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Research on Behavioral Flow in the Green Supply Chain in Vietnam: The Role of Reverse Logistics Activities Under the Expanded Perspective of the TPB Model

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ABSTRACT. The study explores how a green supply chain context influences consumer behavior in Vietnam amid rising environmental concerns. By 2023, global waste hit 1.92 billion tons, with Vietnam contributing 28 million tons—10% of which is plastic waste entering oceans. Vietnamese businesses are urged to adopt reverse logistics and sustainable practices as awareness grows. The research identifies seven factors affecting purchase intention: Attitude, Subjective Norms, Perceived Behavioral Control, Environmental Concern, Moral Norms, Past Behavior, and Consequences. Using SmartPLS 3.2.9 and data from 405 respondents, the study finds that six out of eight hypotheses are supported. Environmental Concern significantly influences purchase intention (0.239), and Perceived Behavioral Control impacts willingness to pay (0.360). The study offers managerial recommendations to strengthen green purchasing behavior and support Vietnam's move toward sustainable development.

1. Introduction

As of the current year, 2023, the world has generated over 1.92 billion tons of waste globally, with Vietnam contributing 28 million tons, of which at least 10% is plastic directly dumped into the sea, making our country one of the world's leading contributors to ocean pollution. If this scenario persists, the leakage is expected to double by 2030. Finding a solution to mitigate this impending crisis is of paramount importance.

With globalization, modernization, and the development of Industry 4.0, the quality of life is improving, and consumer awareness of environmentally friendly practices has significantly increased. This trend encourages businesses to adopt sustainable development solutions, including reverse logistics, which involves bringing used products back from consumers to manufacturers for recycling. The global reverse logistics market is growing rapidly and is

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projected to increase by 9.4% annually from 2023 to 2030. Given its significant agricultural and manufacturing output, reverse logistics plays a crucial role in Vietnam.

The behavioral flow unfolds from the inception of foundational perceptions about product information emanating from consumer demand. This progression extends through purchase intentions, buying decisions, and post-purchase behaviors, where the pivotal role of attitudes toward behavior becomes evident. All pivotal considerations are how users perceive green products, whether customer attitudes undergo transformations when the supply chain operates seamlessly, encompassing reverse logistics activities, and whether recycled products contribute to altering consumer habits or attitudes toward purchasing behavior.

Since opening up to the global arena, Vietnam has immersed itself more profoundly in the intricate web of the global supply chain. Vietnamese businesses are integral components in the global supply chain's processing, distribution, and sales networks. As the world focuses on greening the global supply chain, this coincides with an increased emphasis on sustainable economic development in Vietnam.

The key questions posed here are whether the existence of a reverse logistics solution can address the severe environmental issues in Vietnam and which factors of reverse logistics will impact customers' green purchasing behavior. Current research trends do not provide sufficient insights into these questions, making our research topic crucial.

Our study focuses on various aspects of reverse logistics within the green supply chain and its impact on consumer purchasing behavior. By examining key factors in the planned behavior model (TPB) and the relationships between psychological factors such as trust and customers' purchasing intentions, we aim to understand consumers' attitudes and motivations better when facing green products and sustainable supply chain strategies. Through addressing these research questions, our team will propose specific management recommendations to encourage sustainable purchasing behavior and contribute to developing green supply chains in Vietnam. These strategies are gaining significant attention in the current research community.

Research objectives: Explore the reverse logistics factors affecting customer purchasing behavior in the green supply chain. Evaluate the impact of each factor in reverse logistics on customer purchasing behavior in the green supply chain. Propose managerial implications for businesses to enhance customer purchasing intentions in the green supply chain.

2. Literature Review

2.1. Concept

2.1.1. Logistics

Logistics is frequently mentioned in today's life and is closely tied to economic development. It has facilitated rapid and efficient economic integration, but there are various

interpretations when we discuss the concept. [1] outlined two logistics concepts from the Council of Logistic Management (CLM) in the United States and the International Logistics Management Commission.

The International Logistics Management Commission provides the following definition of logistics: "Logistics is the process of planning, implementing, and efficiently managing the flow of capital to control the circulation and storage of goods from the raw material preservation stage to the completion of the product, as well as the related information of this process from the starting point to the final consumer to satisfy customer requirements." Thus, logistics is a sequence of activities arranged precisely, encompassing various operations within organizations and businesses from the initial ideation and deployment to the final detailed activities such as research, planning, organization, management, execution, testing, control, and improvement. These activities are seamlessly and scientifically integrated to ensure the smooth operation of the logistics chain.

These activities occur continuously and are closely interrelated, impacting each other systematically and scientifically throughout the research, planning, implementation, management, testing, and adjustment processes. [2] They further emphasize product control, including raw materials, finished goods, and final products, and the handling of relevant information throughout the process from the factory to the point of consumption. This addition is a novel aspect of the Logistics concept in the Industry 4.0 era. It clarifies the goals of Logistics and promptly meets consumer trends in a new era while ensuring cost optimization.

In contrast to introducing the concept of Logistics, the Commercial Law of Vietnam in 2005 clearly defines the concept of Logistics services. Logistics services are commercial activities where organizations perform various stages such as transporting goods, warehousing, handling customs procedures at ports or other locations, and inspecting cargo. This service extends beyond domestic boundaries, representing international trade to create mutual benefits between parties

2.1.2. Reverse logistics

Similar to the supply chain, the definition of reverse logistics has been present for quite some time, but precision in its determination remains challenging.

In their 2010 study, [3] highlighted that each person is required to engage in collection, recycling, and refurbishment activities annually, aiming to achieve a rate of at least 4 kg/person/year (according to the guidelines for waste treatment in the field of electrical and electronic equipment 2002/96/EC in Europe, issued in 2003). This aligns with the observations made by [4] in their research. Reverse logistics and early implementation in green and sustainable supply chains have been a subject of interest. From heightened awareness initiatives to more stringent measures, such as mandatory requirements for individuals, it contributes to developing green and sustainable reverse logistics processes to safeguard the environment.

[5] clarified the concept of reverse logistics in terms of execution, explicitly involving promptly recovering used or faulty products or those that did not match size requirements. The purpose could also be related to repair or maintenance. Similarly, [6]stated that reverse logistics is returning certain products to restore profitability for the seller.

2.1.3. Green supply chain

The green supply chain includes all activities from the process of searching and purchasing green materials to designing, manufacturing, and distributing products to the final consumer, all associated with protecting the environment [7]

The four functions of the green supply chain are described by [8] through the category of GSCM: Supplier management and green suppliers; Manage internal green activities; Green Logistics and Reverse Logistics.

[9] noted that definitions of green supply chains have not changed much over time, but as time has passed, we have realized that sustainability can be integrated as a term and as a technology tool to help us gain a broader perspective on the supply chain.

In an environmental sustainability context, green supply chains (GSC) include policies, practices, and tools that organizations can adopt and develop in a distinct research and business field. It can relate to various business, social, economic, technological and environmental goals and sustainability issues [10].

Supply chain management is the close cooperation of partners in planning and implementing activities from purchasing input materials and manufacturing to transporting goods to end consumers. Together, they aim to improve quality and customer service (The Logistics & Supply Chain Management Association).

Green supply chain management is a way to manage the supply chain with the environment. These include purchasing and selecting green materials, designing, manufacturing and shipping products to consumers, and reprocessing products after customers have used them [11].

[12] industries have begun incorporating environmental considerations into their operations due to increased customer awareness and tighter restrictions.

A later definition from [13] defines green supply chain management as “the integration of environmental considerations into supply chain management, including product design, sourcing and selection of raw materials, manufacturing processes, delivery of final products to consumers and end-of-life management of green products.”

Managing activities of producing green products that benefit the organization's environment and within the enterprise is a prerequisite for successfully implementing green supply chain management. On the contrary, by observing customers' choices of sustainable,

environmentally friendly products, suppliers and retailers will link with partners behind the supply chain to promote production and meet customer needs [14].

Consumer behavior also refers to activities that directly affect the acquisition of products and services, including the decision-making stages that precede and follow these actions through which individuals necessarily want to buy the product/service [15]. Study how individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and wants [16]. [17] define consumer behavior as the study of individuals, groups, or organizations and the processes by which an individual or group selects, secures, uses, and gives up products, services, experiences, or ideas to satisfy specific consumer and societal needs. [18] believe that consumer behavior is all activities directly related to searching, collecting, purchasing, owning, using, and discarding products/products. Service. According to [19], the consumer shopping decision process goes through 5 stages: awareness of needs, information search, evaluation of options, purchase decision and review after purchase.

Green consumer behavior is the search, selection and use of products and services that do not impact or minimize environmental pollution. Products can be classified according to the size of these effects, and qualities can be derived [20]. A product with a low environmental impact is considered environmentally sustainable. At the same time, these products and services ensure consumers' health safety and stimulate and influence their consumption decisions [21].

The issue of environmental protection has become a significant issue in public opinion in recent decades. This is a driving force to encourage consumers to choose green products. The increasing awareness of users paying attention to green products used for green use is increasingly emphasized.

Currently, green consumption is not limited to purchasing green consumption but also includes all activities from the perspective of sideline development: buying surplus food, recycling, reusing, saving, using environmentally friendly transportation systems, ... [22]. Companies, especially multinational companies, play an essential role in the world economy and have the resources and capacity to put ecological solutions into practice [23].

Products and services are produced using environmentally friendly materials. Made entirely or partly from recycled compost, they are produced energy-efficiently and then marketed in an environmentally friendly way. [24] argued that green products meet human desires without directly or indirectly damaging the environment, making the world more sustainable.

Therefore, green products have one of the following characteristics: they are produced with recycled content, have low cost and energy savings, and do not contain toxic compounds. During production, they cause little air and water pollution: they can be reused, recycled, and biodegradable; they are manufactured from renewable resources; and they do not contain ozone-reducing agents [25].

The market size of Vietnam's green products is relatively small and has not been precisely determined. However, this market shows signs of positive growth [26]. Environmental issues are now a consumer stimulus, encouraging them to buy green products. Green or natural products are developed according to ecological standards and finished according to ecological standards. Green products have many advantages, for example: Using less water, raw materials and energy in the production process, causing no or slight environmental pollution in the air, and their packaging can be recycled [27].

2.2. Theoretical Model

As an expanded version of the theory of reasoned action, the theory of planned behavior was proposed by researcher [28] to predict planned behavior [28]. The TBP model is commonly used in research on positive environmental behaviors because it is optimal when measuring factors influencing customer intentions and behavior [34]. In addition to explaining human behavior, TBP predicts future consumer intentions and behavior.

Researchers can evaluate the importance of those factors to behavior and attention based on the individual weights of the main factors, including attitudes, subjective norms and perceived behavioral control. Customer's mind. In particular, perceived behavioral control is a new factor added to the model. This is also different from the theory of reasoned action. Consumer perception of ease or difficulty also significantly affects intentions and actual behavior. Therefore, the evaluated TPB model is comprehensive.

[32] study applying planned behavior demonstrated the model's usefulness in studying customer behavior in new contexts. Specifically, subjective attitude and perceived behavioral control are proportional to the customer's intention in actual behavior. The TPB model is as follows:

2.3. Hypotheses and research model

2.3.1. Attitude

Attitude towards behavior refers to how an individual evaluates a behavior favorably or unfavorably in the context of a question [28]. The more favorable an individual's attitude towards a behavior, the more likely the individual is to perform a specific behavior. An individual tends to possess a favorable attitude when the outcomes are positively evaluated, thus making them more likely to engage in that specific behavior [28]; [29]. [30] mentioned that consumers' favorable attitudes toward green products lead to positive behaviors. When consumers become more attentive to a company's internal operations, such efforts result in positive consumer attitudes and increased purchase intentions. Their study[31] stated that consumers with a high awareness of health and safety exhibit a positive attitude towards sustainable hair, body, and skincare products. However, they added that a positive attitude is challenging to translate into caring behavior due to a lack of trust and information. Disclosing information about green products,

including the production process, reduces consumer distrust. Consumer trust significantly influences consumer usage intentions. Therefore, we posit the hypothesis in this study as follows:

H1: Attitude has a positive impact on purchase intention.

2.3.2. Subjective Norm

Subjective norms are the factors that determine whether a person will perform a caring behavior based on perceived social pressure. It refers to a step in making a psychological decision to perform or not to perform a behavior based on the influence of important people around an individual [28]. In other words, standard Subjective norms are the opinions of others that are important to an individual and influential in one's decision-making [32]. If an individual believes that people who are significant to him/her approve or disapprove of the behavior, they are more or less likely to intend to perform it [33]. [29]reported that green businesses, labels, and the environmental impact of products are positively associated with consumer perceptions of sustainable products, while advertising and packaging Environmentally friendly packaging is a relevant negative. It refers to a step in making a psychological decision to perform or not to perform a behavior based on the influence of important people around an individual [28]. Besides, [34] also believes that consumer behavior depends mainly on the usage intentions of other consumers. Therefore, we posit the hypothesis in this research article as follows:

H2: Subjective norm has a positive impact on purchase intention.

2.3.3. Perceived Behavioral Control

Perceived behavioral control refers to the ability to perceive, comprehend, and control one's capability to perform a behavior or accomplish a task. Essentially, the consumer can act [35]. When individuals perceive that they cannot achieve a specific outcome, it becomes challenging for them to form the subsequent purchase intention [35]. In real-life situations, perceived behavioral control may be described more specifically, such as the difficulty or ease of performing an action or accepting a higher level of expenditure. Therefore, perceived behavioral control will impact how consumers accept and make decisions regarding the formation of intentions or acceptance of events, being more willing to invest a higher amount. According to the study by [36], perceived behavioral control positively influences the intention to recycle electronic waste, as consumers realize they can easily contribute to environmental protection by returning electronic waste and are willing to act. In the study by [37], perceived behavioral control positively influences green supply chain management, and the increase in accurate awareness promotes green management activities, enhancing the efficiency of green supply chain operations. Moreover, perceived behavioral control positively impacts customers' green purchasing behavior [38] and the intention to return products [39]. Consumers believe that their actions can satisfy their environmental and social needs through simple actions. Therefore, they will take prompt action when purchasing and returning green products.

According to our proposed model, perceived behavioral control will positively impact purchase intention and willingness to pay.

H3.1 Perceived behavioral control has a positive impact on purchase intention

H3.2 Perceived behavioral control has a positive impact on willingness to pay

2.3.4. Environmental Concern

Environmental concern is one of the main factors influencing pro-environmental behaviors [22]. This concept was raised in the article by [40], and subsequently, many research authors have included environmental concerns in their research. According to [41], Green products are increasingly popular as consumers become increasingly concerned about the environment. As concern for the environment increases, consumers have a better attitude towards green products or friendly services [42]; [43]; [44]. This can be interpreted as environmental concern significantly influencing consumer attitudes. In addition, Norom's research has provided specific evidence to demonstrate the direct effects of environmental concern on recycling intention [45] and several years ago. Later in their article [46], they also reported a positive relationship between concern and intention to recycle e-waste. Moreover, we can see that environmental concerns affect customers' purchasing intentions, and they will even be willing to pay more than people who lack environmental concerns [47]. [48] also showed results on purchase intention and willingness to pay a higher price for organic foods. From there, we hypothesize that environmental concern affects attitude and purchase intention as follows:

H4.1 Environmental concern has a positive impact on purchase intention

H4.2 Environmental concern has a positive impact on willingness to pay

2.3.5. Moral Norm

Moral Norms are personal standards, including situational signals or valuable requirements that influence human behavior. That is, fulfilling normative or restrained obligations when those behaviors negatively impact society [49]. According to [50], moral norms include social rules that direct individuals or a particular social group to act in a familiar pattern to achieve a specific benefit, such as environmental protection. Attitude, subjective norms, and moral norms are indispensable factors in directly influencing the purchasing behavior of green and recycled products [51]. In addition, in the study of [52], Moral Norms are the basis for creating trust when making the right decision in consumption. In addition, in the five interview items of [53], the curbside recycling program was positively affected by Moral Norms. At the same time, the studies of [54] and [55] also show that. Therefore, we posit the hypothesis in this research article as follows:

H5: Moral norm has a positive impact on purchase intention

2.3.6. Past behavior

According to [56], past behaviors ended in the past but are relevant in planning and predicting future actions. Past behaviors repeated many times can form consumption habits and directly affect future purchases. On the contrary, occasionally occurring behaviors will contribute to forming consumer intentions [52]; [57]. It is most clearly expressed in eating habits. When customers regularly use green products, they will return to shop in the future. On the other hand, in the TPB model, Fishbein and [58] argued that past behavior only indirectly affects consumers' future intentions. Therefore, they expect past behavior to positively impact purchasing behavior, especially for products such as recycled batteries, in a study by [59]. Therefore, we posit on this hypothesis are:

H6: Past behavior affects purchase intention in the same direction

2.3.7. Consequence

[60] adapted this theory to pro-environmental behavior by stating that people will take pro-environmental action when they are aware of the consequences for themselves, others and non-human species and when they consider themselves responsible for these consequences. However, as argued by [61], none of the models used adequately captures the multi-deterministic nature of environmental behavior, which means important consequences for purchase intention related to environmental awareness. Through awareness of the consequences of recycling, environmental knowledge and concerns, type and area of residence, social pressures, laws, methods, attitudes towards recycling, and advertising campaigns, among many factors that can [62].

H7.1: Consequences have a positive impact on purchase intention

H7.2: Consequences have a positive impact on willingness to pay

2.3.8. Intention

According to authors [63], intention is a short-term or long-term plan for an individual to perform a specific action. Intention represents certainty about an individual's behavior in an actual situation and is evidenced by a particular outcome [64]. In the authors' study on willingness to recycle electrical waste [65], consumer intention and behavior are closely related. Specifically, intention is an important factor affecting consumers' willingness to pay. Alternatively, the research article "Towards improving understanding of reverse logistics - Examining the mediating role of return intention" [39] also demonstrates that intention to return waste impacts consumers' electrical waste collection. Recent research by [36] shows that consumers' willingness to pay depends mainly on their intention to use. Therefore, we posit the hypothesis in this research article as follows:

H8: Intention has a positive impact on willingness to pay.

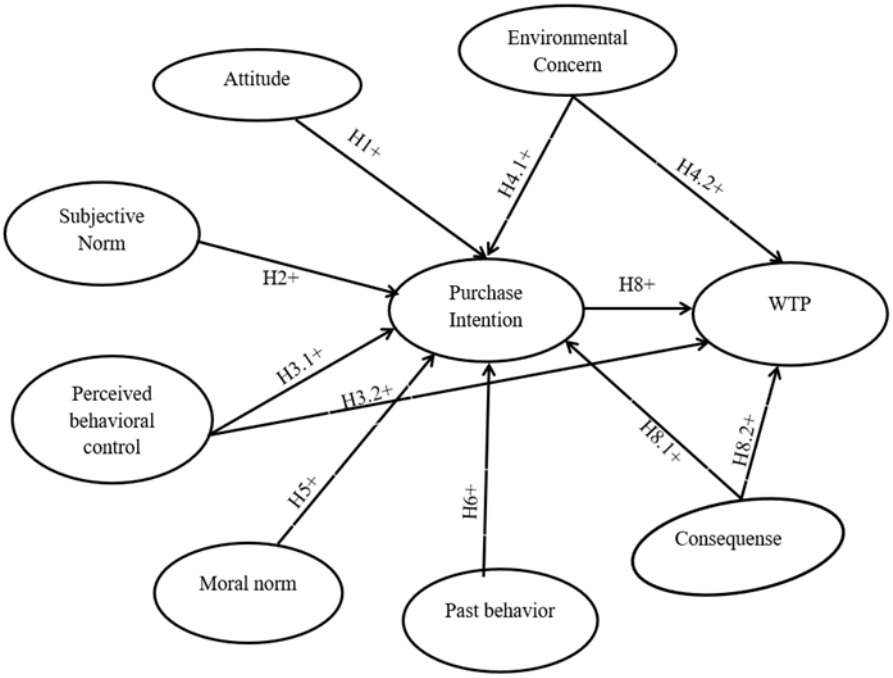

Figure 1. Proposed research model

3. Research Methodology

3.1. Qualitative Research

This project is conducted to explore the factors influencing customer buying behavior in the reverse logistics of the green supply chain through understanding, adjusting, and supplementing relevant variables, including attitude, subjective norm, perceived behavioral control, environmental knowledge, environmental concern, Moral Norms, past behavior, and Moral Norms. The research will be carried out through qualitative surveys targeting Vietnamese consumers. By the proposed research model, the author's team has identified eight independent variables that impact the dependent variables: Vietnamese consumers' intention and willingness to use. Based on qualitative research, the original scales selected by the author's team will be adjusted for optimal refinement to create the formal questionnaire for the main study. The qualitative study aims to refine the research framework to suit the target audience and scope of the final study: the Willingness-to-pay of consumers for green products after the reverse logistics process in Ho Chi Minh City. Through the research framework, the author's team utilizes group discussion techniques to conduct preliminary qualitative research. The results of the qualitative research involve adjusting the measurement scales to better align with the research market. The following are the final adjusted scales to construct the questionnaire.

3.2. Preliminary quantitative research

Several scales were added from the qualitative phase. To ensure the reliability of the measured concepts, the research team conducted a preliminary quantitative study involving 40

respondents. A preliminary questionnaire was constructed based on the questions from the preliminary qualitative study, consisting of 36 questions corresponding to the mentioned 9 scales. The scales were then tested for reliability on SPSS software for preliminary assessment using Cronbach's Alpha index, mentioned in the table below. The results showed that all questionnaire items met preliminary requirements, especially the additional questionnaire items except for qualitative research.

3.3. Quantitative research

3.3.1. Sampling method

Quantitative research uses convenience sampling methods. Data was collected through a survey of users of green products and services of logistics companies in Ho Chi Minh City. Through Google Forms, survey participants answer questions.

3.3.2. Sample size

The team relied on the EFA discovery factor and used MRL regression to conduct quantitative research. The minimum sample size to conduct research is 50 and the maximum is 100 or more, which means the ratio of observations to one known is 5:1 or 10:1 (According to Hair et al., 2014). The total number of observed variables in this topic is 40, so the minimum sample size is 40*5 = 200, and the best sample size is 40*10=400.

On the other hand, the minimum sample size formula, n=50+ 8p, is also commonly used by many researchers when analyzing multivariate regression. Where n is the minimum sample size needed to conduct research and the number of independent variables included in the model is p (Tabachnick & Fidell, 1996). Therefore, we have the minimum sample formula of p= 7, n=106

The survey sample size in the PLS-SEM method is not too large compared to other data processing methods, so the research was conducted with a sample size of 405, which is enough to conduct all quantitative analyses.

The subjects of research and survey are customers who have, are and have never used green products and participate in returning used products to the manufacturer. The survey was conducted within 2 weeks and collected 405 valid samples. This ratio is compiled and analyzed through SmartPLS 3.2.9 software.

4. Research Results

4.1. Descriptive Statistics

The authors received 405 responses, which exceeded the minimum level, satisfying the research criteria. Variables used in analyzing sample characteristics include gender and age. After the survey, with 405 survey samples, the following results were obtained:

According to the statistical data from the survey group of 405 consumers, 266 respondents identified as female, accounting for 66%. Meanwhile, male respondents totaled 139, making up

34% of the sample. This indicates a predominant representation of female consumers in the survey, suggesting a higher interest in and usage of green products than male consumers.

In the age statistics gathered from the 405 respondents in the survey, individuals aged 18 to 22 form the largest group, accounting for 56.5%, with a total of 229 respondents. The next age group, from 23 to 29, comprises 132 respondents, making up 32.6%. Those aged 30 to 39 include 26 individuals, representing 6.5%. Finally, respondents over 39 constitute the most minor portion at 1.5%, with 13 individuals. These figures indicate that the authors mainly reached out to a younger audience, a demographic known for their interest in using green products.

Income statistics within the surveyed group of 405 users of green products play a pivotal role in understanding consumers' motivation and financial capacity in this sector. According to the authors' findings, individuals with incomes under 8 million VND constitute 64% of green product users. The group with incomes ranging from 9 to 16 million VND is also significant at 16%, followed by those with incomes from 17 to 25 million VND, expressing an interest in green products at 13%. The remaining 7% with incomes over 25 million VND are also interested in purchasing green products.

With an overwhelming 64% of green product users having incomes below 8 million VND, it can be inferred that green products strongly appeal to lower-income groups. This may be attributed to the reasonable pricing of these products, aligning with the health and environmental protection needs that individuals with lower incomes also prioritize.

Data on the vocational fields of consumers in the survey of 405 green product users provides profound insights into their demographics and shopping contexts. The survey reveals that students hold a predominant position, constituting 47% of green product shoppers. Following this group are office employees, and 28% self-employed individuals at 15%.

Table 1. Description of the research sample

Personal Information	Details	Quantity	Percentage(%)
Gender	Male	166	41,5
	Female	234	58,5
Age	18 to 25 years old	277	69,3
	26 to 35 years old	76	19,0
	36 to 45 years old	35	8,8
	Above 46 years old	12	3,0
Income	Under 5 Million	123	30,8
	5 - 10 Million	167	41,8
	10 - 15 Million	84	21,0
	Above 15 Million	26	6,5
Purchase frequency	Under 3 times	172	43,0
	From 3 to 5 times	136	34,0
	More than 5 times	92	23,0

4.2. Measurement Model Evaluation

The model's reliability will be evaluated through the composite reliability coefficient CR (Composite Reliability) and the average variance extracted index AVE and factor loadings (Outer loadings). Each index used to evaluate reliability will have its specific standards:

Research by [66]has shown that a reasonable composite reliability coefficient (CR) is 0.7 or higher, which is reliable. As for observed variables whose aggregate reliability is below the standard level of 0.7, the scale needs to be considered and re-evaluated because it does not meet reliability requirements. Many other researchers, such as [67] and [68], also agree with the CR reliability assessment threshold of 0.7 or higher in their research.

The average extracted variance value AVE is also known as the convergent value. This index will indicate the internal convergence of observed variables within the same concept. The rating used for testing is the threshold of 0.5; That is, the AVE index of the observed variable above 0.5 is reasonable; if it does not reach the threshold of 0.5, it shows that the observed variable is having problems. At this time, it is necessary to recheck and adjust some inappropriate scales.

Finally, there are the Outer loadings factor loadings. Outer loadings measure unidimensionality, reasonableness, and appropriateness of scales and factors. This index has three evaluation thresholds as follows:

Above 0.7: At a reasonable level, the observed variable is valid and is retained

From 0.4 - 0.7: Observed variables will still be retained if they do not affect (increase) other indicators such as reliability (CR), convergent validity (AVE) and discriminant validity (Fornell - Larcker). Otherwise, it will be eliminated.

Below 0.4: Indicates that observed variables are not in the same direction so that they will be directly removed from the research model.

The authors have compiled the results of the necessary reliability assessment indicators through data processing using software, presented in Table 2 below.

Table 2. Determining the measurement model

Factor	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
ATT	0.866	0.867	0.903	0.651
SN	0.790	0.798	0.864	0.613
PBC	0.842	0.849	0.889	0.617
EC	0.861	0.864	0.900	0.643
MN	0.850	0.851	0.909	0.769
PB	0.888	0.889	0.923	0.750
CQ	0.810	0.811	0.888	0.725
PI	0.831	0.832	0.899	0.747
WTP	0.893	0.893	0.933	0.823

According to the results from Table 2 and Table 3, the observed variables in the article all achieve reliability consistent with the prescribed threshold: The composite reliability index (CR) is high, ranging from 0.864 to 0.933, all The average variance extracted AVE values are all greater than 0.5, and the Outer loadings are all greater than 0.7. Therefore, the observed variables (ATT, SN, PBC, EC, NN, PB, CQ) are reliable, and this research model is reliable enough to conduct research.

Table 3. Results of factor loading index (outer loading)

	ATT	SN	PBC	EC	MN	PB	CQ	PI	WTP
ATT2	0.827								
ATT3	0.812								
ATT4	0.824								
ATT5	0.803								
ATT6	0.769								
CQ1							0.863		
CQ2							0.849		
CQ3							0.842		
EC1				0.816					
EC2				0.774					
EC3				0.837					
EC4				0.760					
EC5				0.820					
MN1					0.896				
MN2					0.886				
MN3					0.848				
PB1						0.831			
PB2						0.885			
PB3						0.899			
PB4						0.846			
PBC1			0.715						
PBC2			0.853						
PBC3			0.837						
PBC4			0.804						
PBC5			0.705						
PI1								0.847	
PI2								0.880	
PI3								0.866	
SN1		0.753							
SN2		0.803							
SN3		0.784							
SN4		0.790							
WTP1									0.896
WTP2									0.931
WTP3									0.894

In addition to the above reliability assessment indices, the authors use the Fornell-Larcker index - discriminant value in this section to evaluate the discrimination of observed variables. The results of the Fornell-Larcker index analysis - discriminant value are shown in Table 4. A discriminant value is reasonable when: In a vertical row, the first value of a column is greater than the other values in the column, and in a horizontal row, the last value of the row must be greater than the previous values. Moreover, according to the results from Table 4, the indicators all meet the requirements, satisfying the discrimination in the article.

Table 4. Correlation matrix between conceptual structures according to the Fornell-Larcker standard

	ATT	SN	PBC	EC	MN	PB	CQ	PI	WTP
ATT	0.807								
SN	0.594	0.783							
PBC	0.617	0.650	0.785						
EC	0.696	0.604	0.589	0.802					
MN	0.491	0.642	0.591	0.531	0.877				
PB	0.511	0.594	0.616	0.560	0.632	0.866			
CQ	0.621	0.597	0.650	0.710	0.606	0.629	0.851		
PI	0.711	0.641	0.699	0.739	0.638	0.673	0.721	0.864	
WTP	0.516	0.618	0.669	0.566	0.660	0.639	0.630	0.642	0.907

4.3. Structural Model Evaluation

To evaluate the structural model, the team used least squares regression to conclude the impact between variables.

First, the team will evaluate the collinearity/multicollinearity between variables in the research model; the results are shown in Table 5. It can be seen that all VIF values fluctuate from 1.471 to 3.364; this satisfies statistical requirements when the values are below threshold 5. In the context of research and data analysis, the variables in the model are currently correlated with each other but not strongly and do not cause disturbance to the model. In other words, the accuracy and reliability of the estimated results from the regression model are still guaranteed. The highest VIF index is 3.364 in the WTP2 variable; this can be explained because both WTPs are dependent behavioral variables and are affected by other variables in the model. Next, research evaluates the level of impact from the independent variables to the dependent variable through the R squared and adjusted R squared index.

Table 5. VIF coefficient

Observed variables	VIF	Observed variables	VIF	Observed variables	VIF
ATT2	2.112	EC5	2.141	PBC5	1.520
ATT3	2.015	MN1	2.504	PI1	1.769
ATT4	1.994	MN2	2.474	PI2	2.027
ATT5	1.887	MN3	1.723	PI3	1.985
ATT6	1.681	PB1	2.021	SN1	1.538
CQ1	1.869	PB2	2.635	SN2	1.534
CQ2	1.709	PB1	2.914	SN3	1.586
CQ3	1.754	PB4	2.322	SN4	1.615
EC1	1.995	PBC1	1.471	WTP1	2.642
EC2	1.754	PBC2	2.621	WTP2	3.364
EC3	2.127	PBC3	2.465	WTP3	2.426
EC4	1.768	PBC4	1.887		

By definition, the R-squared and adjusted R-squared values are always in the range from 0 to 1, moving closer to 1, showing that the level of explanation of the independent variables to the dependent variables increases.

In the research model, two variables receive impact: PI and WTP, of which:

The adjusted R-squared of PI was 0.726, meaning that variables affecting PI, including MN, ATT, SN, PB, EC, CQ and PBC, explained 72.6% of the variation in the variance of PI.

Similarly, the adjusted R-squared of WTP is 0.528, in which WTP is influenced by EC, CQ, PBC and PI, and the above variables explain 52.8% of the variance of WTP - the assessment target. It can be seen that nearly 48% of the variation in WTP is still unexplained from the research model. The group will discuss this in more depth in the discussion section.

Table 6. R Squared and R Square Adjusted

	R Square	R Square Adjusted
PI	0.731	0.726
WTP	0.533	0.528

After determining the level of explanation of the independent variables on the dependent variable, we will compare the level of their impact, strong or weak, using the f-squared coefficient. The results are shown in table 7. According to [69], the two dependent variables, PI and WTP, have small and medium impact levels, respectively.

Specifically, the PI variable is influenced by most of the independent variables of the research model except SN, which has an impact level of 0. Which ATT and PB have the most

significant impact on PI with the f-squared index? Are 0.073 and 0.047. Regarding WTP, the independent variable PBC has an f-squared index of 0.129, showing the highest level compared to the variables that jointly influence WTP: CQ, EC and PI.

Table 7. f Square results

	ATT	SN	PBC	EC	MN	PB	CQ	PI	WTP
ATT								0.073	
SN								**0.000**	
PBC								0.040	0.129
EC								0.080	0.003
MN								0.025	
PB								0.047	
CQ								0.023	0.038
PI									0.025
WTP									

According to [70], the threshold for determining Q squared is proposed as follows: $0 < Q2 < 0.25$: low level of forecasting accuracy

$0.25 \leq Q2 \leq 0.5$: average level of forecast accuracy

$Q2 > 0.5$: High level of forecast accuracy

The forecasting model for the first dependent variable has high predictive ability, with a squared Q value of 0.533, exceeding the threshold of 0.5, proving the accurate forecasting ability of PI. The Q-squared value of WTP is 0.434, which is still quite average in forecasting ability. Thus, it can be seen that the model ensures relatively good prediction ability.

Table 8. Coefficient for assessing out-of-sample forecasting capacity**.**

	SSO	SSE	Q^2 (=1-SSE/SSO)
ATT	2.025.000	2.025.000	
SN	1.620.000	1.620.000	
PBC	2.025.000	2.025.000	
EC	2.025.000	2.025.000	
MN	1.215.000	1.215.000	
PB	1.620.000	1.620.000	
CQ	1.215.000	1.215.000	
PI	1.215.000	567.567	**0.533**
WTP	1.215.000	687.504	**0.434**

After evaluating the measurement model, the team conducted bootstrap analysis in SmartPLS with an exaggerated number of samples of 5000. The results of Bootstrap (Table 9) and Figure 2 are also the basis for concluding the impact relationship hypotheses.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
ATT → PI	0.214	0.215	0.050	**4.260**	0.000
SN → PI	0.011	0.016	0.039	0.291	**0.771**
PBC → PI	0.161	0.156	0.069	2.351	0.019
PBC → WTP	0.360	0.361	0.053	6.790	0.000
EC → PI	0.239	0.240	0.056	4.255	0.000
EC → WTP	0.059	0.058	0.065	0.913	**0.361**
MN → PI	0.120	0.122	0.055	2.188	0.029
PB → PI	0.165	0.162	0.049	3.379	0.001
CQ → PI	0.131	0.131	0.051	2.582	0.010
CQ → WTP	0.216	0.214	0.077	2.815	0.005
PI→ WTP	0.191	0.193	0.070	2.734	0.006

The group will compare the significance level of T-test P-values with the commonly used threshold of 0.05. The results show that P-values for most impact relationships are < 0.05 and are accepted. Two hypotheses are rejected, including SN → PI and EC → WTP, when the P-values for the respective variables are 0.771 and 0.361, where the variables ATT and EC to PI or PBC to WTP all have P-values equal to 0. Additionally, the Standardized Coefficient Original Sample indicates that the most substantial impact on the PI variable is EC with an index of 0.2392 and the most substantial impact on WTP is PBC with an index of 0.360.

As mentioned, the results of Bootstrapping are the basis for concluding whether to accept/reject the hypotheses proposed in the research model:

Hypothesis H1: Attitude affects consumer purchasing intention. With a P-value of 0.00, Hypothesis H1 is confirmed, demonstrating a significant relationship between attitude and customer purchasing intention.

Hypothesis H2: Subjective norm positively affects consumer purchasing intention. The statistical result with a P-value of 0.771, more significant than 0.05, indicates that subjective norm does not affect customer purchasing intention.

Hypothesis H3.1: Perceived behavioral control positively affects purchasing intention. This hypothesis is accepted with a P-value below 0.05, confirming the significant relationship in the research model.

Hypothesis H3.2: Perceived behavioral control positively affects customer willingness to pay. This hypothesis is accepted with a P-value of 0.00 below 0.05, affirming the significant relationship in the research model.

Hypothesis H4.1: Environmental concern positively affects consumer purchasing intention. With a P-value of 0.00 less than 0.05, Hypothesis H4.1 is accepted, demonstrating the meaningful impact of customer environmental concern on their purchasing intention.

Hypothesis H4.2: Environmental concern positively affects customer willingness to pay. With a P-value of 0.361 > 0.05, this hypothesis is rejected, meaning environmental concern does not affect their willingness to pay.

Hypothesis H5: Moral Norms positively affect consumer purchasing intention. The P-value result < 0.05 for Hypothesis H5 proves the influence of Moral Norms on customer purchasing intention.

Hypothesis H6: Past behavior positively affects purchasing intention. With a P-value nearly equal to 0 (0.001), it is concluded that past behavior influences customer purchasing intention.

Hypothesis H7.1: Consequence positively affects purchasing intention. The correlation between consequence and customer purchasing intention is demonstrated with a P-value < 0.05.

Hypothesis H7.2: Consequence positively affects customer willingness to pay. Similarly, the P-value < 0.05 indicates the positive impact of consequence on customer willingness to pay.

Hypothesis H9: Intention positively affects the willingness to pay level. With a P-value of 0.006 meeting the condition, Hypothesis H9 is accepted, proving that purchasing intention affects the customer's willingness to pay.

In conclusion, the study has proposed 11 research hypotheses, and nine have been accepted based on the significance level of P-values. This affirms a significant correlation or impact from independent to dependent variables, as predicted by the proposed model. These conclusions may have significant implications in the current economic and environmental fields and may provide new ideas for future strategies and decisions.

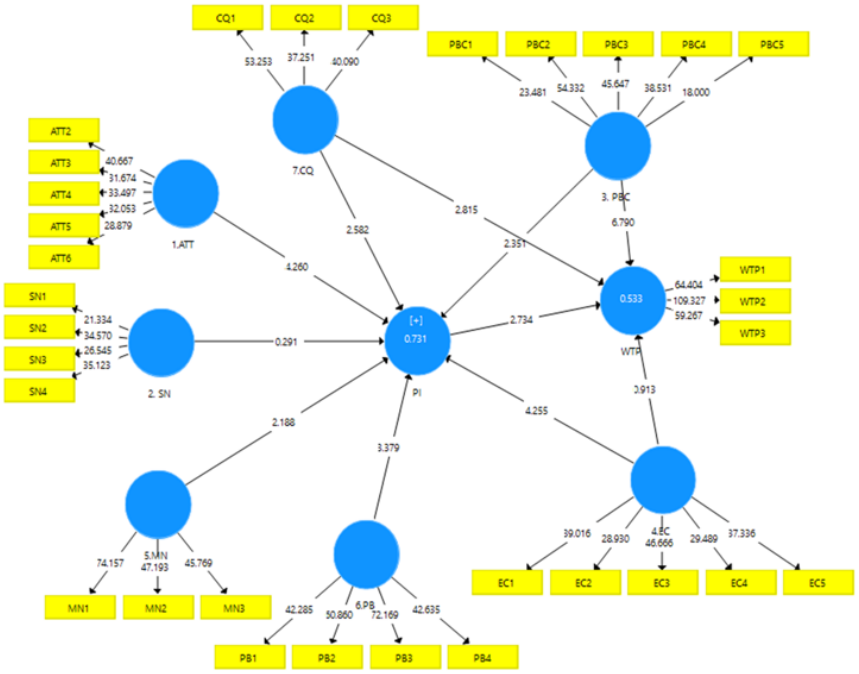

Figure 2. Path model

5. Discussion

5.1. Discussion of Research Results

The escalating environmental pollution poses a growing concern, impacting not only the climate but also directly affecting human life and health. With the emergence of new diseases, especially the COVID-19 pandemic, people have become more attentive to health and the environment. Human behavior has significantly shifted towards eco-friendly shopping and consumption. Consequently, businesses must adapt swiftly to keep pace with consumer trends and the spirit of the times.

Several enterprises in Vietnam have started focusing on reverse logistics processes to cater to these changes, including TH Dairy Joint Stock Company, Coca-Cola Vietnam Beverages Limited, and the Unilever Group.

Factors such as attitude, subjective norms, perceived behavioral control, environmental concern, Moral Norms, past behavior, and consequences are incorporated into the model to examine their impact on consumers' intentions regarding green purchasing, usage, and participation in the reverse logistics process of returning used products to manufacturers. These intentions, in turn, influence consumers' willingness to pay shortly.

Most of the surveyed group are above 22, with 65.4% females representing the most potential demographic. They tend to be more concerned about making environmentally friendly shopping choices. Understanding the factors that influence it is crucial to enhance and boost consumers' willingness to pay in reverse logistics activities. Therefore, this study utilizes a research model to identify the factors affecting Ho Chi Minh City consumer behavior. The authors evaluate the impact levels of these factors on consumers' intentions and Willingness, proposing solutions to promote consumer intentions in Ho Chi Minh City and, more broadly, in Vietnam.

Based on the theoretical basis, the working group has proposed research concepts including (1) Attitude, (2) Subjective norms, (3) Perceived behavioral control, (4) Environmental concern, (5) Moral Norms, (6) Past behavior; (7) Consequences; (8) Purchase intention; (9) Willingness-to-pay. The proposed research model predicts the influence of the above factors on consumer behavior in the reverse logistics process.

Based on the results of analyzing PLS-SEM version 3.2.9, the testing results of the hypotheses and relationships in the model are shown as follows:

Testing hypothesis H1, the research results show that Attitude positively affects intention with a standardized impact coefficient of 0.214 and P value = 0.000. Therefore, hypothesis H1 is accepted. This conclusion is similar to [38] study.

The research results of hypothesis H2 confirm that Subjective Norms have the same impact on purchase intention with a standardized coefficient β of 0.011 but are not statistically

significant at the 5% level (P value = 0.771). Therefore, this hypothesis is rejected; this conclusion is not similar to the study of [38].

Two hypotheses to test the impact of perceived behavioral control on purchase intention and willingness to pay are H3.1 and H3.2. According to the test results, hypotheses H3.1 and H3.2 have the same impact on purchase intention and willingness to pay, respectively. However, the impact level of H3.2 (β = 3.61) on willingness is greater than that of H3.1 (β = 0.156) on purchase intention. Both theories reach statistical significance below the 5% level, with P of H3.1 being 0.019 and H3.2 being 0.000. This hypothesis is accepted and is similar to the study of [36].

Like the Perceived Behavioral Control hypothesis, environmental concern affects intention (H4.1) and willingness (H4.2). The results show that H4.1 positively impacts consumption intention with a β of 0.239 and is statistically significant at the P=0.000 level. Therefore, hypothesis H4.1 is accepted. In contrast, hypothesis H4.2 has a minor impact on Willing-to-pay with β=0.059 and is not statistically significant because P=0.361 is less than 5%; this hypothesis is not accepted. This result is quite similar to [36] study.

The study results show that Moral Standards (MN) positively influence purchase intention with a standardized coefficient β of 0.120 and P=0.029, which is statistically significant. Therefore, hypothesis H5 is accepted; this result is similar to the study of Saumya Dixit et al. (2016).

In hypothesis H6, the results show that Past behavior positively influences purchase intention with a coefficient β of 0.165, statistically significant with P = 0.001. Therefore, hypothesis 6 is accepted. This result is similar to the study of [40].

Testing hypotheses H7.1 and H7.2, in which Consequences positively impact purchase intention (H7.1) with a standardized coefficient β of 0.131 and Consequences also positively impact availability. Sieve (H7.2) with β of 0.216. Both theories are statistically significant at P= 0.010 and P= 0.005, respectively. Therefore, these two theories are accepted, as in the research of [40]

Hypothesis H8 aims to test the impact of Purchase Intention on Customers' Willingness to Pay. Hypothesis H8 has a positive impact, with the standardized β coefficient reaching 0.191. Regarding statistical significance, the hypothesis has P = 0.006, so the hypothesis is accepted. This conclusion is similar to the study of [36].

In summary, the study accurately anticipated contemporary consumer trends and selected an appropriate research methodology, with most proposed hypotheses being accepted. However, there are still significant ways to improve the study. The survey data collected in Ho Chi Minh City, Vietnam, is constrained by cultural, social, and geographical factors. The research could benefit from a more extensive and diverse sample drawn from a population with broader

geographic representation, encompassing both developed and developing regions or across different countries.

Furthermore, the research team recommends expanding the scope of the study to consider finer filters and select specific consumer groups with intentions to use particular green products. The study's R-squared values for Consumer Purchase Intentions (PI) and Consumer willingness to pay (WTP) are 0.726 and 0.528, respectively. This implies that the explanatory variables only account for 72.6% of the variance in Purchase Intentions and 52.8% in willingness to pay. This suggests that the study could be enhanced by incorporating additional variables, such as interests, income, education level, and religious beliefs, to examine the acceptance of green products and the environmental green agenda among different consumer groups.

These studies are vital in robustly enhancing the nation's efforts toward achieving environmental, economic, cultural, and social sustainability.

5.2. Comparison with previous studies

Purchasing intention in green supply chains is an attractive topic for many scientific researchers. Previous studies on factors affecting customer buying behavior in green supply chains have demonstrated the positive impact of observed variables on purchase intention. Previous studies show that researchers on this issue have adopted quite similar and popular observation variables in purchasing behavior research: Attitudes, subjective norms, and perceived control. Behavioral control such as [37], [71]. Moreover, the team's model continues to use those observed variables in this research topic. In addition, [38] and [36] added another observed variable, EC, to their model to identify more factors affecting customers' purchasing behavior. Saumya et al. (2016) model also has other observed variables: Moral norm,...

The results of the data analysis in this study not only contribute to the existing body of research but represent a breakthrough, highlighting both relevant similarities and unexplored aspects overlooked in prior studies. Throughout the research process, we encountered hypotheses that lacked statistical significance and were subsequently rejected. Nonetheless, we could underscore the substantial influence of independent variables such as Attitude, Subjective Norms, Perceived Behavioral Control, Moral Norms, Past Behavior, and Consequences on Purchase Intentions and Willingness to Pay among consumers.

Against the backdrop of global and Vietnamese environmental concerns, where environmental issues have become increasingly salient, this study scrutinizes the impact of independent variables on purchase intentions and extends its inquiry into purchase intentions to explore consumers' willingness to pay.

This research not only inherits reasonable observational factors from previous studies but also introduces new hypotheses, emphasizing additional impact indicators. Executed within a major city in Vietnam, where environmental topics are paramount, the anticipated outcomes of

this study are expected to provide positive indicators, contributing to the awareness and management of current environmental challenges.

5.3. Proposed management implications

Boosting Purchase Intentions through Direct Communication

Utilizing direct communication at the point of sale is an effective method to integrate environmental content into modern sales processes. The nature of word-of-mouth communication aligns well with the socio-cultural aspects of the human environment, particularly in Vietnam. Organizing training sessions on environmental communication for sales managers, product consultants, and relevant staff at retail stores can be implemented. During these training sessions, employees will be trained to convey environmental information persuasively and provide consumers with knowledge, positively influencing them regarding differentiating information, the benefits, and the significance of daily customer activities, such as waste management and purchasing green products.

Enhancing the Number of Recycling Collection Channels to Stimulate Customer Interest

Currently, consumers are highly concerned about environmental issues and their impact on waste reduction through product and packaging choices. Therefore, logistics companies need to establish effective recycling collection channels to draw more attention from consumers. The distribution of these channels should be reasonable, avoiding excessive concentration, which may incur additional costs for businesses. Conversely, sparse distribution makes it difficult for consumers to return used products to the manufacturer. Additionally, businesses should consider direct transportation to consumers' homes or a centralized collection point for efficiency and time savings. This approach also helps businesses alleviate pressures related to sourcing production materials and inventory management, optimizing costs for materials. The saved costs can be invested in promoting products across various traditional and modern channels to increase brand visibility and facilitate easier access to green and recycled products.

Establishing Transparent Processes in Collection, Recycling, and Product Delivery

Consumers believe that returning used products to manufacturers for recycling is beneficial. However, there is often skepticism about whether businesses' products are genuinely environmentally friendly. To address this, businesses should establish transparent collection and recycling processes to build consumer trust. The higher the trust level, the more likely businesses can build loyalty and attract new customers. Building and Developing Sales Channels Consumers state that they have the resources to buy green products and are willing to pay more for recycled products. Therefore, businesses should create sales channels to capture consumer attention. Developing independent sales channels can be slow and challenging; hence, businesses need to collaborate with shopping centers, stores, supermarkets, convenience stores, and groceries to provide convenience for customers. Developing sales channels helps businesses generate profits

and makes customers fond of the business by creating ready availability of green products. Moreover, with the current shift in consumer purchasing habits from in-person to online shopping, businesses must focus on online sales. Selling products online through the business's website or e-commerce platforms like Shopee, Lazada, Tiki, etc., will help businesses effectively meet customer needs and preferences.

Creating Effective Promotion and Marketing Policies

Enhance the promotion of products during special occasions, such as Earth Day, to encourage consumers to adopt environmentally friendly shopping and reduce the use of environmentally harmful products. Additionally, promotional programs can attract new customers and enable those with low incomes to test the products. These programs help build customer loyalty, encouraging repeat purchases in the future. Moreover, logistics companies falsely claim that many counterfeit and low-quality products are green in today's market. Therefore, businesses need to control product distribution points closely to avoid mixing fake products, which can affect the business's credibility.

5.4. Limitations of the Study

This study has provided valuable findings in identifying factors influencing green consumer behavior within a green supply chain integrated with reverse logistics. However, several limitations should be acknowledged to inform future research directions.

Firstly, the survey scope was limited to Ho Chi Minh City—a central urban area with a young population and relatively high environmental awareness. As a result, the findings may not represent the broader population in other regions of Vietnam, mainly rural areas or provinces where green consumption is less prevalent.

Secondly, the data collection method relied on self-reported responses via online surveys, which may introduce social desirability bias. Respondents might be inclined to provide answers they perceive as socially acceptable, potentially affecting data accuracy.

Thirdly, the research model does not encompass all possible external factors influencing green consumer behavior. This study did not include variables such as government policy support, mass media communication, and corporate social responsibility activities.

Lastly, the cross-sectional design limits the ability to assess behavioral changes over time or to establish causal relationships between variables. This restricts the study's capacity to explain long-term trends in green purchasing behavior.

5.5. Suggestions for Future Research

To overcome the abovementioned limitations, future studies should consider expanding the survey scope to include various regions across Vietnam, mainly rural areas and developing provinces. This would allow for a comparative analysis of green consumer behavior across diverse socio-economic and cultural contexts and help tailor more region-specific strategies.

Furthermore, longitudinal research designs should be employed to observe consumer awareness, intention, and behavior changes over time. This approach would enable the evaluation of the long-term effectiveness of environmental communication programs or green consumption policies.

Future studies should also integrate external factors such as media influence, environmental education, government incentives for green production, and public perception of corporate responsibility. Doing so would provide a more comprehensive understanding of the drivers and barriers to green consumer behavior.

In addition, combining quantitative and qualitative methods—such as in-depth interviews and focus group discussions—can uncover underlying motivations or personal obstacles that may not be captured through quantitative surveys alone.

Finally, researchers are encouraged to segment consumers based on demographic (age, income, education) and psychographic (values, environmental concern) characteristics. This segmentation would support the development of targeted communication strategies and marketing campaigns to enhance the effectiveness of green consumption promotion efforts in the future.

6. Conclusions

Based on the profound results of the study, several significant conclusions can be drawn regarding the impact of various factors on consumer purchase intention and their willingness to pay in the reverse logistics field. The key points that can be highlighted are as follows:

The study has confirmed several crucial factors that positively influence the purchase intention and willingness to pay consumers. Notably, a positive attitude substantially impacts purchase intention, supporting the perspective of previous research [38]. Additionally, the perception of behavioral control plays a crucial role, especially in positively impacting the willingness to pay. Special attention to the environment has positively contributed to the purchase intention, demonstrating consumers' sensitivity to environmental issues. Moral norms also positively influence purchase intentions, reflecting the trust and value consumers associate with businesses. Past behavior not only significantly influences the purchase intention but also demonstrates the impact of personal past experiences on current purchasing decisions. The consequences of shopping behavior not only contribute to shaping the customer’s intention but also considerably impact their willingness to pay.

These results highlight the importance of the environment and health in purchasing decisions and underscore the significant role of factors such as ethics and past behavior. In the current context, where environmental pollution and community health become more crucial than ever, businesses need to be flexible and proactively change their business strategies to meet the

needs and values of consumers. Moreover, government intervention can significantly impact green consumerism in Vietnam.

By promoting awareness of the environment and green consumption, we can create long-term benefits for both businesses and society. This is not just a current business trend but also a commitment to sustainability, a way to build consumer trust and shape the future we collectively aspire to build.

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