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Factors Influencing Consumer Behavior Towards Green Consumption: An Empirical Study in Vietnam

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Abstract

This study aims to investigate factors influencing customer behavior towards nylon bags and single-use plastics. These factors are environmental protection awareness, health protection awareness, sense of responsibility, expectations, and green marketing. A quantitative method with the use of surveys is deployed to collect data of young people under 30, generating 1650 valid responses. The collected data is then analyzed with SPSS 22, using Cronbach's Alpha and Exploratory Factor Analysis to test the reliability of the model before validating the hypotheses by regression analysis. The study found that the majority of respondents are inclined to use plastic bags, despite their environmental awareness. The results also demonstrate that health consciousness, environmental concerns, self-driven responsibility for the sustainability of young people have a significant impact on their behaviors in using nylon bags and plastic products, whereas expectation and green marketing are confirmed not to be the factors. The study suggests that if green marketing is to gain higher influence, an increase in research and development to support other environmentally friendly packaging would be the right path. Finally, this research proposes some feasible recommendations for the government, which include imposing bolder and more targeted environmental policies on consumers and introducing educational campaigns to raise awareness about minimizing plastic consumption.

Keywords: Consumer Behavior, Green Purchase, Nylon Bags, Single-use Plastics, Vietnam

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Vietnam is undergoing rapid industrialization and urbanization, which has resulted in an increase in the domestic waste, particularly plastic bags, which take a long time to decompose (Huong et al., 2021). The positive aspects of nylon bag production and consumption have overshadowed the negative effects on the environment (Olden, 2018). As a result, despite warnings concerning massive and varied dangers to the environment and human health, nylon bags are widely used in many nations throughout the world and have become an urgent challenge in environmental management in most developing countries, including Vietnam (Nguyen & Hoang, 2018). While the natural environment has a certain load-bearing capacity, the rapid population growth leads to a lot of untreated waste being discharged into the environment, thus exceeding the self-cleaning and recovery capacity of the environment. Naturally, it will inevitably lead to heavy environmental pollution. Vietnam, like many other developing countries with a huge population and lower-middle-income, is struggling with declining natural resources and pollution.

Along with the development of the world economy, nylon bags and single-use plastics are more and more widely used and also used once and then discharged into the environment (Uemura et al., 2020). This is not only an economic waste but also an incalculable danger to humanity. Recognizing the harmful effects of plastic bags on the environment and public health, many countries around the world have strong solutions to solve this problem, such as: promulgating a ban on the production of non-degradable nylon bags; heavy tax on the production of non-biodegradable nylon bags has

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been applied in Taiwan, China, the United Kingdom and some states in the United States, Switzerland, South Africa, and Denmark (Ahmad & Zhang, 2020). In addition, these countries also require consumers to pay for plastic bags when making purchases to encourage people to reuse plastic bags or use environmentally friendly bags. Some countries in Africa, such as Uganda, Kenya, Tanzania, etc. have also started banning imports, production of plastic bags, and increased taxes on plastic bags to minimize their negative impacts on the environment (Chen, 2013).

The adverse impact of plastic bags on the environment has received significant worldwide attention. As a result, many studies have been conducted to understand the customer behaviors towards nylon bags and single-use plastics, such as Synthia and Kabir (2015), Khan et al. (2020), Arı and Yılmaz (2017), Su et al. (2021), and Le (2021). For example, Khan et al. (2020) report a significant concern about the climate change of academics and practitioners in Malaysia and Thailand due to bad consumers' behaviors and suggested a model for changing these behaviors. This study emphasizes the importance of three factors, which are law enforcement, personal knowledge, and awareness of environmental protection in changing customers' attitudes and behaviors towards nylon bags and plastics products. Synthia and Kabir (2015) demonstrated that it is essential to ban plastics products and change customers' attitudes about using them. They find no relationship between demographic factors such as age, income, occupation, and the awareness of using eco-friendly or biodegradable shopping bags. Su et al. (2021) and Le (2021) conducted studies in the Vietnamese market and suggested that young people's purchase intention depends on their interests and perceptions. However, these studies did not show a critical link between family-related factors, friend-related factors, environmental protection awareness, health concerns, and the purchase intention to use plastic bags.

To assess consumers' demand for green products and propose solutions to increase their awareness of green products, especially with young people, the authors decided to research the topic "Factors influencing the behavior of the young towards using nylon bags and single-use plastics." With this topic, the authors will study the factors affecting green product consumption behavior. First, the study begins with understanding, comparing, and drawing out the differences, advantages, and disadvantages of green products vs. single-use plastic and nylon bags. Next, the research will identify the factors and problems that make it difficult for young people to use green products. Based on that, some recommendations are provided in the final part of this research for the authority. They can consider solutions to help young people and the community be more aware of environmental protection, leading them to be closer to green products, guiding young people towards the observance and good implementation of the law on environmental protection provisions.

2. Literature Review and Hypotheses

2.1. Literature Review

Due to the increasing demand and popularity of nylon bags and plastics products and their consequences to the environment, consumers' behaviors toward these products have received much attention from academics and practitioners (Ahmad & Zhang, 2020; Ansar, 2013). For example, the theory of action explains the individual's actions and social actions in using cloth bags instead of plastic bags to limit the amount of waste from nylon to the environment, causing environmental pollution (Liu et al., 2020). In this theory, social habits are mentioned, while social action is inherited and perfected. Additionally, the information provided according to the purpose of the study is expected to help people change their habits and perceptions through social interaction. On the other hand, behavioral theory highlights the consumer behavior when using nylon bags, environmental conditions that are likely to change behavior from using nylon bags to using cloth bags (Ajzen, 2011; Davis et al., 2015). And ways to strengthen and maintain this habit. In addition, the behavioral theory is also used to examine the consequences of changing behavior from using plastic bags to using cloth bags, thereby finding ways to intervene and change bad behaviors and support to maintain good ones (Glanz & Bishop, 2010). Last but not least, cognitive theory aims to comprehend the individual understanding of the negative impacts of plastic bags while also assisting individuals in realizing the value of cloth bags in the environmental campaign, thereby creating the habit of utilizing cloth bags in daily life (Borza, 2017; Kuzik et al., 2020). When people are aware of the importance of cloth bags and change their habits to using green products, this will reduce waste problems and limit environmental pollution; from there, it is possible to replicate the non-woven bag model to the community (Martin & Santos, 2016).

Empirical studies, by contrast, investigate which factors and to what extent these factors influence the customers' behaviors towards nylon bags and single-use plastics. For example, Synthia and Kabir found a significant link between consumers' awareness of environmental issues and their willingness to bring about behavioral changes in shopping bags. However, they did not find evidence suggesting the correlation between demographic factors and customers' behaviors towards plastics products. These findings are supported by those of Arı and Yılmaz (2016). They argued that environmental consciousness, social pressure, law enforcement, and interest in using cloth bags are employed as latent variables influencing consumers' behaviors to use plastic bags. In other words, consumers will switch to cloth bags if they have faced social pressure or are environmentally conscious. Lam and Chen (2006) presented a

model for predicting which factors influence customers' bag-use habits, based on a new Taiwan law prohibiting the usage of plastic bags. The research results showed that attitude, environmental concern, and self-responsibility are the determinants of customer' bag-use behaviors.

In Vietnam, some academics and practitioners have raised their concerns about the severe losses and the tremendous damages that nylon bags and plastic products have brought to the Vietnamese environment. Consequently, changing purchasing behaviors into an eco-friendlier has become a popular topic in many conferences and studies. For instance, Su et al. (2021) found a significant impact of environmental lifestyle and retailers' environmental reputation on shopping behavior concerning sustainable packaging. This confirms the importance of environmental awareness in changing shopping styles mentioned in Lam and Chen (2006) and Arı and Yılmaz (2016). Le (2021) further investigated customer purchasing behavior from a green marketing perspective among Vietnamese students. This study suggested that green commodity, green cost, green convenience, and green communication influence green purchasing decisions. Bui et al. (2021) and Nguyen et al. (2020) Nhu et al. (2019) studied which factors and to what extent these factors affect the intention to purchase green products in Vietnam. They agreed that social and environmental sustainability awareness positively impacts the altruism of customers who are interested in green consumption. It means that the purchase intention to use eco-friendly products instead of nylon bags or plastics products is determined mostly by the customers' awareness of sustainability and their responsibility to protect the environment.

In conclusion, many studies have examined the determinants of customer behaviors in using nylon bags and plastics products with a harmonious result. They all confirm the significance of environmental protection awareness and personal responsibility to change their bad behavior into eco-friendliness. However, they ignore the impact of health consciousness and expectations on consumer behaviors. Furthermore, with the increasing importance of sustainability and environmental protection, especially in developing countries like Vietnam, where these factors are traded with industrialization and economic development, this topic should be further discussed. The author expects to suggest a new model with more data to investigate which factors and to what extent these factors influence the consumer behaviors in using nylon bags and plastics products in Vietnam.

2.2. Hypotheses Development

The study aims at examining the relationship between customer behaviors in using nylon bags and single-use plastics products (dependent variable) and their determinants (5 independent variables). To this end, 5 hypotheses are proposed as follows:

There has been a wide range of studies discussing the relationship between environmental concern and green purchase intention. According to Robert and Bacon (1997), environmental concern is defined as "the degree of emotionality, the amount of specific factual knowledge, and the level of willingness as well as the extent of actual behavior on pollution-environmental issues." Chen (2013), when investigating the relationship between environmental awareness and green purchase intention, confirms that they positively affect one another. To support this consideration, Ari and Yilmaz (2017) yield a similar conclusion that the increase in environmental awareness can lead to the intensification of using cloth bags instead of plastic ones. As can be seen from previous studies, it is possible that when it comes to using nylon bags, the more aware individuals become, the more environmental products they will use.

H1: *Environmental protection awareness towards the use of single-use plastic bags and nylon bags exerts a positive impact on customer behaviors towards these products.*

With reference to Xu et al. (2020) and Yadav and Pathak (2017), health consciousness is the customers' daily concern towards health protection. Despite the scarcity of research discussing this issue, health protection awareness is still claimed to significantly affect customer purchase behaviors in the aforementioned studies. To further support this suggestion, Nguyen et al. (2020) conducted research in Vietnam to investigate the elements affecting the intention of customers to purchase green products. The researchers later concluded that customers' attitudes and intentions while purchasing environmentally friendly goods can be positively influenced by health consciousness.

H2: *There is a positive association between health protection awareness and customer behaviors towards the use of single-use plastic bags and nylon bags.*

Regarding consumer social responsibility, according to Roberts (1995), a customer with a sense of responsibility will purchase products and services that are considered to protect the environment and use his or her influence to raise other people's awareness about the environment. Recent studies also emphasized the significance of consumer social responsibility, which is proposed to implement activities that can bring benefits to humans, the environment, and solidarity, and suggested as a duty that customers should implement to improve the society (Vitell, 2015). In addition, Xu et al. (2017) also agreed that moral factors like responsibility will positively affect individuals' actions towards protecting the environment.

H3: *Sense of responsibility for the use of single-use plastic bags and nylon bags positively influences customer behaviors toward these products.*

Regarding customers' expectations towards the use of single-use plastic bags and nylon bags specifically, there are not many studies discussing this issue. Customer behavior is the actions and the decision processes of people who purchase goods and services for personal consumption. The definition of customer expectation is shared among researchers (Tyron, 1994). According to Oliver (1980), a "person can have an expectation as a forecast for what might happen in the future, which is formed when he or she considers various sources of information such as past experience or current incidents." During the 2000s, Kim and Lennon (2008) also emphasized that expectations can expand customers' product knowledge and boost their favorable experiences, which positively affects purchase. This suggestion is also supported by Krishnamurthy (2015) that "they influence decisions before purchase and help determine satisfaction after purchase."

H4: *Expectations when using single-use plastic bags and nylon bags are positively associated with customer behaviors toward these products.*

The impact of green marketing on consumer purchase intention has been thoroughly studied in the past. Green marketing refers to the practice of developing and advertising products based on their real or perceived environmental sustainability (Ansar, 2013) Moreover, according to Le (2020), it is concluded that green marketing such as advertisements, an ecological packaging, green commodity, green cost, etc have a positive influence on consumer purchase intention. On the other hand, greenwashing is known as a tactic used to make false claims about a firm's actions when it comes to protecting the environment (Marquis et al., 2016). Since misleading statements about environmental aspects are created to improve the public image of a firm, Ahmad and Zhang (2020) confirmed that greenwashing is negatively related to green purchase intention.

H5: *Green marketing for using single-use plastic bags and nylon bags is positively related to customer behaviors toward these products.*

3. Research Methods

The quantitative method is used as the methodological approach in this study. The author uses a Google form to conduct surveys and then sends them to selected participants via email on electronic devices (smartphones, laptops, and computers). Then, to increase the number of participants, we also send the questionnaires to social media users under 30 years old. Therefore, the target research participants are students, teachers from many universities in Vietnam, office workers, social network users. The research period starts from May 3, 2021, to May 22, 2021. After May 22, 2021, the authors collected 1650 survey questionnaires. The data was then reprocessed and analyzed according to the proposed Likert scale. To demonstrate the impact of 6 different independent variables on the behavior of using single-use plastic and nylon bags, the authors will research with five independent variables: demographics, awareness on environmental protection, health awareness, sense of responsibility, expectations, and green marketing. The analysis in this research will be supported by IBM SPSS Statistics 20 software.

A model with six different dependent variables is built as follows (Table 1):

$$BEH = \alpha + \beta_1 \times ENV + \beta_2 \times HEA + \beta_3 \times RES + \beta_4 \times EXP + \beta_5 \times GMK + u$$

In which: α is the intercept coefficient, β_1; β_2; β_3; β_4; β_5; are slope coefficients, and u is error

4. Results and Discussion

4.1. Reliability and Validity

The Cronbach's Alpha reliability scale for the independent variable Environmental protection awareness (ENV) is 0.968 > 0.8, indicating that it meets the criteria for reliability and that the scale is extremely good (Table 2). Because the value of Cronbach's Alpha if Item Deleted of the scale ENV2, ENV3, ENV4, and ENV5 is equal to 0.956, 0.953, 0.958, and 0.958, respectively, all less than 0.968; so these four scales are retained in the measure of Environmental Protection Awareness. However, the value of ENV1 is equal to 0.977 > 0.968, so it must be removed from this scale. In other words, the four scales ENV2, ENV3, ENV4, and ENV5 used for the Environmental awareness variable are reliable and good to use.

The Cronbach's Alpha reliability scale for the independent variable Health Protection Awareness (HEA) is 0.917 > 0.8, indicating that it meets the criteria for reliability and that the scale is extremely good (Table 2). The value of Cronbach's Alpha if Item Deleted of the HEA2 and HEA3 scales are equal to 0.866 and 0.846, respectively, all less than 0.917, therefore, these scales are retained in the scale of Health Protection Perception. However, the HEA1 scale equal to 0.919 is larger than 0.917, so it must be excluded from the health protection awareness scale. In other words, the two scales HEA2 and HEA3 used for the variable Health protection perception, are both reliable and good to use.

Table 1: List of Independent and Dependent Variables

Variable	Meaning	Role	Measurement	Model
BEH	Customers behaviors	Dependent variable	Frequency of using nylon bags and single-use plastic products	BEH
ENV	Environmental protection awareness	Independent variable	Poor air quality	ENV1
			Ecosystem destruction	ENV2
			Heavy polluted rivers and streams	ENV3
			Urban flooding	ENV4
			Animal casualties	ENV5
HEA	Health protection awareness	Independent variable	Diseases of the digestive system, respiratory system	HEA1
			Miscarriage, conceiving problems	HEA2
			Congenital disabilities, children's developmental problems	HEA3
RES	Sense of responsibility	Independent variable	Waste collection, classification, and treatment appropriately	RES1
			Plant more trees	RES2
			Limit the use of single-use plastic and nylon bags	RES3
			Use green products	RES4
EXP	Expectations	Independent variable	Clean air	EXP1
			Clean water source	EXP2
			Improved ecosystem	EXP3
			Plants and animals are protected	EXP4
			Environmental Protection law	EXP5
GMK	Green marketing	Independent variable X6	Propagate to protect the environment	GMK1
			Convenient product	GMK2
			Fair price	GMK3
			Good product quality	GMK4
			Safe for humans and animals	GMK5
			Eco-friendly product life cycle	GMK6

The Cronbach's Alpha reliability scale for the independent variable Sense of Responsibility (RES) is 0.944 > 0.8, indicating that it meets the criteria for reliability and that the scale is extremely good (Table 2). The value of Cronbach's Alpha if Item Deleted of the RES1, RES2, RES3, and RES4 scales is equal to 0.943, 0.911, 0.916, and 0.934, respectively, all less than 0.944, therefore, these four scales are retained in the scale of Sense of Responsibility. In other words, all four scales, RES1, RES2, RES3, and RES4 used for the variable sense of responsibility, are reliable and good to use.

The Cronbach's alpha reliability scale for the independent variable Expectations (EXP) equals 0.982 > 0.8, indicating that it meets the criteria for reliability and that the scale is extremely good. The value of Cronbach's alpha if Item Deleted of the EXP1, EXP2, EXP3, EXP4, and EXP5 scales is equal to 0.976, 0.977, 0.976, 0.981, and 0.977, respectively, all less than 0.982, therefore, these five scales are retained in the Expectation scale. In other words, all five scales, EXP1, EXP2, EXP3, EXP4, and EXP5 used for the Expectations variable, are reliable and good to use.

The Cronbach's Alpha reliability scale for the independent variable Green Marketing variable (GMK) is 0.959 > 0.8, indicating that it meets the criteria for reliability and that the scale is extremely good (Table 2). The value of Cronbach's Alpha if Item Deleted of the GMK1, GMK2, GMK4, GMK5, and GMK6 scales is equal to 0.949, 0.949, 0.949, 0.951, and 0.949, respectively, all less than 0.959; thus, they can be retained in the Green Marketing scale. However, the value of GMK3 (= 0.964) is larger than 0.959, so it must be excluded from the Green Marketing scale. In other words, GMK1, GMK2, GMK4, GMK5, and GMK6 used for the Green Marketing variable are all reliable and good to use.

From the results of the rotation matrix, the variables GMK1, GMK2, GMK5, and GMK6 will be excluded. This is

Table 2: Cronbach's Anpha Test

Variables	Meaning	Model	Cronbach's Alpha If Item Deleted	Cronbach's Alpha
ENV	Environmental protection awareness	ENV1	0.977	0.968
		ENV2	0.956	
		ENV3	0.953	
		ENV4	0.958	
		ENV5	0.958	
HEA	Health protection awareness	HEA1	0.919	0.917
		HEA2	0.866	
		HEA3	0.846	
RES	Sense of responsibility	RES1	0.943	0.944
		RES2	0.911	
		RES3	0.916	
		RES4	0.934	
EXP	Expectations	EXP1	0.976	0.982
		EXP2	0.977	
		EXP3	0.976	
		EXP4	0.981	
		EXP5	0.977	
GMK	Green marketing	GMK1	0.949	0.959
		GMK2	0.949	
		GMK3	0.964	
		GMK4	0.949	
		GMK5	0.951	
		GMK6	0.949	

because, first, the variable GMK1 uploads in Component 1 and Component 2, with a load factor of 0.627 and 0.616, respectively, which violates the discriminant in the rotation matrix besides having a load factor difference of less than 0.3. Second, the variable GMK2 uploads in both factors, Component 1 and Component 2, with a load factor of 0.539 and 0.652, respectively, which violates the discriminant in the rotation matrix, besides having a load factor difference of less than 0.3. Third, the GMK5 variable is uploaded in both factors, Component 1 and Component 2, with a load factor of 0.663 and 0.572, respectively, which violates the discriminant in the rotation matrix besides having a load factor difference of less than 0.3. Finally, variable GMK6 is uploaded in both factors, Component 1 and Component 2, with a load factor of 0.667 and 0.585, respectively, which violates the discriminant in the rotation matrix besides having a load factor difference of less than 0.3.

Next, the study will conduct the second EFA exploratory factor analysis after removing the four observed variables GMK1, GMK2, GMK5, and GMK6.

In the second time of KMO and Bartlett's Test, the results show that $0.5 \leq KMO = 0.874 \leq 1$; factor analysis is accepted with the research data set. Furthermore, the significance value of Bartlett's Test = 0.000 < 0.05, which means that factor analysis is appropriate. The rotated component matrix shows that the Eigenvalue = 1.668 ≥ 1, and three factors extracted from the data set have significant meaning. Moreover, total variance explained = 85,874 ≥ 50% indicates that the EFA model is suitable, and those factors above can explain 85.874% of the variance of the observed variables. The results of the rotation matrix show that 16 observed variables are grouped into three factors; all observed variables have Factor loading coefficients greater than 0.5.

Table 3: Coefficient Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.167	0.458		6.920	0.000		
	ENV	0.172	0.141	0.159	5.217	0.000	0.346	2.890
	EXP	0.019	0.142	0.015	0.136	0.892	0.464	2.154
	HEA	0.129	0.122	0.131	2.661	0.008	0.387	2.584
	RES	0.360	0.129	0.327	2.801	0.006	0.432	2.315
	GMK	0.094	0.126	0.089	0.745	0.458	0.410	2.437

[a]Dependent Variable: BEH.

4.2. Hypotheses Testing and Discussion

The value R^2 = 0.065 means that 6.5% of the variance of the dependent variable being studied is explained by the variance of the independent variable. In other words, the variance of BEH (6.5%) is explained by the 5 independent variables GMK, EXP, RES, ENV, and HEA. The Durin-Waston value of 1,704 is in the range of 1.5 to 2.5, so no first-order autocorrelation occurs. The sig value (of the *F*-test) = 0.055 = 0.05, means that the model has statistical significance. Thus, the multiple linear regression model fits the data set and is usable (Table 3).

Table 3 illustrates the relationship between five independent variables, including environmental protection awareness (ENV), expectation (EXP), health consciousness (HEA), sense of responsibility (RES), and green marketing (GMK), and one dependent variable – customer behaviors in using nylon bags and plastics products (BEH). The results show that all independent variables are positively associated with the dependent variable because their slopes are all positive. However, expectations and green marketing are not statistically significant because their *p*-values are higher than 0.05. It means that these factors do not influence customer behaviors in using nylon bags and plastics products, as mentioned in Bui et al. (2021), Nguyen et al. (2020, and Nhu et al. (2019). Interestingly, HEA, ENV, and RES are the most important determinants of BEH since the *p*-values of these factors are under 0.05. It means that with a confidence level of 95%, it can be said that health consciousness, environmental protection awareness, and responsibility for sustainability and the environment of young people influence their behaviors in using nylon bags and plastics products. The positive correlation between these variables shows that young people would change their behaviors to be more environmentally friendly if they increase their environmental awareness and responsibility, as well as their health consciousness.

5. Conclusion and Recommendations

5.1. Conclusion

This study found out that a majority of respondents (92.3%) have environmental awareness but they still consume plastic bags on a daily basis. Since plastic bags are usually provided free throughout Vietnam, customers are likely to use them excessively. The results of the research established that the most powerful antecedent in affecting purchase behaviors of young consumers is health consciousness followed by environmental protection awareness, and responsibility for sustainability and the environment, with a strong positive correlation between these variables. It indicates that young people will change their behavior to an eco-friendlier approach if there is a rise in their awareness and responsibility to protect their health and the environment. These findings are in line with earlier research focusing on factors influencing consumers' green behaviors (Lam & Chen, 2006; Arı & Yılmaz, 2016). Making an injunctive norm stand out in a situation where a descriptive norm encourages undesirable behavior could be a strong way to encourage a number of pro-environmental behaviors.

5.2. Policy Recommendations

Various forms of practical recommendations can be given on how to reduce the use of nylon and disposable bags, a product that causes remarkable damage to both the ecosystem and human health. First, the government should introduce bolder environmental policies regarding the purchase and consumption of plastic bags such as promulgating a ban on the production of non-degradable nylon bags, offer tax incentives for plastic-free shops, or require consumers to pay extra money for plastic bags to urge them to use eco-friendly or cloth bags. Other countries, such as Japan,

have banned the practice of giving away free plastic bags in retail stores to implement the reusable bag lifestyle with the Japanese people. That strategy had an immediate impact when plastic bag usage at stores fell by more than 50% in the first two months. Furthermore, educational campaigns at all levels would appear to be a measure to promote reuse and recycling behavior, which could help to reduce plastic usage. Moreover, policies need to be more focused on a specific group of people. Young people, for instance, are the primary users of e-commerce platforms, and they have a strong demand for packaging. As a result, efforts directed at the youth to reduce plastic waste from online shopping are more likely to succeed.

Second, the analytical results of our investigation provide a good suggestion for the producers and consumers of nylon packaging. For companies and manufacturers, more investment in research and development activities is required to support the growth of alternatives to present packaging materials. As drawn from this study, health consciousness is the main determinant that affects young consumers' use of single-use plastics in Vietnam. Therefore, in place of package appearance, companies should put greater emphasis on the safety of packaging and its protective capability. It may include avoiding the use of hazardous materials, using recycled materials in products, products made from renewable materials (e.g., bamboo), not using too much packaging, or products designed to be repaired and reused. However, these above-mentioned interventions could be combined to activate long-lasting and successful outcomes.

5.3. Limitations and Direction for Future Studies

This is one of the first studies that examined the correlation between health awareness and plastic product purchase decisions of youngsters in Vietnam. It contributes to clarifying the awareness and behavior of consumers when using plastic bags in their daily activities. However, this research may contain some limitations. First, the research is done by means of online surveys while the online response rate is relatively low compared to the traditional response rate. Thus non-response bias could exist when people who have different opinions are unwilling to participate. Another limitation is that research subjects are currently focused on young people (mostly students and office workers) living in urban areas. Future research on this topic should expand the sample size and include other groups of population in different regions to increase the reliability and validity of the data collection process.

Future research can develop more comprehensive models that include other factors (not used in this study) influencing the intention and behavior of using plastic bags such as packaging price or convenience of use. Additionally, further research is encouraged to identify the relationship between green marketing and plastic consumption since marketing was found to have a significant effect on the buying process of people. And to accurately evaluate Vietnamese consumers' perceptions and behavior towards plastic bags, qualitative research is desirable in the future.

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