumption has numerous benefits for consumers and the environment, there are still many challenges ahead for green products to totally replace polluting conventional consumer items, notably as follows:

Businesses' sense of responsibility for environmental protection issues is still limited. Many companies have not satisfactorily resolved the contradiction between profit goals and green growth, especially for small and medium enterprises. Besides, although green technology is very developed globally, it is not easy to apply in Vietnam.

Enterprises can transfer advanced and modern technology, but the human factor and capacity level have not kept pace (Nath, Kumar, Agrawal, Gautam, & Sharma, 2013). The investment and high initial cost have dramatically impacted access to green technology. The number of enterprises actively investing in and renovating production models towards modernity still faces many difficulties in mobilizing resources and choosing suitable technologies. Inspecting green goods, clean goods, and goods that meet certification standards for businesses is often not taken seriously. Counterfeit, imitation, and poor-quality goods are still circulating in the market, reducing consumer confidence. There is a lack of policies to support green development; policies towards green consumption development are not synchronized. Policies to promote the production of green products and services have not yet created a strong motivation for businesses. Support policies have not yet attracted enterprises to invest in changing technology chains and have not produced significant changes for enterprises to innovate technology and production processes (Joshi & Rahman, 2017).

The State should have mechanisms and policies to encourage and support enterprises to invest in and develop green product production, revealing many inadequacies. Funding from the State budget to help enterprises invest in technological innovation to produce environmentally friendly goods is still tiny and has a low support level. Regulations and policies to support them often focus on the production stage, not firmly on consumers. Many individuals have modest or moderate incomes, and consumer knowledge of green products is still restricted. The cost of producing a unit of a green product is frequently substantially more than that of comparable commodities; hence, the cost is high and not competitive in the market; the average price of green goods is frequently high. 20-40% more than comparable consumer items. The findings of this investigation are totally compatible with the findings of the author's research (Jaiswal & Kant, 2018). Customer complaints regarding the quality of items that are not as promised by the manufacturer also lead to a loss of trust in green products on the market. Green consumption is becoming increasingly popular throughout the world, and Vietnam is no exception. To compete in the market, green branding is becoming increasingly popular. Many firms have invested in manufacturing to assure green and clean products, creating a green brand connected with sustainable development (He, Cai, Deng, & Li, 2016). According to Nielsen Vietnam study data, businesses with green and clean promises have a pretty high growth rate, around 4% per year.

Consumers, particularly in rural areas, are still not fully aware of the issue of environmental protection when purchasing goods, and their understanding of green consumption is limited (nearly 72% of people have heard of but do not understand environmentally friendly products). Consumption of eco-labeled items is also centered mostly among persons with a high level of education, a solid income, knowledge, and a greater concern for environmental friendliness than other customers or other organizations. In recent years, increased awareness of the impact of consumer behavior on global warming and sustainable development has led to the development of green consumption in Vietnam. With the above importance, the research has assessed the status of green consumption. From there, propose some practical recommendations to promote green consumption, contributing to changing consumer behavior towards sustainable consumption, reasonable use of resources, and environmental protection.

4.2. Regression Model Assumptions Testing

Cronbach's alpha for green marketing elements influencing green consumption intention and behavior is shown in Table 1. Cronbach's alpha is more than 7.0 in all cases, and the average is near 3.0.

With a significance threshold of 0.05, Table 2 reveals six green marketing parameters influencing green consumption intention and behavior. Furthermore, green consumption provides several benefits to investors and the living environment; nevertheless, in a developing nation like Vietnam, many problems and hurdles remain for green products to totally replace polluting conventional consumer items. Green manufacturing and sustainable green consumption models necessitate efforts from manufacturers and suppliers, as well as changes in consumer purchasing behaviors.

Table 1. Testing of Cronbach's alpha for factors in green marketing affecting the green consumption intention and green consumption behavior.

Code	Items	Cronbach's alpha	Mean
Green products (PRO)		0.856	3.392
PRO1	This brand produces eco-friendly products	0.805	3.383
PRO2	This brand strives to improve the design and quality of its products to make them more and more environmentally friendly	0.818	3.505
PRO3	This brand uses low- or no-polluting/Toxic raw materials and fuels for the environment	0.845	3.320
PRO4	This brand conducts waste collection and recycling	0.800	3.362
The price of green products (PRI)		0.917	3.001
PRI1	This brand often costs more for their eco-friendly products	0.871	3.024
PRI2	This brand's organic products cost more than conventional products	0.890	2.983
PRI3	I am willing to pay more for eco-friendly products made by this brand	0.897	2.991
PRI4	I accept the fact that a fraction of the higher price of organic products goes to the environment, which is worth it	0.908	3.006
Green places (PLA)		0.908	3.263
PLA1	I can find these organic products in stores that support green and environmental practices.	0.899	3.281
PLA2	The stores that sell this brand's organic products are usually eco-friendly stores	0.815	3.297
PLA3	The store is always stocked with organic products	0.890	3.212
Green promotion (PROM)		0.940	3.035
PROM1	I have learned about this brand's organic products by many means (Newspapers, Televisions, YouTube, website, Facebook, and consumer community sites to protect the environment)	0.923	2.994
PROM2	This brand provides a lot of accurate information about their organic products in their media	0.935	3.015
PROM3	This brand offers special promotions to people who buy their organic products	0.925	3.072
PROM4	This brand uses media that do not pollute the environment	0.903	3.061
Green policy (POL)		0.934	3.015
POL1	The State needs to build and perfect the legal framework	0.914	2.966
POL2	Policies on green consumption to ensure consistency, synchronization, and transparency	0.919	2.997
POL3	Introduce policies to encourage the production of green products and services	0.916	3.058
POL4	Develop industries and fields that apply clean technology	0.909	3.039
Green consumption intention (GCI)		0.925	3.286
GCI1	I plan to buy green products	0.906	3.296
GCI2	I am willing to pay more for green products	0.860	3.323
GCI3	I want to buy green products to reduce umbrella environmental contamination	0.909	3.240
Green consumption behavior (GCB)		0.833	2.373
GCB1	I always buy safe/Sourced food with environmental protection	0.764	2.330
GCB2	I always try to buy products with green labels and a higher price	0.757	2.421
GCB3	I recommend green products that I use for relatives and friends	0.787	2.368

Table 2. Testing factors in green marketing affecting the green consumption intention and green consumption behavior.

Relationships	Standardized estimate	S.E.	C.R	P	SE-bias	Result
GCI \leftarrow PRI	0.571	0.037	14.954	***	0.003	Accepted
GCI \leftarrow PROM	0.094	0.028	2.829	0.005	0.004	Accepted
GCI \leftarrow PRO	0.178	0.036	5.008	***	0.003	Accepted
GCI \leftarrow POL	0.082	0.032	2.407	0.016	0.005	Accepted
GCI \leftarrow PLA	0.057	0.037	2.207	0.027	0.004	Accepted
GCB \leftarrow GCI	0.348	0.029	6.873	***	0.001	Accepted
GCB \leftarrow PRI	0.271	0.027	5.532	***	0.001	Accepted
GCB \leftarrow PROM	0.106	0.018	2.886	0.004	0.001	Accepted
GCB \leftarrow PRO	0.118	0.023	3.045	0.002	0.002	Accepted
GCB \leftarrow POL	0.083	0.021	2.220	0.026	0.001	Accepted
GCB \leftarrow PLA	0.069	0.024	2.429	0.015	0.004	Accepted

Note: *** denote statistical significances at 1%.

Businesses' awareness of responsibility for environmental protection concerns remains inadequate. Many businesses, particularly small and medium-sized businesses, have not satisfactorily resolved the contradiction between profit goals and green growth. Furthermore, despite tremendous worldwide development, green technology is not easily utilized in Vietnam. Although enterprises can shift to sophisticated and contemporary technologies, human factors and capability levels have not kept pace. The high initial expenses and investments have had a substantial influence on access to green technologies. Many businesses proactively investing and innovating production models towards modernity still face many difficulties in mobilizing resources and choosing appropriate technology. Inspection of green goods, clean goods, and Goods that meet certification standards for businesses is often not thoughtfully implemented. Counterfeit, counterfeit, and poor-quality goods are still circulating in the market, reducing consumer confidence.

There is a lack of policies to support green development, and policies aimed at developing green consumption are inconsistent. Policies to promote the production of green products and services have not created strong motivation for businesses. Support policies have not attracted enterprises to invest in changing technology lines and have not produced significant changes for companies to innovate technology and production processes. Mechanisms and policies to encourage and support businesses to invest in developing green product production still reveal many shortcomings. Funding from the State budget to support enterprises in investing in technological innovation to produce environmentally friendly goods is limited, and the level of support is low. Support policy regulations often focus on the production stage and are not strongly oriented towards consumers.

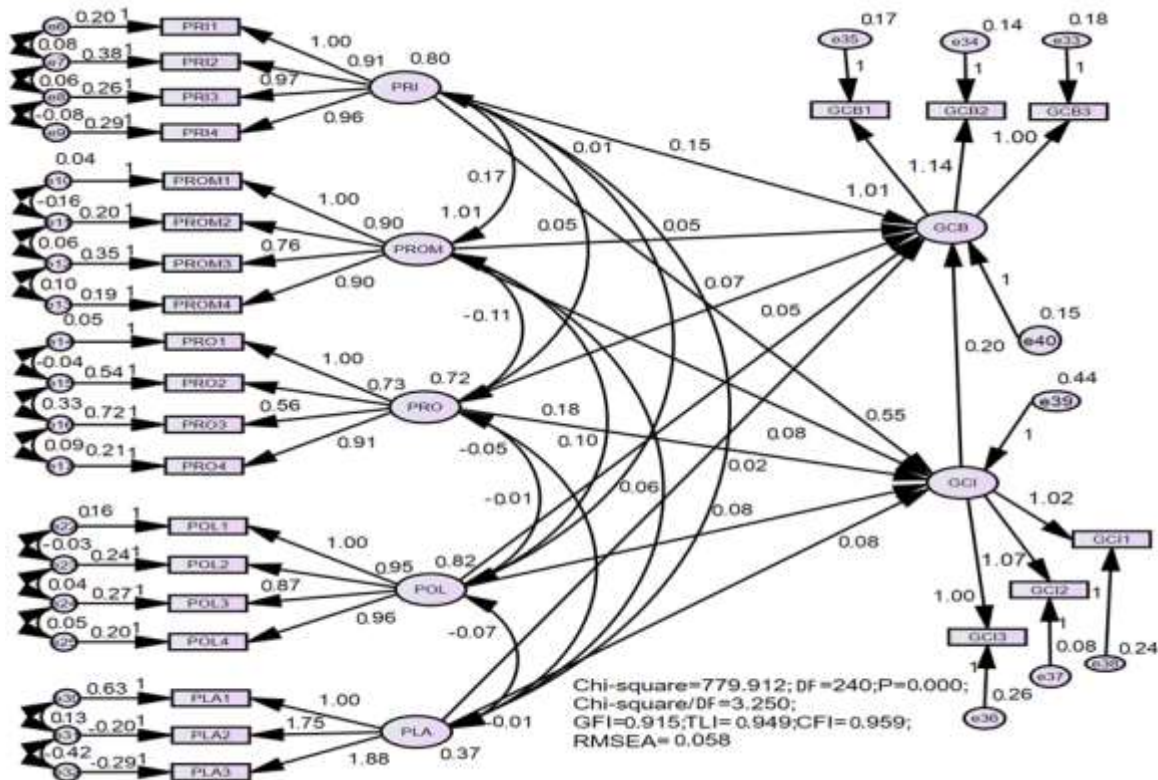


Figure 2. Testing SEM for factors in green marketing affecting the green consumption intention and green consumption behavior.

Figure 2 depicts the evaluation of the aspects of green marketing that influence green consumption intention and behavior: Chi-square/degree of freedom = 3.250 (<5.0), GFI = 0.915 (>0.800), TLI = 0.949 (>0.900), CFI = 0.959 (> 0.900), and RMSEA = 0.058 (<0.08). Over the years, our green consumption propaganda and promotion operations have increased public awareness of the usage of ecological products and eco-plastic bags. However, according to the assessment, these are only single activities, not connected with each other; the scope of impact is

narrow, so there is no popularity or sustainability. Meanwhile, there are no separate green shopping or consumption regulations in Vietnam. Despite the fact that many contents related to green procurement, sustainable procurement, environmental friendliness, and cleaner production have been integrated and regulated in many legal documents, these contents only go so far as to support the production of environmentally friendly products and services. The findings of this investigation are totally compatible with the findings of the author's research (Joshi & Rahman, 2017). There is no important enough adjustment tool to restrict the use of non-green or ecologically friendly items.

5. CONCLUSIONS

Sustainable green growth and making efforts to use environmentally friendly solutions to limit climate change, not only in the agricultural sector but in all other fields such as industry, services, trade, and consumption, all shift their priority to green production and consumption models and ways. Greening production and consumption contribute to reducing pollution and greenhouse gas emissions towards sustainable growth, bringing many practical benefits in terms of economy and intangible values for businesses. The results of the SEM study revealed the following: Green products, pricing, location, marketing, and policy were the five criteria that accepted the hypothesis with a significance level of 0.05. As a result, in the future years, (1) Finishing macro-policy tools and processes. To achieve uniformity, synchronization, and transparency, the state must design and refine the legislative framework and laws on green consumption. The Government needs to identify critical industries/fields that are likely to develop and focus on goods in which Vietnam currently has strengths. (2) Businesses should catch up with this trend, which will create opportunities for rapid development, expand market share, and take advantage of the Government's support for businesses. Businesses must comply with environmental protection regulations, proactively improve production processes, innovate technologies, create clean energy, renewable energy, and manufacturing technologies, and prioritize the usage of ecologically beneficial input materials. (3) Consumers continue to campaign for and produce information about green consumption for the living environment and human health, with the objective of shifting the entire society's consciousness and behaviors towards environmental preservation. However, there are hurdles to green consumption, such as resolving the link between profit and green growth, the State's policies supporting green production and consumption, and people's purchasing patterns. As a result, synchronized suggestions are required to encourage green consumption, assure sustainable growth, and catch up with global development trends.

The limitations of their study and future research suggestions:

To begin, the study was solely done in Vietnam, using a straightforward and random sample procedure. As a result, the study's findings will be disappointing. As a result, the next research objective is to explore other significant nations, such as Thailand and China, using a broader range of sample methodologies.

Second, the study only covers five major elements influencing Vietnamese consumers' green consumption behavior, while the remaining numerous factors are attributed to other reasons. As a result, further research on attitudes towards behavior, subjective norms, perceived behavioral control, and cognitive efficacy must be incorporated into the model.

Third, because research on green consumer behavior in Vietnam is very new, there is a paucity of comparative data. As a result, additional secondary data must be collected to compare and contrast with prior research and augment consumers' current state of green consumption in other nations. Fourth, the study merely surveys consumers' green consumption habits and does not limit green food or goods. As a result, future studies must specify green product consumption behavior, green food consumption, or a specific product.

Funding: This research is supported by Lac Hong University, Vietnam (Grant number: 171/QĐ-ĐHLH).

Institutional Review Board Statement: The Ethical Committee of the Lac Hong University, Vietnam has granted approval for this study.

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Data Availability Statement: The corresponding author can provide the supporting data of this study upon a reasonable request.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

REFERENCES

- Aadhitya, L., & Astuti, R. D. (2019). The effect of consumer value on attitude toward green product and green consumer behaviour in organic food. *IPTEK Journal of Proceeding Series*, 5(1), 193–200. <https://doi.org/10.12962/j23546026.y2019i5.6299>
- Ahmed, N., Li, C., Khan, A., Qalati, S. A., Naz, S., & Rana, F. (2020). Purchase intention toward organic food among young consumers using theory of planned behavior: Role of environmental concerns and environmental awareness. *Journal of Environmental Planning and Management*, 64(5), 796–724. <https://doi.org/10.1080/09640568.2020.1785404>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Akehurst, G., Afonso, C., & Gonçalves, H. M. (2012). Re-examining green purchase behaviour and the green consumer profile: New evidences. *Management Decision*, 50(5), 972–988. <https://doi.org/10.1108/00251741211227726>
- Ali, S., Ullah, H., Akbar, M., Akhtar, W., & Zahid, H. (2019). Determinants of consumer intentions to purchase energy-saving household products in Pakistan. *Sustainability*, 11(5), 1–20. <https://doi.org/10.3390/su11051462>
- Chekima, B., Wafa, S. A. W. S. K., Igau, O. A., Chekima, S., & Sondoh, S. L., Jr. (2016). Examining green consumerism motivational drivers: Does premium price and demographics matter to green purchasing? *Journal of Cleaner Production*, 112(4), 3436–3450. <https://doi.org/10.1016/j.jclepro.2015.09.102>
- Choi, D., & Johnson, K. K. (2019). Influences of environmental and hedonic motivations on intention to purchase green products: An extension of the theory of planned behavior. *Sustainable Production and Consumption*, 18(4), 145–155. <https://doi.org/10.1016/j.spc.2019.02.001>
- Do Paço, A., Alves, H., Shiel, C., & Filho, W. L. (2013). Development of a green consumer behaviour model. *International Journal of Consumer Studies*, 37(4), 414–421. <https://doi.org/10.1111/ijcs.12009>
- Eze, U. C., & Ndubisi, N. O. (2013). Green buyer behavior: Evidence from Asia consumers. *Journal of Asian and African Studies*, 48(4), 413–426. <https://doi.org/10.1177/0021909613493602>
- Hair, J., Anderson, R., Tatham, R., & Black, W. (2010). *Multivariate data analysis*. US: Upper Saddle River, NJ, USA: Prentice-Hall.
- Hao, Y., Liu, H., Chen, H., Sha, Y., Ji, H., & Fan, J. (2019). What affect consumers' willingness to pay for green packaging? Evidence from China. *Resources Conservation and Recycling*, 141(3), 21–29. <https://doi.org/10.1016/j.resconrec.2018.10.001>
- He, A. Z., Cai, T., Deng, T. X., & Li, X. (2016). Factors affecting non-green consumer behaviour: An exploratory study among Chinese consumers. *International Journal of Consumer Studies*, 40(3), 345–356. <https://doi.org/10.1111/ijcs.12261>
- Huang, H. C., Lin, T. H., Lai, M. C., & Lin, T. L. (2014). Environmental consciousness and green customer behavior: An examination of motivation crowding effect. *International Journal of Hospitality Management*, 40(7), 139–149. <https://doi.org/10.1016/j.ijhm.2014.04.006>
- Ibrahim, H., Mariapan, M., Lin, E. L. A., & Bidin, S. (2021). Environmental concern, attitude and intention in understanding student's anti-littering behavior using structural equation modeling. *Sustainability*, 13(8), 1–12. <https://doi.org/10.3390/su13084301>

- Jaiswal, D., & Kant, R. (2018). Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *Journal of Retailing and Consumer Services*, 41(3), 60–69. <https://doi.org/10.1016/j.jretconser.2017.11.008>
- Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, 3(1-2), 128–143. <https://doi.org/10.1016/j.ism.2015.04.001>
- Joshi, Y., & Rahman, Z. (2017). Investigating the determinants of consumers' sustainable purchase behaviour. *Sustainable Production and Consumption*, 10(4), 110–120. <https://doi.org/10.1016/j.spc.2017.02.002>
- Kautish, P., Paul, J., & Sharma, R. (2019). The moderating influence of environmental consciousness and recycling intentions on green purchase behavior. *Journal of Cleaner Production*, 228(10), 1425–1436. <https://doi.org/10.1016/j.jclepro.2019.04.389>
- Kumar, P., & Ghodeswar, B. M. (2015). Factors affecting consumers' green product purchase decisions. *Marketing Intelligence & Planning*, 33(3), 330–347. <https://doi.org/10.1108/MIP-03-2014-0068>
- Kursan, M. I. (2021). Purchase experience during the COVID-19 pandemic and social cognitive theory: The relevance of consumer vulnerability, resilience, and adaptability for purchase satisfaction and repurchase. *International Journal of Consumer Studies*, 45(6), 1425–1442. <https://doi.org/10.1111/ijcs.12672>
- Lee, Y. K. (2017). A comparative study of green purchase intention between Korean and Chinese consumers: The moderating role of collectivism. *Sustainability*, 9(10), 1–17. <https://doi.org/10.3390/su9101930>
- Nath, V., Kumar, R., Agrawal, R., Gautam, A., & Sharma, V. (2013). Consumer adoption of green products: Modeling the enablers. *Global Business Review*, 14(3), 453–470. <https://doi.org/10.1177/0972150913496864>
- Nittala, R., & Moturu, V. R. (2021). Role of pro-environmental post-purchase behaviour in green consumer behaviour. *Vilakshan - XIMB Journal of Management*, 20(1), 82–97. <https://doi.org/10.1108/xjm-03-2021-0074>
- Sharma, K., Aswal, C., & Paul, J. (2023). Factors affecting green purchase behavior: A systematic literature review. *Business Strategy and the Environment*, 32(4), 2078–2092. <https://doi.org/10.1002/bse.3237>
- Uddin, S. M. F., & Khan, M. N. (2016). Exploring green purchasing behaviour of young urban consumers: Empirical evidences from India. *South Asian Journal of Global Business Research*, 5(1), 85–103. <https://doi.org/10.1108/SAJGBR-12-2014-0083>
- Wei, S., Ang, T., & Jancencelle, V. E. (2018). Willingness to pay more for green products: The interplay of consumer characteristics and customer participation. *Journal of Retailing and Consumer Services*, 45(10), 230–238. <https://doi.org/10.1016/j.jretconser.2018.08.015>
- Yu, S., & Lee, J. (2019). The effects of consumers' perceived values on intention to purchase upcycled products. *Sustainability*, 11(4), 1–20. <https://doi.org/10.3390/su11041034>
- Zhu, Q., Li, Y., Geng, Y., & Qi, Y. (2013). Green food consumption intention, behaviors and influencing factors among Chinese consumers. *Food Quality and Preference*, 28(1), 279–286. <https://doi.org/10.1016/j.foodqual.2012.10.005>

Views and opinions expressed in this article are the views and opinions of the author(s), Journal of Social Economics Research shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.