

Managerial Recommendations for Enhancing Green Consumption Behavior and Sustainable Consumption

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Abstract

The green consumerism movement is gaining steam in emerging nations with middle-income or higher populations, such as Vietnam, and is particularly well-liked in affluent countries. In addition, the importance of green consumerism is gaining significant traction, alongside efforts to promote ecologically friendly production and consumption. As the economy progressed, people's living standards improved, leading to a growing need for high-quality, safe products and services. This is particularly true for items that directly serve people and contribute to their everyday lives. Therefore, the article aims to evaluate the factors affecting green consumer behavior and sustainable consumption based on the structural equation model with the least squares method to test their hypotheses. The data were applied in the study through a survey of 360 consumers in 04 big cities in Vietnam. Research results showed that seven factors impact green consumption behavior, including (1) environmental awareness, (2) green product characteristics, (3) green marketing, (4) perceptions about green product prices, (5) social influence, (6) environmental policy, and (7) green consumption policy with significance 0.01. The finding explores green consumption behavior influencing sustainable consumption with a significance of 0.01. The practical implication helps managers, policymakers, and manufacturers consider applications to improve humanity and behavior green consumption in the global context of moving towards sustainable green development. The theory implication is to change behavior to improve greening production, reduce pollution and greenhouse emissions, and move towards sustainable development, bringing many practical economic and social benefits and intangible value for businesses. Simultaneously, the novelty of the study aids enterprises in staying abreast of this trend, enabling them to seize possibilities for fast growth, extend their market presence, and capitalize on governmental backing for businesses.

Keywords:

Green;
Consumption;
Behavior;
Sustainable;
Managerial Recommendations.

Article History:

Received:	07	July	2024
Revised:	17	November	2024
Accepted:	23	November	2024
Published:	01	December	2024

1- Introduction

Sustainable consumerism is buying and using eco-friendly items that don't hurt humans or ecosystems. Green consumerism has become the consumption trend of the century since many countries worry about the environment. Governments, organizations, and people regularly concern themselves with global warming, the greenhouse effect, and ocean invasion. Over the past decade, much effort has been put into policies and programs to transform industrial structures and clean production processes. However, businesses can only reduce the environmental impacts related to production but cannot address the ecological consequences associated with consumers' choice, use, and disposal of products use. Besides the economy's growth, the demand for green products in many countries worldwide has increased significantly due to growing environmental concerns. The process of consuming green products is that more and more consumers like and are willing to buy these products [1]. Consumers increasingly think green, and people's consumption consciousness is oriented towards greener activities related to the quality of life of individuals and communities [2].

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DOI: <http://dx.doi.org/10.28991/ESJ-2024-08-06-07>

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In addition, the shift to more efficient and environmentally friendly manufacturing processes has been actively pursued by implementing various regulations and initiatives. However, companies can only lessen production-related environmental consequences; they can't do much about consumers' environmental effects due to their product choices, usage, and disposal habits. The role of consumerism in addressing environmental concerns is thus growing in significance. More sustainable solutions in production-consumption systems may be achieved via collaboration between stakeholders, including consumers and producers [3, 4]. To further promote sustainable manufacturing and consumption, green consumption is seen as a realistic way to lessen the amount of plastic trash in the environment. As in many other nations worldwide, green consumerism is rising in Vietnam. Vietnamese consumers are increasingly more conscious of the need to purchase environmentally friendly goods.

Consequently, environmental protection, public health, and sustainable development may be achieved more widely using green consumption policies in Vietnam. As the economy expands and living standards increase, consumers want safe, high-quality products and services. Consumers will pay more for eco-friendly, sustainable items, especially daily-use items. This shows that Vietnamese consumers' views have changed tremendously.

The term green consumption describes a style of shopping that aims to satisfy human needs while reducing harmful environmental effects. More and more people are becoming aware of the connection between their purchasing habits, climate change, and sustainable development, resulting in a surge of green buying in several nations. Green, environmentally friendly items are becoming the norm for high-quality goods and services among customers throughout the world [5, 6]. Green consumerism is still a novel idea in Vietnam; therefore, people there haven't internalized its significance or developed good habits. Advantages of eco-friendly purchasing: Those who identify as green are known to purchase goods that are gentler on Mother Earth.

Concurrently, cut back on items that pollute the environment during manufacture or have a lot of packaging. Affordable and risk-free: Products derived from natural sources are invariably risk-free for consumers. Customers may save money by avoiding single-use items and recycling paper and bamboo bags. Simultaneously, strive to reduce household expenditure by limiting purchasing things that are either superfluous or harmful. The most excellent method to preserve our natural resources is to use recycled items. Strive for sustainable development now so it doesn't impact tomorrow. Boost output: Companies that use organic and natural products are more likely to take advantage of the state's favorable laws and break into the world's most intricate marketplaces [7, 8].

Despite the many advantages of green consumption for consumers and the environment, there are still numerous obstacles to replacing traditional polluting consumer goods with green alternatives. The weak sense of responsibility among firms for environmental protection concerns presents several challenges. Despite major global advancements in green technology, its implementation in Vietnam remains challenging. Enterprises can adopt advanced and modern technology, but human aspects and capacity levels have not kept pace. The investment and substantial initial expenses have had a significant effect on the availability of green technologies [8].

Despite aggressively investing and innovating in production patterns to achieve modernity, many firms still encounter challenges in mobilizing resources and selecting suitable technologies. The careful examination of environmentally-friendly and sanitary products that adhere to business certification criteria is sometimes lacking in thoroughness. Illegitimate, forged, and substandard merchandise continues to be in circulation throughout the market, therefore diminishing customer trust [9, 10].

Green consumerism has become a significant global trend due to increasing environmental concerns. Numerous studies have highlighted the importance of green consumption in reducing ecological footprints and promoting sustainable development [11, 12]. Despite this growing interest, there is a gap in understanding how various factors influence green consumption behavior, particularly in developing countries like Vietnam. This study aims to fill this gap by investigating the factors affecting green consumption behavior and sustainable consumption in Vietnam. Using structural equation modeling (SEM), this research identifies critical determinants and provides actionable insights for policymakers and businesses to foster a more sustainable consumer culture.

Therefore, understanding consumers' green consumption behavior is extremely important for businesses, helping them create competitive advantages and build long-term sustainable development strategies. Researching factors affecting green consumption behavior and proposing some solutions to promote green consumption is extremely necessary, specifically for consumers in 04 central cities of Vietnam; this is new research in the locality, so the authors decided to carry out the research topic and this research results contributing to improving the green consumption behavior of Vietnamese consumers.

2- Literature Review and Hypothesis Development

2-1- The Concept of Green Consumption Behavior (Y1)

Many studies have built upon the original 1970 American reference of green consumption to broaden its scope. A kind of consumption that promotes environmental protection, green consumption centers on making purchases with an eye on minimizing negative impacts on the planet. According to certain writers' publications, green consumption means

buying and using eco-friendly items safe for humans and the environment [3, 11, 12]. The notion of green consumption is growing in scope as the world becomes more interconnected. Therefore, in today's world, sustainable consumption encompasses more than simply green shopping habits; it also includes purchasing ecological food, recycling, reusing, saving, and adopting an eco-friendly transportation system.

Additionally, environmentally sustainable products, often known as green products, lessen the environmental adverse effects through their production, use, and disposal [13-15]. Green products do not harm natural resources, do not pollute the earth, and are easily recyclable or conserved. If a product satisfies even one of these four requirements, according to the authors' study, we may say that it is environmentally friendly: First, it's eco-friendly; second, it offers healthy alternatives to traditional harmful goods; third, it lessens the product's influence on the environment when in use; and fourth, it makes the world a safer and friendlier place for people to live. The term "green consumer behavior" describes actions taken by individuals or groups to reduce their negative influence on the environment. Specifically, it describes buying and using products with little environmental impact, which helps those in the community and encourages everyone to do their part to protect the planet [3, 16-18].

Thus, the notions of green products and consumer behavior have given rise to several theories on environmentally conscious purchasing practices. Green consumption behavior encompasses a range of actions, such as purchasing ecologically friendly items, reducing, reusing, and recycling as much as possible, well as utilizing environmentally friendly packaging and methods for waste management [5, 19]. Green products are products produced using environmentally friendly materials and processes, such as agricultural products that do not use fertilizers or chemical pesticides; animals are raised close to natural conditions, without regular use of drugs and antibiotics; Packaging products can decompose naturally [7, 20].

In summary, green consumer behavior includes buying and consuming green items, conserving, reusing, recycling, using green packaging, and addressing trash. Green consumption is sustainable consumption in which customers consider their responsibilities to the environment and society by buying and consuming natural, healthful, and ecologically friendly items.

2-2- The Concept of the Sustainable Consumption (Y2)

Sustainable consumption reduces waste pollution and uses natural resources and hazardous chemicals to fulfill basic requirements and improve quality of life without harming future generations. Sustainable consumption entails the utilization of appropriate services and products to fulfill essential requirements and enhance quality of life. Sustainable production and consumption are interconnected approaches aimed at achieving development objectives, reducing future economic, environmental, and social expenses, and enhancing economic competitiveness and poverty alleviation [21-23]. Environmental protection and green growth are 'inseparable' aims of sustainable consumption. Maintaining energy and material consumption and pollution levels within natural ecosystems increases resource efficiency in product production, distribution, and usage. Sustainable consumption efficiently uses products, goods, and services to fulfill the needs of people, families, agencies, and organizations while reducing environmental, economic, and social effects [9, 24].

Sustainable consumption is buying goods and services that meet requirements without harming the environment, society, or economy. According to other research, sustainability is environmentally and socially responsible consumption that meets basic necessities and improves living quality [11, 25]. Researchers also consider sustainable consumption's environmental impact. This research promotes consumerism that reduces natural resource use and hazardous emissions. The study defines sustainable consumption as a multidimensional construct that includes environmental concerns, quality of life, and future generations [14, 26].

Thus, in this study, the research team approaches sustainable consumption as the actions of consumers to search, buy, and use products and services to minimize waste that causes environmental pollution, protect the environment, and ensure safety for personal health and the community while reducing negative environmental, social and economic impacts [6, 27]. Sustainable consumption uses products and services that meet essential needs to help improve quality of life while minimizing the use of natural resources and toxic materials. Simultaneously, it restricts the release of harmful substances for the whole lifespan of the product, aiming to prevent any adverse effects on future generations. Hence, sustainable consumption encompasses more than mere purchasing; it also encompasses the behavior of consumers, which encompasses a wide range of entities such as governments, corporations, final consumers, people, and households [9, 28].

2-3- The Concept of Environmental Awareness (X1)

The environmental awareness (X1): Due to the swift economic growth in recent years, various environmental concerns have arisen, including global warming, the greenhouse effect, and seawater encroachment. These issues are widely discussed by governments, organizations, and individuals as significant concerns affecting all aspects of life.

Consumers are more aware of the adverse environmental effects of their consuming actions [19, 29]. As consumers' environmental awareness grows, they place greater significance on engaging in environmentally friendly purchasing behavior and adopting green-consuming practices.

In addition, environmental awareness represents the level of concern about the environmental benefits consumers believe they will achieve if they use green foods [22, 30]. The topic of the environment has indeed received the attention of not only a country or an individual, but it has genuinely been followed by the whole human world with macro-level summit meetings, actively protecting and preserving the daily living environment at the micro level in general, studies show that environmental concern affects the consumption of green goods. Therefore, hypothesis H1 proposed that environmental awareness positively affects green consumption behavior bellowed.

H1: Environmental awareness positively influencing green consumption behavior.

2-4-The Concept of Green Product Characteristics (X2)

Green product characteristics (X2): Green products are products with a production process that has little environmental impact. They are often designed and manufactured using environmentally friendly materials. These products contribute to a more sustainable form of living and development by causing little or no environmental impact [13, 15]. Besides, green product characteristics mentioned that consumers realize that shopping online or through convenience stores or green department stores helps them save time and reduce effort and can be done anytime without harming the environment. In addition, a green product characteristic is an ecological or environmentally friendly product [15, 24].

Green products are environmentally friendly and do not contribute to pollution or the depletion of natural resources. Products that include any of the following characteristics can be classified as green products: Utilize materials that may be recycled, refrain from conducting tests on animals, employ energy-saving practices, cultivate fruits and vegetables using organic matter, and ensure no detrimental effects on the ozone layer. Green products are items that use recycling practices, such as using recycled materials, reducing packaging, or using less hazardous chemicals, in order to limit their impact on the natural environment [8, 18]. Therefore, hypothesis H2 proposed that green product characteristics positively affect green consumption behavior bellowed.

H2: Green product characteristics positively influencing green consumption behavior.

2-5-The Concept of Green Marketing (X3)

Green marketing (X3): Green marketing also exists called sustainable marketing it can be the definition is that all activities are set and designed to create and facilitate any exchange activity to satisfy needs crane or human desire so that satisfaction of needs and desires [13, 23]. This has minimal adverse impact on the environment nature. Green bag marketing includes the totality of marketing activities businesses do to promote and produce products that positively impact the environment or reduce negative impacts on the environment [23, 25].

Nowadays, green marketing is one crucial component of further research in the market due to the increasing effects of all media directions, putting pressure on companies and forcing them to show friendly behavior in an environment [26, 31]. Over the years, there have been changes on the part of businessmen, shifting from passive change under communal pressures. The opportunity to make genuine efforts to improve the millet sustainable marketing plan and behave accordingly environmentally responsible [29, 31]. To improve a company's public perception and customer loyalty, green marketing must be linked to concrete, long-term initiatives to save the environment and reduce waste.

Consequently, concrete measures to safeguard the environment and natural resources must accompany corporate declarations and marketing messages. A segment of the public or the brand's consumers will learn more about the firm's social responsibility and develop more faith and devotion to the company due to the human aspect of these corporate acts [17, 32]. Thus, hypothesis H3 proposed that green marketing positively affects green consumption behavior bellowed.

H3: Green marketing positively influencing green consumption behavior.

2-6-The Concept of Perceptions about Green Product Prices (X4)

Perceptions about green product prices (X4): The perceived cost of environmentally-friendly items is frequently more than that of traditional products, and persuading people to pay a premium for purchasing a new product is challenging. Reducing manufacturing costs or increasing core values can enhance the competitiveness of green products in the market [18, 33]. The target group of people who know the importance of green products will be willing to pay more. Perceptions about the price of green products in terms of safety and ease of use are fundamental when discussing the purchase behavior of green food products [31, 33].

Besides, current food hygiene and safety issues, such as pesticide residues in food, significantly impact consumers' purchasing decisions because of concerns about their health and their families. Therefore, green food prices are considered safer, healthier, and more nutritious. Consumers are more aware of their health, and their families are more confident in consuming green foods that are easy to use and preserve, so the demand for green food products is growing [32, 34]. Therefore, hypothesis H4 proposed that the perceptions about green product prices positively affect green consumption behavior bellowed.

H4: Perceptions about green product prices positively influencing green consumption behavior.

2-7- The Concept of Social Influence (X5)

Social influence (X5): Sustainable consumerism has gained significant traction in industrialized nations and is gradually gaining momentum in emerging countries, driven by rising personal affluence and growing consumer consciousness. Consumers are experiencing a growing level of worry over the environment and are placing greater significance on engaging in environmentally conscious shopping habits [13, 35].

Environmental specialists perceive green consumerism as a strategy to mitigate adverse alterations in the global ecological habitat. Hence, the inclination towards manufacturing and utilizing eco-friendly goods is projected to see significant growth in the foreseeable future. The notion of planned conduct places even greater significance on social impact [3, 36]. Social effects may influence Attitudes regarding the environment more than regional characteristics.

Furthermore, disseminating information through the media and reports from organizations with vested interests and affiliations significantly influences attitudes regarding sustainable development and the determination of intent to engage in sustainable consumption [16, 37, 38]. The social effect is manifested when individuals are cognizant that their green-consuming behavior is influenced by the people in their immediate social circle, such as family, friends, coworkers, superiors, or other institutions. As a result, many companies are capitalizing on this trend to boost their brand awareness and increase productivity by pledging to be socially and environmentally responsible, putting consumer health first when creating new products, and tying sustainability into product design. Therefore, hypothesis H5 proposed that social influence positively affects green consumption behavior bellowed.

H5: Social influence positively influencing green consumption behavior.

2-8- The Concept of Environmental Policy (X6)

Environmental policy (X6): Green consumption has become a popular way to decrease plastic waste and promote sustainable manufacturing and consumption. Green consumption is becoming a trend, and consumer awareness of green products and consumption has increased [10, 39]. Thus, improving environmental policy implementation and application will safeguard the environment and public health and promote sustainable development. Top management's environmental policy describes the organization's pledges to support and improve environmental performance and behavior [20, 39].

Environmentally friendly consumption. Environmental policy helps an organization identify environmental goals, implement the environmental management system, and improve sustainable development, including consumption [40]. Environmental policies keep the environment clean and beautiful, improve it, ensure ecological balance, prevent and overcome human and natural environmental damage, and exploit, rationally use, and save natural resources through green consumption [33, 40]. Therefore, hypothesis H6 proposed that the environmental policy affects green consumption behavior bellowed.

H6: Environmental policy positively influencing green consumption behavior.

2-9- The Concept of Green Consumption Policy (X7)

Green consumption policy (X7): Green consumption policy is the common name of a group of specific economic policies to influence the interests and behavior of consumers to encourage and promote green consumption limit and narrow consumption [30, 38]. Green consumption policy contributes to green economic development and promotes sustainable consumption. Regarding content, green consumption policies include policies encouraging and supporting consumers to purchase and use green products, including recycled products, such as green tax policies, green price policies, and green consumer credit policies [20, 41].

For green consumption to be implemented in life, many governments around the world must introduce measures, programs, projects, etc., to change the awareness and behavior of subjects in society, including individuals, organizations in the process of production, distribution, and exchange of goods to ensure environmental friendliness, reduce greenhouse gas emissions, and contribute to environmental protection, it is called a green consumption policy [34, 42]. Thus, the promulgation and implementation of green consumption policies have brought positive impacts in raising awareness of people, businesses, and state agency officials related to green consumption while creating a solid shift in

developing green products and services or expanding distribution markets for energy-saving products, organic foods, or other green products [43]. Therefore, hypothesis H7 proposed that the green consumption policy positively affects green consumption behavior followed.

H7: Green consumption policy positively influencing green consumption behavior.

2-10-The Green Consumption Behavior (Y1) affecting Sustainable Consumption (Y2)

Consumer behavior plays an essential role in developing consumer trends. However, changing consumer behavior is a massive challenge for the government because people's intentions and actions are often inconsistent. This poses a new requirement for policymakers to incorporate behavioral science knowledge into sustainable consumption development policies [37, 43]. Scientists worldwide have succeeded in changing consumer behavior in some fields, such as water, energy, transportation, food, and waste focusing on changing consumer behavior through evaluation measures.

These advocacy initiatives aim to raise consumer awareness of sustainable products, while campaigns assist individuals in formulating particular purchase strategies. By employing these methodologies, research indicates that the outcomes of consumption have significantly improved. Hence, altering consumer behavior is crucial for achieving sustainable consumption, which is one of the fundamental principles of sustainable development [28, 44, 45]. Besides, many studies have also shown that consumer behavior determines sustainable consumption; it can be seen that sustainable consumption is the key to protecting natural resources, improving quality of life, and ensuring social security. Therefore, hypothesis H8 proposed that green consumption behavior positively impacts sustainable consumption followed.

H8: Green consumption behavior positively influencing sustainable consumption.

The authors of this study paper utilized the Theory of Planned Behavior (TPB) to demonstrate that the intention to engage in certain conduct may be used to predict or explain the actual occurrence of that behavior [3, 24, 33]. Intention, strongly influenced by attitude towards conduct, subjective standards, and perceived behavioral control, is the primary determinant of behavior. In addition, consumer behavior theory states that marketing factors, including product, price, place, and promotion, as well as external factors such as economic, technological, political, and cultural influences, affect and influence the consumer's awareness [3, 46-48].

These factors and consumer characteristics shape green consumption behavior and sustainable consumption. Based on the presented theory, the research team uses TPB theory and consumer behavior theory to explain and let's learn about the driving factors in green consumption behavior and the research model proposed in Figure 1.

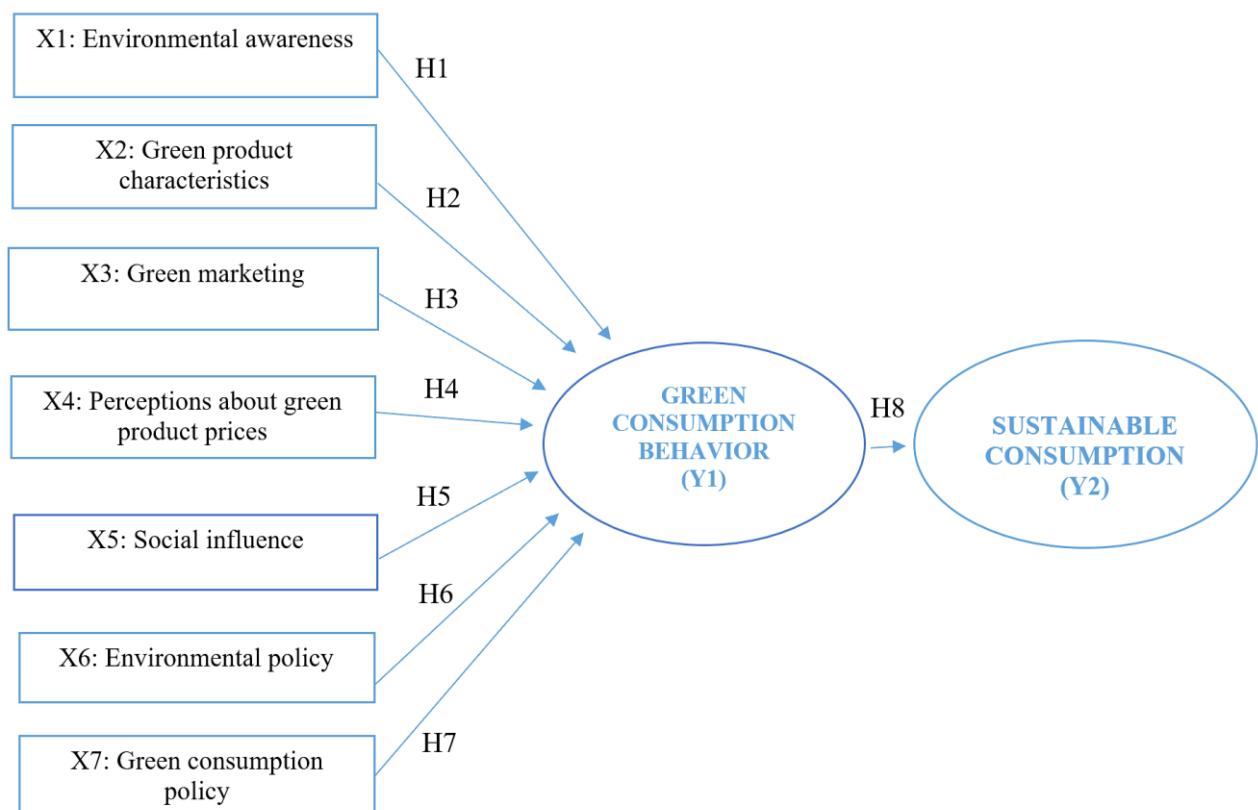


Figure 1. Seven key factors affecting green consumption behavior and sustainable consumption

Figure 1 shows that seven key factors affecting green consumption behavior and sustainable consumption. In addition, the general opinion of scientists confirms that 7 aspects are wholly appropriate, and the green consumption behavior most concerned about today is chosen below. The independent variables include X1: Environmental awareness, X2: Green product characteristics, X3: Green marketing, X4: Perceptions about green product prices, X5: Social influence, X6: Environmental policy, and X7: Green consumption policy.

The dependent variables are Y1: Green consumption behavior; Y2: Sustainable consumption.

3- Methods of Research

The research used mixed research methods of discovery, qualitative and quantitative research. Use analytical techniques: descriptive statistics and structural equation model. The scale of the independent and dependent variables is designed based on previous studies and is rated according to a 5-point Likert scale. The authors carried out two phases in this study (Figure 2):

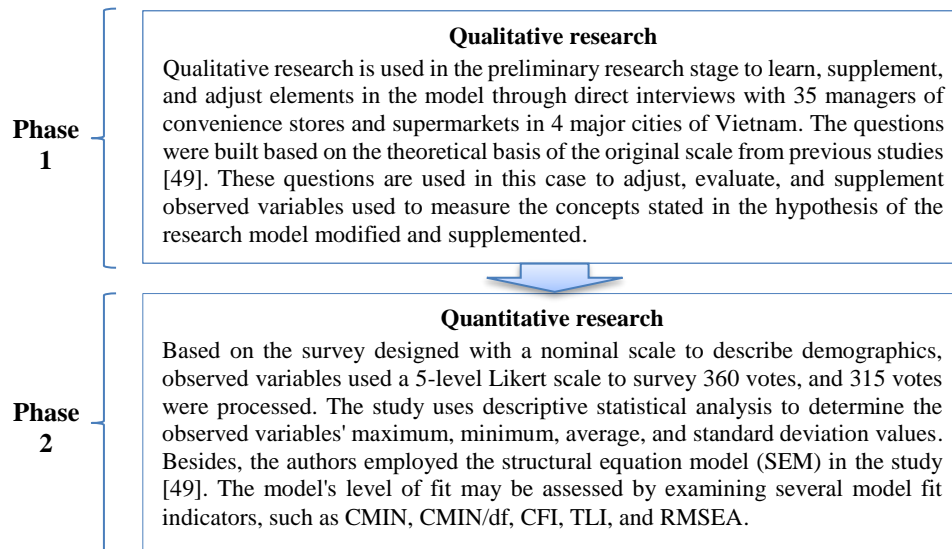


Figure 2. The process for factors affecting consumption behavior and sustainable consumption

To achieve the research goal, the study uses two research methods: Qualitative and quantitative methods followed.

(1) Qualitative research is used in the preliminary research stage to learn, supplement, and adjust elements in the model through direct interviews with 35 managers of convenience stores and supermarkets in 4 major cities of Vietnam. The criteria to be one of the largest cities depends not only on area and population but also on the development of the economy, politics, education, facilities, and infrastructure. Purpose: correctly identify the factors that impact green consumer behavior and complete the survey questionnaire. Specifically, qualitative research was conducted in direct interviews and group discussions according to a prepared outline with 35 managers with experience managing supermarkets and consumer stores in 04 cities mentioned below. The questions were built based on the theoretical basis of the original scale from previous studies [49]. These questions are used in this case to adjust, evaluate, and supplement observed variables used to measure the concepts stated in the hypothesis of the research model modified and supplemented. Qualitative research aims to complete the model and survey factors for quantitative research [49].

(2) Quantitative research is used at the formal research stage. Consumer opinions are collected through detailed interview questionnaires, coded, synthesized, and analyzed. In addition, the authors used face-to-face interview techniques to collect information from consumers. Surveyed consumers, including men and women aged 18-60, use green products at supermarkets and green food stores in 04 cities, including Hanoi, Ho Chi Minh City, Da Nang, and Can Tho. Respondents were selected to represent a broad spectrum of demographics. How to select the sample: the author uses a random, convenient sampling method; the number of questionnaires distributed is 360, representing 360 consumers who regularly buy green products; this is the number of samples to ensure response [49]. Meets analytical and statistical conditions [49]. For each city, the authors surveyed 90 consumers to represent 360 votes. The survey period is from February 2023 to April 2023, and the data is processed as follows:

Hanoi has twelve districts and seventeen districts in all. As a unique urban area, this city is governed centrally. Hanoi straddles the Red River Delta and the Da River on the left bank of the former. Vinh Phuc province is bordered on the north by Thai Nguyen and Bac Ninh provinces, on the south by Hoa Binh, on the east by Bac Ninh and Hung Yen, and on the west by Vinh Phuc province. With an area of 3,359 km² and a population of 8,418,883 people, Hanoi is one of the top 17 capitals in the world after growth. Because of its humid tropical monsoon environment, Hanoi is a great

destination to visit at any time of year. Each passing season gives customers a new perspective on life, the environment, and the locals. Many people have gone shopping at newly constructed megamalls like Royal City, Time City, AEON Mall, etc. in recent years.

Ho Chi Minh City is surrounded by many provinces: Binh Duong to the north, Tay Ninh to the northwest, Dong Nai to the east and northeast, Ba Ria-Vung Tau to the southeast, and Long An and Tien Giang to the west and southwest. From the East Coast, the city core is around 50 kilometers away. This serves as both an international gateway and a transportation center, linking the provinces in the area. Saigon Port, part of the country's biggest port and airport infrastructure, can handle 10 million tons of cargo annually. Ho Chi Minh City is now a centrally administered city designated as a particular urban area in Vietnam. Population: 8,993,000,000; Area: 2,061 km²; Density: 4,292 people/km².

Da Nang has many provinces as neighbors: Thua Thien-Hue to the north, Quang Nam to the west and south, and the East Sea to the east. 1,134,000 people live in the 1,285 km² of this city, located 108 km northwest of Hue City, 764 kilometers North of Hanoi, and 964 km South of Ho Chi Minh City. The town is characterized by its lofty mountains, swift rivers, and narrow coastal plains interlaced with steep hills in the middle and the midlands.

Can Tho is one of the cities governed centrally, an economic and transportation hub. Cantho is the Mekong Delta's biggest and most advanced city, paramount among the area's provinces. With its extensive network of rivers, expansive fruit orchards, and fields that may support cattle growth, agriculture, fisheries, power generation, and more, Can Tho has earned the nickname River City. Nearly 1,252,35,000 individuals call this 1,440,40 km² area home. As the provincial capital and cultural epicenter of Vietnam's southwestern region, Can Tho is home to several educational and research institutions dedicated to advancing scientific knowledge.

Based on the survey designed with a nominal scale to describe demographics, observed variables used a 5-level Likert scale to survey 360 votes, and 315 votes were processed. The study uses descriptive statistical analysis to determine the observed variables' maximum, minimum, average, and standard deviation values. Descriptive statistics of the study sample: This step will provide descriptive statistics for nominal and quantitative variables. Frequent statistics will be used for nominal variables, using the frequency value in the frequency table to calculate percentages. Evaluate which group has the highest or lowest percentage and which group has more than which group. Descriptive statistics for quantitative variables use average statistics and rely mainly on the mean value [49].

Next, multiple linear regression analysis: Identify factors affecting the green consumption behavior of consumers in the 4 cities mentioned above to test the relationship between the dependent and independent variables. In addition, check and ensure that the model does not have multicollinearity with the VIF coefficient of the independent variables $VIF < 3$ [49]. The survey questionnaire was designed based on the research results of the research overview and results with expert interviews to make adjustments to clarify the meaning of the questions and suit the Vietnamese context through interviews and discussions with 35 experts. Most scientists point out factors related to green consumption behavior. The general opinion of scientists confirms that 7 aspects are wholly appropriate, and the green consumption behavior most concerned about today is chosen below. The researchers employed the structural equation model (SEM) in the study [49]. The model's level of fit may be assessed by examining several Model Fit indicators, such as Chi-square (CMIN), Chi-square adjusted for degrees of freedom (CMIN/df < 3.0), Comparative Fit Index (CFI > 0.9), Tucker and Lewis Index (TLI > 0.9), and Root Mean Square Error Approximation (RMSEA < 0.08).

The independent variables include X1: Environmental awareness, X2: Green product characteristics, X3: Green marketing, X4: Perceptions about green product prices, X5: Social influence, X6: Environmental policy, and X7: Green consumption policy. The dependent variables are Y1: Green consumption behavior; Y2: Sustainable consumption.

4- Results and Discussion

4-1- The Current Status of Green Consumption in Vietnam

The practice of green has recently gained popularity in many nations. The National Strategy on Green Growth for 2021-2030, with a vision to 2050, includes green consumption as one of its main features, making Vietnam no exception to this trend. Exploring ways to improve the execution and utilization of sustainable development in Vietnam may be achieved through green consumption policies, which aim to safeguard the environment and public health. Furthermore, one of the most fundamental topics is green consumerism. Green growth is a strategy that seeks to promote economic restructuring through innovation in growth models. This restructuring should lead to economic prosperity, environmental sustainability, and social justice. The plan also aims to limit global warming and move towards a green, carbon-neutral economy.

Many communities throughout the nation have come up with green consumption guidelines, laws, and action programs, and at first, they successfully drew many people in; many shoppers have stated that they will only purchase organic or bioorganic goods going forward, particularly in the wake of the Covid-19 outbreak. They avoided negative

consequences by sticking to time-honored practices in farming and animal husbandry, harming the natural world. Consumers continue to buy these items despite the price hikes because they care about environmental and health concerns. More than 60% of Vietnamese customers are prepared to pay a premium for companies that make an excellent difference to society and the environment, according to a study. Nearly 70% of Vietnamese customers worry about the potential negative impacts of synthetic materials on the environment in the long run, and 62% of those consumers say that companies' dedication to environmental responsibility influences their buying decisions. It is clear that eco-friendly purchasing is becoming more popular throughout the globe, and Vietnam is no exception. Many companies are trying to invest in manufacturing to provide goods that guarantee green and clean aspects, creating a green brand connected with sustainable development to compete in the market. This trend is known as greening.

Insufficient policies exist to promote environmentally-friendly development, and the policies focused on encouraging eco-friendly consumption are not coherent. Efforts to incentivize firms to provide environmentally-friendly products and services have failed to generate significant incentive. The support policies have failed to entice corporations to invest in transitioning their technology lines, resulting in little advancements in technology and manufacturing processes for businesses. There are still several deficiencies in the mechanisms and regulations aimed at promoting and assisting firms in investing in the development of environmentally friendly product production. The allocation of funds from the State budget to facilitate firms in their investment in technical innovation for the production of ecologically sustainable goods is restricted, and the extent of assistance provided is minimal. Support policy rules often prioritize the production stage and do not aggressively emphasize consumers.

A significant portion of the Vietnamese population has a moderate to low economic level, and there is a limited amount of consumer knowledge regarding environmentally friendly products. The production cost of a unit of green product is typically significantly more than that of comparable goods, resulting in a high price that makes it hard to compete in the market. On average, the cost of green goods is generally 20 - 40% higher than that of other consumer goods of the same type. Customer grievances over the discrepancy between the quality of goods and the manufacturer's stated commitment also undermine faith in environmentally-friendly items available in the market. Another challenge is the lack of widespread consumer knowledge or recognition. Consumers, particularly those residing in rural areas, still lack comprehensive awareness regarding environmental conservation when it comes to consuming goods. Their understanding of green consumption remains limited, with nearly 70% of individuals reporting that they have heard about environmentally friendly products but do not have a clear understanding of them. The consumption of eco-labeled items is primarily limited to those with higher levels of education, substantial income, extensive knowledge, and a greater emphasis on environmental sustainability compared to other individuals and organizations.

Beyond that, several companies are launching initiatives to promote eco-friendly consumption, with a particular focus on cutting down on plastic waste and the usage of single-use plastic bags. To lessen their reliance on single-use plastic bags, some major Vietnamese supermarkets have instituted programs that reward customers with points whenever they bring their own or use reusable bags instead of plastic ones. As a result, companies in Cantho, Ho Chi Minh City, Da Nang, and Hanoi have been working to lessen their environmental impact by switching to more sustainable packaging materials. One such method is wrapping food and vegetables in banana leaves instead of nylon bags. There has been a nationwide mobilization to swap plastic bottles for trees, organized by public and commercial entities. As a result of the growing demand for environmentally friendly goods with traceable origins, clean food store chains have proliferated in response to the green consumerism trend. Many companies have established a network of ecologically conscious farms, transforming agricultural goods from Vietnam into safe items for local and international consumption. Despite the numerous advantages to both customers and the environment, it is challenging for environmentally friendly items to entirely supplant traditional consumer goods that contribute to pollution. Businesses still lack a strong feeling of responsibility regarding environmental protection problems.

The limitation's cause is: (1) The green consumption policy is still a new topic for policymakers, businesses, and consumers in Vietnam. At the same time, changing a habit in living and consumption activities of a subject in society is not easy. When performing green consumption behaviors, subjects will incur a particular cost, which also affects green consumption behavior. Implementing green consumption policies is still challenging due to a lack of financial resources. The financial need to transition to green consumption behavior is vast, while the limited state budget must meet many of the country's socio-economic development requirements. (2) The propaganda, dissemination, and education of awareness of implementing green consumption policies are not really practical. The State's support policy for green supply chains is still limited. Vietnam's green consumption policy still has limitations and inadequacies that make it challenging to implement. For example, the Government's current spending and public procurement policies still do not ensure synchronization with the green shopping trend, and there is no policy to encourage the purchase of recycled and environmentally friendly products in the market. Government's public spending activities; most Vietnamese businesses still prefer cheap machinery and production lines with outdated technology that consumes energy and affects the ecological environment. The state still lacks several essential policies to comprehensively support recycling activities' production and organization stages. The document system guiding framework policy implementation has not been fully and promptly developed.

A significant number of firms have not effectively addressed the contradiction between their profit objectives and the pursuit of environmentally sustainable growth, particularly for small and medium-sized organizations. There is a dearth of rules in place to promote the advancement of environmentally friendly practices, and the policies that do exist to encourage green consumption are not consistently implemented. Efforts to incentivize firms to provide environmentally friendly products and services have not effectively generated significant incentive. Companies in the manufacturing sector, their suppliers, and consumers will all need to make an effort shortly to shift towards more environmentally friendly production methods and sustainable consumption patterns. Promoting environmentally friendly and long-term manufacturing also requires the right tools, regulations, and assistance programs from state and federal agencies, including:

The state must establish and finalize green consumption laws and regulations for uniformity, harmony, and openness. The government should prioritize developing certain businesses and regions. First, we must zero down on products where Vietnam is now vital. We need policies that promote the creation of environmentally friendly goods and services, foster the growth of sectors and businesses that utilize clean technology, support the greening of production, put renewable energy development at the forefront, make efficient and cost-effective use of resources, and advance green technology. It is imperative to develop and disseminate green business models, and to establish pricing mechanisms that support green products and services in order to incentivize their purchase. Enhance vocational education to provide robust support for enterprises, encompassing managerial techniques, practical application of specialized technological domains, and technologies aimed at mitigating greenhouse gas emissions... The scope of preferential policies and assistance for items recognized with the Vietnam Green Label should be broadened to encompass initiatives that produce environmentally friendly goods across all sectors.

Green growth and consumption are essential concepts, and the state should launch campaigns to educate the public and spread the word: Maintain your advocacy for propaganda efforts to increase public consciousness, spreading knowledge about the significance of environmentally conscious consumerism and its positive effects on both human and environmental health, with the ultimate goal of influencing societal shifts in environmental consciousness and action. A media strategy highlighting the advantages of eco-friendly consumption is necessary to raise customers' awareness of the product's impact on their health and the environment. Share models, successful practices, tangible initiatives about sustainable living, eco-friendly consumption, and alignment with nature, while also maintaining and promoting traditional values linked to the "Human People" Campaign. Vietnam places a high importance on the utilization of products made in Vietnam. The primary objective should be for the Retail and Supermarket Association and the Consumer Protection Association to coordinate member units in order to enhance the presence of Vietnamese products in shopping malls and supermarkets. This should be accompanied by advertising and promotional initiatives that promote authentic commerce. The responsibility for this effort lies with the Government, the people, and the business community.

Businesses must ensure they fully comply with environmental protection legislation while also taking the initiative to enhance production processes through innovation and the development of clean energy sources, renewable energy, and energy-saving manufacturing technologies. Make it a top priority to employ input materials that are safe for the environment. For instance, a product development strategy linked to a dedication to sustainability should always prioritize customer health. Make it mandatory for producers to handle things properly after they are discarded. Businesses without a lot of capital can still achieve green development goals by doing simple things like ensuring they comply with environmental protection regulations, reducing fuel and electricity consumption in production, and using input materials that are good for the environment. In the face of ever-increasing levels of competition, green development will emerge as a critical strategy for companies looking to grow sustainably.

4-2-Analysis of Descriptive Statistical Results for the Green Consumption Behavior and Sustainable Consumption

The idea of sustainable consumption is becoming increasingly prevalent in Vietnam and nations throughout the world, particularly due to the depletion of key raw materials. Businesses must possess knowledge about sustainable production, consumption, and green distribution in order to stay competitive and comply with sustainable development requirements. Nevertheless, there is a conspicuous paradox that individuals are encountering: the desire for consumer goods is on the rise, but the availability of natural resources is progressively diminishing. This causes a lot of instability, such as the gap between rich and poor getting wider, deteriorating environmental quality means declining quality of life, and climate change developments becoming increasingly complex, causing significant impacts on people's lives. Based on the study results from conducting 360 questionnaires, 315 valid votes were presented and processed by SPSS 20.0 with descriptive statistical results in Figure 3. Figure 3 represents the distribution of consumer responses across seven variables (X1 to X7) related to green consumption behavior and sustainable consumption. The responses are categorized into five levels: Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree. Figure 3 illustrates varied consumer attitudes toward green consumption and sustainable behavior. Most consumers tend to agree or remain neutral, with a few areas of significant disagreement. This information can help identify which aspects of green consumption are widely accepted and which may require more education or different approaches to increase acceptance.

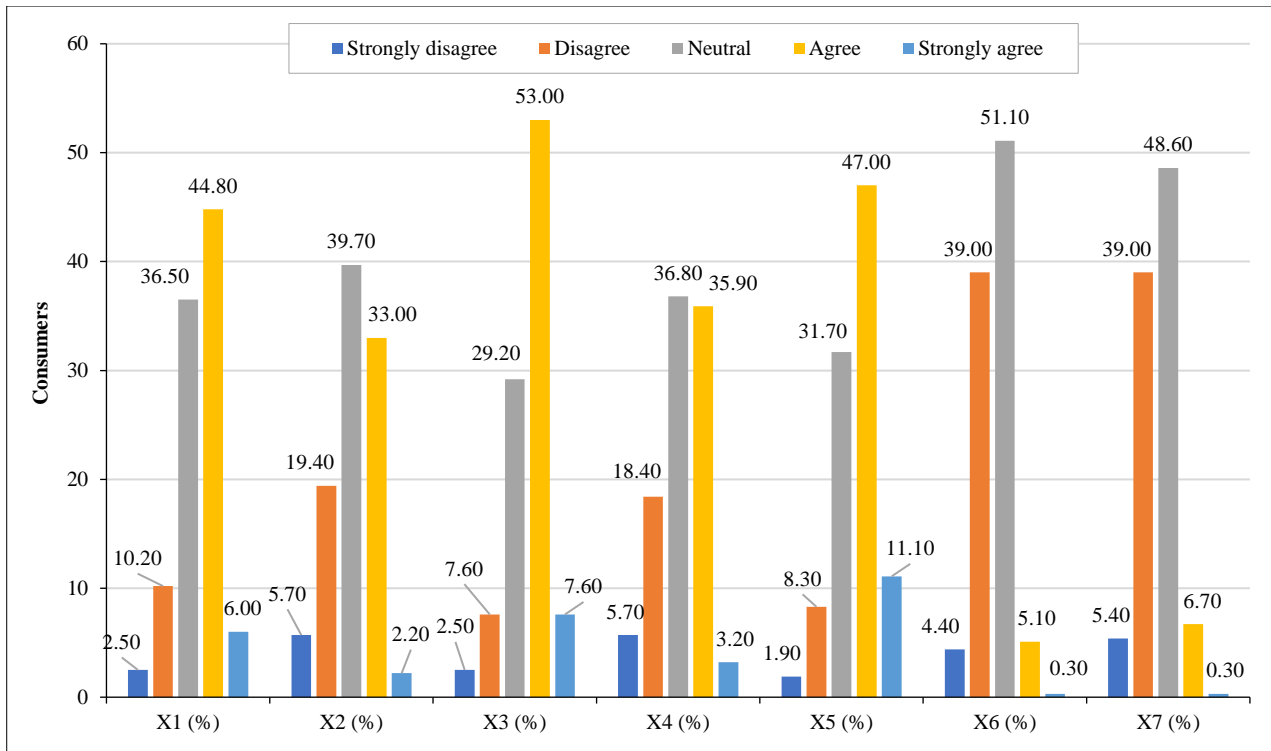


Figure 3. Frequency of statistical results for the green consumption behavior and sustainable consumption

Figure 3 shows that research results had over 55 percent from level 3 to level 5. Besides, more than 60% of consumers are also willing to change their purchasing behavior to minimize environmental negative impacts. This trend is part of why many large businesses worldwide have also implemented programs such as exchanging old items for new ones or taking back old items from customers to recycle or reuse, helping to extend the life cycle of products that can be used multiple times, reducing the tremendous amount of waste released into the environment. After the Covid-19 epidemic, the notions of green consumption and sustainable consumption were already well-established and were further pushed into the mainstream. Additionally, the poll found that over 70% of respondents felt that Covid-19 altered their view on environmental and sustainable consumption concerns.

Besides, research results suggest that sustainable consumption is the most optimal solution to resolve these uncertainties. Sustainable consumption uses products and services that meet essential needs to help improve quality of life while minimizing the usage of natural resources and toxic materials. At the same time, emissions of pollutants should be limited throughout the product's life cycle with the goal of not causing harm to future generations.

Nowadays, green consumerism is seen as a socially and economically significant movement making a difference in classrooms and communities. In addition to helping the environment, buying green items is good for the economy. Humans have limitless demands but restricted capabilities; this fundamental notion of trade-offs has always been there, but the advent of Covid-19 has brought it into sharp focus. The Earth can only react so many times. Both our consumption and our output mirror those constraints. As a social change agent, Covid-19 has the potential to green production and consumption practices, which would lead to greater sustainability. Data used in the study were collected using a convenience sampling method. Sample size according to the formula: $n \geq 8m + 50$, where m is the number of independent variables. The research model has 7 independent variables to measure. The research team conducted direct interviews with 360 customers who used green products at many supermarkets in 4 major cities of Vietnam (Cantho city, Ho Chi Minh city, Da Nang City, and Hanoi). In each city, the authors surveyed 90 people's consumption of green products. The data collection period is from February 2023 to April 2023. The results were collected, and inappropriate answers were eliminated. Based on the study results from conducting 360 questionnaires, 315 valid votes were presented and processed by SPSS 20.0 with descriptive statistical results below.

The study found that environmental awareness, green product characteristics, and green marketing significantly influence green consumption behavior. These findings align with previous research indicating that consumer awareness and product attributes are crucial in promoting eco-friendly behaviors [25, 26, 33]. However, perceptions about green product prices remain a barrier, suggesting the need for strategies to make green products more financially accessible. Social influence and environmental policy also emerged as significant factors, highlighting the importance of community norms and governmental regulations in shaping consumer behavior. These results suggest that targeted interventions in these areas could significantly enhance green consumption practices in Vietnam.

Table 1 presents the mean values of all components, around 3.0. Moreover, the standard deviation has an approaching value of 1.0. The provided data exhibits significant potential for green and sustainable consumption behavior. The results of this study show that green consumption behavior is influenced by the factors mentioned above. Therefore, businesses can focus on these factors and implement action strategies to improve and control the above factors, thereby enhancing the green consumption behavior that is being encouraged in Vietnam.

Table 1. Descriptive statistical results for the green consumption behavior and sustainable consumption

Content of the green consumption behavior and sustainable consumption	N	Min	Max	Mean	Std. Deviation
X1: Environmental awareness	315	1.00	5.00	3.4159	0.84935
X2: Green product characteristics	315	1.00	5.00	3.0667	0.91624
X3: Green marketing	315	1.00	5.00	3.5556	0.84042
X4: Perceptions about green product prices	315	1.00	5.00	3.1238	0.94122
X5: Social influence	315	1.00	5.00	3.5714	0.86537
X6: Environmental policy	315	1.00	5.00	2.5778	0.67448
X7: Green consumption policy	315	1.00	5.00	2.5746	0.71159
Y1: Green consumption behavior	315	1.00	4.00	2.4825	0.60952
Y2: Sustainable consumption	315	1.00	5.00	2.5683	0.72990

Notes: Average values for determinants of green and sustainable consumption behavior; n = 360 (315 samples and 315 values, 45 lack of information). The Std. Deviation is given in parentheses.

Successful environmental protection regulatory compliance is essential for businesses, as is the proactive improvement of production processes through innovation and the development of clean energy sources, renewable energy, and energy-saving production technologies. Make it a top priority to employ input materials that are safe for the environment. For instance, a product development strategy linked to a dedication to sustainability should always prioritize customer health.

Businesses must carry out campaigns and programs to encourage consumers to use green products, creating a green consumption culture. Companies can apply promotions such as giving away green products when buying a regular product, increasing the weight of a product, or giving away vouchers that only apply to green products. Strengthen people's awareness through media, packaging, and websites, and use positive impact images from celebrities. In addition, businesses need to pay attention to the issue of appropriate prices and campaigns to raise price awareness among consumers.

On the State side, building and completing the legal framework and policies on green consumption is necessary to ensure consistency, synchronization, and transparency. Provide guidelines to encourage the production of green products and services; develop industries and fields that apply clean technology; Promote greening production; prioritize the development of renewable energy, economically and effectively use resources; and develop green technology.

Table 2. Testing seven key factors affecting green consumption behavior and sustainable consumption

Relationships	Unstandardized Estimate	Standardized Estimate	S.E.	C.R.	P	Results
Y1 ← X1	0.099	0.138	0.037	2.674	0.007	Accepted H1
Y1 ← X2	0.098	0.145	0.024	3.996	***	Accepted H2
Y1 ← X3	0.072	0.099	0.026	2.778	0.005	Accepted H3
Y1 ← X4	0.090	0.138	0.028	3.232	0.001	Accepted H4
Y1 ← X5	0.112	0.159	0.033	3.354	***	Accepted H5
Y1 ← X6	0.478	0.526	0.034	13.983	***	Accepted H6
Y1 ← X7	0.098	0.115	0.031	3.144	0.002	Accepted H7
Y2 ← Y1	0.803	0.681	0.050	16.002	***	Accepted H8

Note *** 1%.

Table 2 shows testing results for seven key factors affecting green consumption behavior and sustainable consumption with sig. 0.01. Research results also show that increased consumer demand is the decisive factor for sustainable business development trends. Climate change has been causing many severe consequences for human life globally. In particular, the Covid-19 pandemic has changed people's thinking about green living, sustainable lifestyle, and consumption

behavior. Consumers today care about whether businesses bring sustainable development value to the environment. They expect businesses to have practical initiatives and actions to improve the environment and contribute to sustainable development. Besides, it can be seen that the green consumption trend is getting stronger and stronger, and it impacts businesses, forcing them to change their thinking about how to make their products and services meet the needs of new consumers today.

According to research results, sustainable production and consumption are inevitable trends not only in Vietnam but also in countries around the world, especially in the context of our primary raw material sources becoming increasingly more exhausted. The issue is that state management agencies need more support to join hands to promote sustainable production and consumption in Vietnam. In particular, there needs to be solutions on mechanisms, policies, and priorities to encourage scientific research and develop modern technologies that can be applied to production. Besides, green and clean production requires a long-term and stable source of capital. Therefore, mechanisms and policies must help businesses access preferential capital sources. At the same time, the State needs to have policies that encourage and prioritize greener and cleaner production units, such as two units producing the same equipment, but the unit that makes cleaner and greener will prioritize promoting the product and using it. To meet the immediate challenges posed, businesses must have an apparent perception of transitioning to sustainable production, green production, and sustainable consumption; green consumption is an inevitable trend and a strategic path for businesses to move towards sustainable development.

Table 3 shows testing results for Bootstrap with 15000 samples for factors affecting green consumption behavior and sustainable consumption with sig. 0.01 and column C.R < 1.96. This test result is entirely consistent with research data, accurately reflects the recommendations proposed by experts, and is compatible with previous studies. Research results show that the first difficulty when converting to green production is to choose a model and technology suitable for the production scale of the enterprise. Additionally, investment capital is one of the biggest challenges for businesses, tiny and medium-sized enterprises with limited financial resources, but it is challenging to access loan incentives and low-interest rates. In particular, state policies to support businesses in converting to green production are still limited and do not create favorable business conditions.

Table 3. Testing Bootstrap for factors affecting green consumption behavior and sustainable consumption

Relationships	SE	SE-SE	Mean	Bias	SE-Bias	C.R	Results
Y1 ← X1	0.041	0.001	0.097	0.002	0.002	1.00	Accepted H1
Y1 ← X2	0.027	0.001	0.096	0.001	0.001	1.00	Accepted H2
Y1 ← X3	0.024	0.001	0.074	0.003	0.002	1.50	Accepted H3
Y1 ← X4	0.030	0.001	0.092	0.002	0.001	2.00	Accepted H4
Y1 ← X5	0.035	0.001	0.111	0.001	0.001	1.00	Accepted H5
Y1 ← X6	0.055	0.001	0.482	0.004	0.003	1.33	Accepted H6
Y1 ← X7	0.031	0.001	0.099	0.000	0.001	0.00	Accepted H7
Y2 ← Y1	0.046	0.001	0.800	0.003	0.002	1.50	Accepted H8

To overcome the above problems, many believe that Vietnam needs to build and promulgate additional legal frameworks and policies to encourage sustainable production and consumption, aiming to develop a circular economy model in the future. In particular, it is necessary to focus on connecting sustainable production and consumption networks to form chain links from production to distribution and consumption of products. Therefore, the State needs to improve policies and legal frameworks to support businesses in converting to green production and sustainable consumption. It is necessary to synchronize policies prioritizing development and conversion to green production in industries and fields, prioritizing fields and sectors that apply clean, green technology.

Businesses and production facilities must invest more actively in research, development, and application of green technology, applying sustainable production solutions that meet domestic certifications and sustainability standards. Businesses must be aware that transitioning to sustainable production, green production, and sustainable consumption is inevitable; sustainable production is a strategic path. The findings of this study corroborate the work [15, 25, 36], who identified environmental awareness as a key driver of green consumption. However, unlike the studies found price perceptions to be less significant, this study highlights the substantial impact of cost on consumer behavior [14, 26, 36]. These differences may be attributed to the unique economic and cultural context of Vietnam, where income levels and environmental priorities may differ from those in more developed countries.

Figure 4 displays the testing outcomes for seven factors that impact green consumption behavior and sustainable consumption at a significance level of 0.01. Seven components need to be considered: X1: Environmental awareness; X2: Green product characteristics; X3: Green marketing; X4: Perceptions about green product prices; X5: Social influence; X6: Environmental policy; and X7: Green consumption policy. The study also clearly shows consumers' expectations of businesses regarding practical initiatives and actions to improve the environment. Accordingly, more than 40% of consumers consider businesses' initiatives and practical activities to improve the environment essential. Only 5% of consumers think this is not important. Besides, the research results also show that climate change is increasingly affecting the lives of people around the world, particularly in Vietnam. The issue of environmental protection is becoming hotter than ever, so all countries have been trying to find solutions to improve the environment to save the situation and find a direction for sustainable development in the future. Moreover, consumers have realized that purchasing can considerably impact the environment. So, following the new social responsibility trend, companies have built and maintained a competitive advantage by providing green, environmentally friendly products and services.

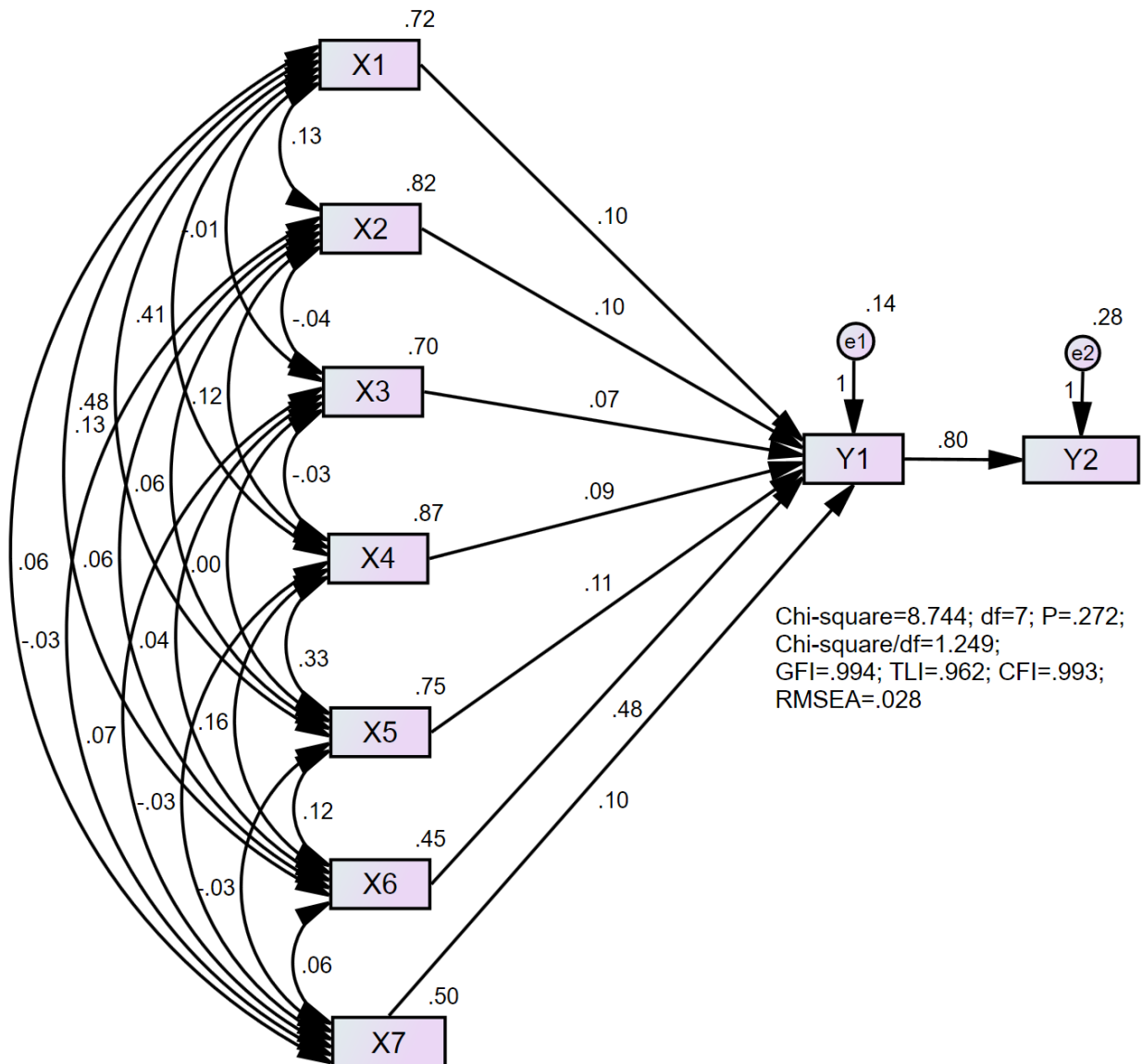


Figure 4. Testing results for seven factors affecting green consumption behavior and sustainable consumption

Thus, it can be seen that consumer awareness regarding green consumption in Vietnam has changed drastically. Many propaganda activities have been promoted to raise public awareness about using green products and supporting environmental protection. However, the scope of impact is still relatively narrow, so the conversion efficiency is not high. Besides, Vietnam also does not have its own regulations on green consumption. Instead, only regulations support the production of environmentally friendly products and services. There are no indications or robust tools to adjust consumer behavior from non-green consumption to green consumption. This is also why the green consumption trend has not developed strongly in Vietnam.

4-3- Discussions

The above analytical issues about the current state of green consumption, factors affecting green consumption behavior, and the trend of Vietnam's ecological environment in recent years show that Vietnam's environment is changing and facing considerable challenges in the coming years, so timely solutions are needed. Based on the testing for SEM, seven key factors affect green consumption behavior and sustainable consumption with sig. 0.01. Seven components need to be considered: X1: Environmental awareness; X2: Green product characteristics; X3: Green marketing; X4: Perceptions about green product prices; X5: Social influence; X6: Environmental policy and X7: Green consumption policy, which are the following discussions synchronously implemented:

First, X1: Environmental awareness: This factor affects green consumption behavior with a significance level 0.01 in Table 2, with the same results [19, 22, 29]. Green customers' environmental consciousness is on the rise in emerging nations, where rising incomes and consumer awareness have already achieved some success. Additionally, studies have shown that green eating can help prevent harmful changes to the world's ecosystems. Not only is our living environment becoming increasingly polluted due to the overexploitation of resources, but many forms of production contribute to pollution by releasing chemicals and toxic substances that are difficult to break down into the environment. Additionally, people's environmental consciousness is lacking, which makes matters worse. This means that eco-friendly product production and consumption will likely continue to rise in popularity. In addition, companies might take advantage of this situation to ramp up the manufacture of eco-friendly green products. Bring more attention to the significance of green consumption and growth via spreading information and educating the general public: Stay on top of the propaganda campaign to get the word out about green growth and consumption. Green consumption: what it is, how it benefits the environment and people's health, and how it might inspire a societal shift in environmental consciousness and action. For consumers to make better-informed decisions about products that are good for their health and the environment, a media platform policy should highlight the personal advantages of green consumption.

Secondly, X2: Green product characteristics: This factor affects green consumption behavior with a significance level 0.01 in Table 2, with the same results [13, 15, 24]. The availability qualities of green goods refer to their capacity to be consistently produced and supplied to the market, effectively satisfying the demands of consumers. Simultaneously, it adheres to environmental conservation regulations. In addition, the availability of products plays a significant role in encouraging consumers to engage in green consumption. To facilitate this, administrators should ensure that green products are readily accessible to consumers by expanding distribution channels to include supermarkets, convenience stores, and markets. It is particularly important to develop a system of organic food stores. Therefore, companies should follow all environmental protection requirements to the letter and take the initiative to enhance their production processes, develop new technologies, and create clean energy sources, renewable energy, and energy-saving manufacturing tools. Make it a top priority to employ input materials that are safe for the environment. For instance, a product development strategy linked to a dedication to sustainability should always prioritize customer health. The absence of chemicals and other harmful substances in eco-friendly products makes them beneficial for physical and mental well-being. A lot of natural light and pure air may enter green buildings through the big windows. As a result, stress levels drop, and mental health improves. Although several companies at home and abroad are working towards green industrial transformation, the most prevalent clean energy sources currently used are hydraulic, solar, and wind power. When additional forms of energy, such as steam and heat, are needed in the manufacturing process, this hinders the long-term viability of enterprises. When a company doesn't correctly handle steam and heat-producing systems, it can have far-reaching adverse effects on the environment, unlike clean electric energy.

Third, X3: Green marketing: This factor affects green consumption behavior with a significance level of 0.01 in Table 2, with the same results [23, 25, 26]. Green marketing is activities that promote products and services to target markets, including paid advertising, public relations, promotional sales, direct marketing, and website promotions. Advertising is a significant part of green marketing strategy because it helps consumers recognize businesses' contributions to environmental protection. According to studies, companies can use promotional strategies, including advertisements about enjoying a daily lifestyle using green products, demonstrating that the business is responsible for the environment. Therefore, companies must carry out campaigns and programs to encourage consumers to use green products, creating a green consumption culture. Businesses can apply promotions such as giving away green products when buying a regular product, increasing the weight of a product, and giving away vouchers that only apply to green products. Strengthen people's awareness through media, packaging, and websites, and use positive impact images from celebrities. In addition, businesses need to pay attention to the issue of appropriate prices and campaigns to raise price awareness among consumers. Green marketing is not currently viral among companies in Vietnam, but in many developed countries, this type of marketing has become a trend that many businesses apply. Green marketing activities will bring countless new opportunities for businesses because green living, green consumption, and the use of environmentally friendly products among consumers are gradually becoming popular and are expected to increase and become a trend, a new wave, shortly as environmental pollution becomes more and more serious. This is a factor that businesses need to consider to have appropriate green marketing strategies in the future.

Fourth, X4: Perceptions about green product prices: This factor affects the green consumption behavior with a significance level of 0.01 in Table 2, with the same results [18, 33, 34]. Price perception is the amount a buyer must pay to obtain a product or service. In purchasing psychology, consumers often want to buy products at low prices but with quality, accompanied by after-sales programs. However, green products often have higher prices than similar products, but with the benefits of green products, price awareness from consumers is needed to improve green consumption behavior. This is also quite an important factor affecting green consumption behavior. Compared to other popular products, eco-friendly items tend to have higher pricing. Besides, the expenses associated with manufacturing and certification tend to drive up the price of green and environmentally friendly products. Even among the most eco-conscious shoppers, the exorbitant cost of green items discourages many from making green purchases. Fewer consumers are willing to pay for green products because they balk at the high price. The perception of high green product prices is one of the main barriers, causing consumers to buy more conventional products than green products. More consumers will access these products if businesses create reasonably priced, green, environmentally friendly products.

Fifth, X5: Social influence: This factor affects the green consumption behavior with a significance level 0.01 in Table 2, with the same results [13, 35, 36]. When influential people think a person should or shouldn't do something, they exert social influence. An individual's interest in environmentally conscious consumerism is significantly influenced by subjective norms, which may be defined as their impression of societal pressures to engage in or refrain from engaging in a specific behavior from many sources such as family, society, the government, and the media. An essential component that significantly affects customer behavior is social influence, also known as social effect. In essence, social stratification is present in every human society. The caste system is one kind of social stratification; under this system, people of various castes are linked together in specific jobs and do not rise up the ranks. Class distinctions are the most prevalent kind of social stratification. A buyer's relatives and their reference group can significantly impact the buyer's actions. Family members, particularly the buyer's spouse and children, influence the buyer's everyday buying habits more directly. There has been a lot of research on families since they are the most researched unit in society related to consumption.

Sixth, X6: Environmental policy: This factor affects the green consumption behavior with a significance level 0.01 in Table 2, with the same results [10, 39, 40]. Vietnam has been confronted with several possible ecological threats in recent years. It is becoming more challenging to manage and overcome the effects of environmental catastrophes due to their growing severity, impact on vast regions, and complexity. Unauthorized dumping by manufacturing and commercial institution owners is the leading cause of environmental accidents. Other causes include waste treatment and storage facility issues, explosions, fires, chemical leaks, oil spills, and significant amounts of untreated waste. For this reason, green consumption policies and a legislative framework must be developed and finalized to guarantee consistency, harmony, and openness. To promote the greening of production, to prioritize the development of renewable energy, to use resources economically and efficiently, to create green technology, and to provide policies that support the creation of green products and services, as well as to develop companies and fields that use clean technology.

Finally, X7: Green consumption policy: This factor affects the green consumption behavior with a significance level 0.01 in Table 2, with the same results [30, 38, 41, 48]. Every aspect of Vietnamese society has seen remarkable improvement in recent years, but the country's economy has grown at a dizzying rate, and people's material and spiritual well-being have been steadily rising. Several shortcomings have been exposed by the country's socioeconomic growth process, which has also put significant strain on the environment, ecosystems, and biodiversity. Environmental pollution is still a complex problem with multiple hotspots; many areas have seen a precipitous decrease in environmental quality, and green consumption regulations are unfinished. Due to its shortcomings and constraints, it is still challenging to execute Vietnam's green consumption strategy. Consider the government's present expenditure and public procurement policies: they fail to align with the green purchasing trend and fail to promote the market's adoption of recycled and eco-friendly items. Public expenditures by the Vietnamese government; most Vietnamese companies still use low-quality, energy-guzzling production processes that use antiquated technologies. To fully back the manufacturing and organization phases of recycling efforts, the state is still missing a few crucial legislations, and framework policies have not been thoroughly and quickly built into a set of papers.

Moreover, the study addresses the inconsistency between consumer intentions and actual behavior by proposing strategies such as awareness campaigns, incentivizing green purchases, and improving the availability of green products. These interventions aim to bridge the gap between what consumers intend to do and their actual purchasing behaviors. Additionally, the research suggests implementing behavioral nudges, such as default options for green products and social norm messaging, to encourage more consistent green consumption practices.

5- Conclusions and Policy Recommendations

5-1- Conclusions

Currently, green consumption is not only a potential business field but also contributes to solving social and environmental problems through economic activities. Therefore, research to understand the mechanism that affects consumer behavior, converting from their perception to actual action, is the concern of many businesses and researchers. The results obtained from this study clearly indicate seven factors affecting green consumption behavior and sustainable consumption with sig. 0.01. This study used descriptive statistical tools to measure mean value, standard deviation, and structural equation model. Moreover, the study's contributions help policymakers and business managers apply research results to enhance green consumption behavior and sustainable consumption. In addition, research results help businesses identify more factors that impact consumer behavior in addition to traditional factors. This result is unique from research data at some supermarkets in 4 cities: Cantho, Ho Chi Minh, Da Nang, and Hanoi. Finally, the research showed that consumer behavior is essential in developing green consumption trends. However, changing consumer behavior is a massive challenge for the government because people's intentions and actions are often inconsistent. This poses a new requirement for policymakers to incorporate behavioral science knowledge into sustainable consumption development policies. Accordingly, focus on changing consumer behavior through evaluation measures and advocacy programs that draw consumer attention to sustainable products. Campaigns help consumers make specific plans before making purchases. However, it can be seen that this is a comprehensive issue involving the responsibilities and participation of many subjects, state agencies, organizations, business communities, and consumers. Therefore, countries around the world, especially developing countries like Vietnam, are in the process of developing industrialization; with the processing industry and resource exploitation accounting for a high proportion and technological level still low, there needs to be specific and positive solutions and steps to change production and consumption models towards sustainability and environmental friendliness, the authors proposed the policy recommendations below.

5-2- Managerial Recommendations

There are still numerous challenges and hurdles to overcome before green products can entirely replace traditional consumer goods that produce pollution, even if green consumption delivers many advantages to investors and the living environment. This is particularly true in developing countries like Vietnam. Companies in the manufacturing sector, their suppliers, and consumers must all work towards more environmentally friendly production methods and more sustainable consumption patterns. To further emphasize the need for authorities and municipalities to implement suitable laws, processes, and support programs to promote environmentally friendly and sustainable consumption and production models, we must simultaneously execute the following recommendations:

First, improve X1: Environmental awareness. This factor has an average value of 3.4159; the standardized estimate is 0.138 with sig. 0.01 in Table 1 & 2. Therefore, businesses should have environmental programs, seeing the significance of environmental protection when consuming green. In addition, Vietnamese consumers also need to pay more attention to the environment and be clearly aware of the effectiveness of purchasing clean food and energy-saving equipment and the behavior of using plastic bags in daily life. However, Vietnamese consumers must increase their environmental awareness or values daily. Businesses can provide consumers with all the necessary information to raise awareness of consumer actions that impact the environment. To select the most beneficial goods for their families and use them correctly, customers need to read the components list and the directions thoroughly. Using green items helps save fuel and resources while extending the product's life and decreasing the time broken products are tossed into the environment. As a means of preserving the planet, consumers bring attention to the use of environmentally friendly items. With the current situation of dirty food spreading on the market, the first practical action consumers must take is to say no to unclean food. In addition to being clearly aware of the harmful effects of dirty food on their own and their family's health, consumers must also have specific knowledge about clean food and green food and the necessary skills to recognize it. Get food that is safe for your health and safe for the environment.

Second, improve X2: Green product characteristics. This factor has an average value of 3.0667; the standardized estimate is 0.145 with sig. 0.01 in Table 1 & 2. Therefore, businesses continue to produce and perfect environmentally friendly products, focusing on the quality of green products provided to consumers. In addition to committing to and seriously implementing their responsibilities to protect the environment, manufacturing enterprises must also pay attention to green education. In terms of propaganda, emphasizing businesses' responsibility towards nature and the environment can help sell green products. Companies continue to improve the design and quality of increasingly more environmentally friendly products. Additionally, to determine the product's availability, businesses must prioritize distribution efforts to ensure the product is constantly close to consumers. Companies selling environmentally friendly goods also benefit because many Vietnamese customers purchase groceries from small shops or toad markets rather than giant supermarkets. Developing more suitable distribution channels in conventional marketplaces, such as corner stores and supermarkets close to people's homes, must be a priority. Producing better goods using less harmful energy and raw resources is a top business priority. For instance, a product development strategy linked to a dedication to sustainability should always prioritize customer health. Labeling green goods is an ethical and sustainable business strategy that helps consumers learn more about the food they buy. A customer might not even purchase environmentally friendly food if there isn't a trustworthy way to rate it.

Third, improve X3: Green marketing. This factor has an average value of 3.5556 and a standardized estimate of 0.099 with sig. 0.01 in Table 1 & 2. Therefore, businesses must diversify advertising channels for green products, so consumers know more and buy more. Businesses consolidating and developing communication campaigns should focus on explaining how and why individuals with the proper awareness and green consumption behavior can solve environmental problems and transform the critical point of knowledge propaganda into knowledge related to green consumption behaviors. If companies want people to buy more environmentally friendly items, they could institute incentive schemes. Businesses From there, companies may play a role in getting people to care about the environment by changing their own habits and the habits of the general public. Green product designs and packaging must be more attractive and appealing if businesses are serious about making environmentally friendly items. Marketers also need tools to assist in getting the word out about these fundamental environmental principles; doing so will boost the efficiency of company ads and other forms of brand communication. Additionally, companies may advertise the launch of a new product line that caters to a different demographic by using green pictures. Finally, green marketing significantly influences consumer behavior in Vietnam by raising awareness and shaping perceptions about the benefits of green products. Effective strategies include: (1) Health benefits highlighting: Emphasizing the personal health advantages of using green products. (2) Social Influencers: Leveraging the influence of celebrities and social media personalities to promote green consumption. (3) Public awareness campaigns: Conducting campaigns to educate consumers about the environmental impact of their choices and the benefits of green products. These strategies have increased consumer engagement and willingness to pay a premium for green products, driving more sustainable consumption patterns.

Fourth, improve X4: Perceptions about green product prices. This factor has an average value of 3.1238 and a standardized estimate of 0.138 with sig. 0.01 in Table 1 & 2. Therefore, businesses should build prices for green products that are more reasonable than conventional products because of their characteristics. To achieve the best price results, manufacturers also need support from distributors because this is the unit that directly brings green products to consumers. Distributors should have activities to help consumers distinguish between green and conventional products, such as displaying them in different areas and having detailed descriptions. Businesses also need to immediately deploy a campaign to make green products more reasonable than conventional products. At the same time, distributors should also focus on checking the input of green products to ensure the right choice of good manufacturers and not mistakenly buying items impersonating green products. This is the right direction to help distributors build a beautiful image in consumers' hearts, thereby increasing consumer trust. Businesses need to have promotion programs when consumers buy green products by paying a more reasonable price. To do this, there needs to be solutions to help consumers better understand the role of green products in health and the environment. Specifically, there needs to be propaganda and education activities so that people understand the importance of food in general and green food in particular to life. The advantages of green foods for health compared to conventional foods are mentioned.

Fifth, improve X5: Social influence. This factor has an average value of 3.5714; the standardized estimate is 0.159 with sig. 0.01 in Table 1 & 2. Therefore, businesses must develop advocacy and propaganda programs for families and relatives to use green foods to protect the environment. With the growth in demand for green foods and increased environmental protection awareness, consumers will tend to increase their intentions and behavior toward green consumption. However, there is still a need to improve awareness of green food consumption through building activities, capacity building, understanding, and creating more convenient marketing channels so that more consumers can buy green foods. Second, pay more attention to marketing so that friends and colleagues in the company can use green food and introduce their relatives to use it. In order to enhance the effectiveness of environmental education efforts, it is imperative to establish a stronger connection between these campaigns and individuals' everyday experiences. Additionally, education should adopt a more participatory approach to foster a comprehensive comprehension of environmental information through active engagement in sustainable consumption practices. One potential strategy for enhancing environmental consciousness among primary and secondary school children, as well as their family members, is for the government to incorporate environmental education initiatives into their regular curriculum. Businesses need to further promote communication activities so that officials and employees working in the company and in community activities support the use of green food or green products. Businesses should emphasize the personal benefits of green consumption behavior, which will be more effective because consumers are more likely to perform green consumption behavior when they are fully aware of the product's effectiveness for their health and direct environmental harm. Promote environmental propaganda and education. Develop and complete environmental training and education programs in the general education system at all levels following Vietnam's conditions and educational programs. Promote propaganda activities and raise awareness about environmental protection, green growth, circular economy development, low-waste, and low-carbon economy by innovating content and diversifying appropriate propaganda forms suitable for each subject and region. Promote the construction of specialized pages, columns, topics, and reports on environmental protection, and at the same time, discover, set an example, and replicate good examples, models, and good practices to create positive changes in society.

Sixth, improve X6: Environmental policy. This factor has an average value of 2.5778; the standardized estimate is 0.526 with sig. 0.01 in Table 1 & 2. Therefore, businesses, consumers, and state management agency officials must change their green consumption habits; thus, the state should launch communication efforts to raise awareness. Public servants in state management agencies must disseminate information on the value of clean technology, thrifty and ecologically conscious consumption, and green public procurement. Spread the word so they are well-versed in the state's

green consumption rules and regulations and can implement them. Propaganda is essential for corporations to increase corporate responsibility for environmental conservation. Get the word out so that when environmental protection rules are being considered or new green services and products are being developed, businesses can take advantage of these possibilities. Get the word out, explain everything step-by-step, and ensure they meet all the environmental requirements for the goods and services they sell. Assist individuals in accessing data on financial incentives and initiatives designed to promote environmentally conscious purchases. For consumers, improving the ability to recognize green products and services is necessary. Propaganda to change traditional shopping and consumption habits that harm the environment. In the coming time, strengthening the implementation of green consumption policies for sustainable development requires total attention from the State, businesses, and consumers to work together to implement synchronous solutions from completion policies, increasing financial resources to raise awareness and form a green supply chain, helping consumers have a green product system to serve green consumption. Complete the system of policies and laws on environmental protection: Complete the system of institutions, policies, and laws on environmental protection. Build and develop economic tools in environmental management suitable to Vietnam's conditions.

Finally, improve X7: Green consumption policy. This factor has an average value of 2.5746; the standardized estimate is 0.115 with sig. 0.01 in Table 1 & 2. Therefore, the government and relevant ministries should review all green consumption and growth policies and policies related to sustainable development and climate change that regulate green consumption in Vietnam. This is the first thing that needs to be done to reduce overlap and overlap between policies on goals, strategies, and implementation processes. The proposed policies need a specific implementation roadmap from the central to local levels regarding goals, implementation content, and implementation time. It is necessary to increase the mobilization of financial resources for investment in green consumption. Innovative public finance policies and creative financial mechanisms are needed. Mobilizing financial resources for green consumption cannot only rely on the state budget; it is necessary to establish mechanisms and policy orientations to attract external capital, including private capital, through public-private partnerships. The government should back efforts to develop a green supply chain for a more sustainable distribution system and a more comprehensive range of eco-friendly goods and services. To establish a sustainable supply chain, the government must encourage companies to employ cleaner production methods and use energy efficiently throughout product delivery. Encourage the substitution of biodegradable packaging with non-biodegradable packaging and decrease the usage of non-biodegradable packaging in public markets, shopping malls, and supermarkets. Foster long-term relationships among those involved in the sourcing, processing, manufacturing, and final consumption of eco-friendly goods and services by highlighting the importance of suppliers, manufacturers, distributors, and consumers.

Moreover, these recommendations are tailored to the context of developing countries like Vietnam: (1) Subsidies for green products: Providing financial incentives for manufacturers and consumers to reduce the cost barrier associated with green products. (2) Stricter environmental regulations: Implementing and enforcing policies that mandate sustainable production practices and limit the use of harmful materials. (3) Educational programs: Promoting educational initiatives to raise awareness about the benefits of green consumption and how to make environmentally friendly choices. (4) Green public procurement: Encouraging government and public institutions to prioritize purchasing green products, setting an example for the private sector and consumers. These recommendations are tailored to developing countries like Vietnam's economic and social context, where financial constraints and limited awareness are significant barriers to green consumption.

Behavioral science can be integrated into sustainable consumption policies by using techniques such as nudges, social norms, and incentives. For example, in the UK, default options for energy-efficient appliances have successfully increased their adoption. Vietnam could adopt similar strategies, such as defaulting to green products in public procurement or using social norm campaigns to promote green consumption. These approaches leverage human psychology to make sustainable choices easier and more appealing.

5-3-Limitations and Further Research

Limitations of this study recommend future research: Any investigation has certain limitations: 1) The investigation was done in a few supermarkets in four major Vietnamese cities utilizing random and easy sampling. Thus, the inquiry will provide low findings. Therefore, using more diversified sample techniques, the following research explores other provinces and big cities like Hai Phong, Dong Nai, Binh Duong, and Ba Ria-Vung Tau. 2) Only seven primary characteristics affect consumers' green consumption behavior, although many others do. Further research on attitudes toward conduct, subjective norms, perceived behavioral control, and cognitive efficacy is needed to complete the model. 3) The Vietnam green consumer behavior study piece lacks secondary and comparison data since it is new. Thus, more secondary data is needed to compare and contrast past research and complement data on Vietnamese consumers' green consumption status across many years. 4) The study solely surveys customers' green consumption habits, not green food or goods. Thus, future studies must define green product consumption behavior, food or product. To generalize the research results to supermarket systems and the green product consumer market in Vietnam, more research must be done in other cities and localities nationwide, covering all green product distribution systems.

6- Declarations

6-1-Author Contributions

Conceptualization, L.P.N. and P.T.T.; methodology, L.P.N.; software, L.P.N.; validation, L.P.N., P.T.T., and L.P.N.; formal analysis, L.P.N.; investigation, L.P.N.; resources, P.T.T.; data curation, L.P.N.; writing—original draft preparation, P.T.T.; writing—review and editing, P.T.T.; visualization, L.P.N.; supervision, P.T.T.; project administration, L.P.N.; funding acquisition, P.T.T. All authors have read and agreed to the published version of the manuscript.

6-2-Data Availability Statement

The data presented in this study are available in the article.

6-3-Funding

Funding supported by Lac Hong University (LHU), Vietnam.

6-4-Acknowledgements

The authors thanked the managers of the Lac Hong University (LHU), Vietnam.

6-5-Institutional Review Board Statement

Not applicable.

6-6-Informed Consent Statement

Not applicable.

6-7-Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

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