

Factors influencing the consumer's intention to buy fashion products made by recycled plastic waste

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ABSTRACT

Turning recycled plastic waste into fashion products is an uprising trend that creates efficiencies and sustainability for both economic development and the environment. However, in Vietnam, the recycled-from-plastic-waste fashion industry is still underdeveloped. By using statistical inference method and primary data sources, the research determines factors that influence consumption behavior towards fashion products made by recycled plastic waste in Hanoi. Research results indicate that prices, product quality, and community influence impact on consumer behavior. In particular, community influence is considered as a new factor which is further investigated in accordance with conditions in Vietnam. Ultimately, the research proposes a number of recommendations for recycled fashion products manufacturing business in Vietnam.

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1. Introduction

Nowadays, one of the top concerns in Vietnam particularly and worldwide, in general, is the environmental pollution problem, especially plastic pollution. It is estimated that Vietnam discharges more than 1.8 million tons of plastic waste every year, and the amount for plastic consumption in Vietnam is expected to increase by 16-18% per year (United Nations Report, 2018). In the context that Vietnam and the world are facing serious threats from plastic waste, many countries have been taking action with an aim to reduce plastic waste from the environment. A number of solutions have been implemented such as recycling plastic into pots or building materials. In addition, some countries have also decided to recycle plastics wastes into fashion products such as clothing, running shoes, swimwear, ties, towels, etc. Thus, the process of producing Recycled from plastic waste fashion products will be beneficial for both economic development in general and fashion industry in particular. When it comes to manufacturing Recycled from plastic waste fashion products, input materials (plastic waste) are considered as one of the advantages that Vietnam has, but it can only be put in practice if there's a market for it and consumers are willing to buy the product. In addition, there are few studies deeply on consumer behaviors on Recycled from plastic waste fashion products, in spite of the fact that these researches are essential and give important insights for the process of market potential evaluation and market development. The objective of this paper is to assess the factors that influence the consumption behavior of recycled plastic fashion products through two research models. The first model studies the factors that directly affect the behavior of fashion recycling. Model 2 utilizes Ajen's planned behavioral theory (1980) through a structural model from awareness to intent and behavior. The research has 5 parts as follows: (i) Introduction; (ii) Overview of the research area,

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Theoretical basis, and Research methodology; (iii) Overview of research area; (iv) Results discussion; (v) Conclusion and policy implications

2. Literature review

2.1. International research

Nakano (2010) conducted a survey in the UK with the aim of understanding consumers' attitudes and reactions towards recycled from plastic waste fashion products and their awareness of environmental protection, and ultimately, it evaluates the potential of the recycled from plastic waste fashion products market. To build the outlines and raised questions, the author used consumer behavior theory. The research methodology used in the study was the descriptive statistical method with a sample size of 95 people and the conclusion was that the price factor of recycled from plastic waste fashion products affects consumers purchasing intent. Consumers are not willing to pay for the new item just for environmental protection reasons. On the other hand, the research indicates that the accessibility to recycled from plastic waste fashion products is limited since these products are not widely advertised and the number of recycled from plastic waste fashion products supply is relatively small. Another problem that the research pointed out is that there is a difference between the awareness of environmental issues and consumer behavior, particularly for those groups that recognize the urgent environmental problem but show no interest in recycled from plastic waste fashion products. In contrast, the lower-awareness group, who tend to consume these products, do not pay much attention to environmental issues. Overall, the study contains very useful insights, but it has only studied a small number of influential variables and has a limited number of survey participants.

Magnier et al. (2019) performed a survey in the Netherlands with an aim to investigate consumer reactions to products recycled from plastic waste in the ocean. This research studies the implication of the circular economy model, in which turning plastic waste in the ocean into input for the clothing production process to minimize the limitations of the linear economic model. The paper was based on the theory of risk perception and uses the Cost-Benefit analysis method to explain the buying behavior of consumers. The study used descriptive statistical method with a sample size of 258 and draw some conclusions based on the target groups. This study contributes to the theoretical understanding of consumer attitudes towards recycled ocean plastics and can help companies develop strategies to launch those products effectively. However, the division of target groups is subjective and there is no scientific basis (Salem & Chaichi, 2018).

2.2. Research in Vietnam

There were a number of researchers in Vietnam who studied and analyzed the factors influencing consumers' buying behavior towards fashion products. Nguyen and Huynh (2015) studied consumers' attitudes and buying intentions towards luxury fashion products in Vietnam. The model of fashion clothing consumption buying behavior includes the following factors: Brand image, Community influence, Price and quality of products, Product's uniqueness of products, and Attitude towards Counterfeit products. Truong (2017) studied factors that influence young people's online purchasing decisions towards fashion products in Ho Chi Minh City. At the 1% significance level, regression and correlation analysis show that there were 6 factors influencing young people's online purchasing decision: (1) Reliability; (2) Price expectation; (3) Perception of risks related to products; (4) Word of mouth; (5) Ease of use recognition; (6) Usefulness recognition. In addition, Nguyen (2019) investigated factors that influence consumers' online shopping decisions towards fashion products. Survey results from 141 customers in Ho Chi Minh City showed that there are 5 factors that positively influence customers' online shopping decisions including price expectations, trust, product's usefulness, brand image, and a negative impact factor - risk perception. The factor with the highest positive correlation is the price expectation factor. Nguyen et al. (2020) studied the relationship between fashion designers and customer relationship and the intention to buy fashion products. The results show: Designer's reputation, Social network marketing, the atmosphere of the store are factors that influence consumer's buying decisions. Inheriting achievements and scientific values gained from previous studies and based on the research gap, this research continues to analyze factors that influence consumption behavior towards recycled from plastic waste fashion products with the following research directions:

The research context influences the research problems through the implementation of the research area, which is Hanoi City. Nguyen and Huynh (2015) mentioned the impact of factors such as price, product quality, brand image, community influence on the buying behavior of luxury fashion products in Vietnam. In addition, Magnier et al. (2019) also pointed out the environmental awareness of green consumer behavior. These two studies have given the factors influencing buying behavior towards fashion products in general and fashion products recycled from plastic waste in particular. However, there are a number of other factors such as product's versatility in the consumption process, consumer identity also more or less influences the intention to buy a fashion product. The research team wants to study the impact of these factors on the consumption behavior towards fashion products recycled from plastic waste, therefore, a model has been built which is shown in Fig. 1. Based on theory of consumer behavior of Philip (2001; 1999) and the results of previous works, the research team proposed impact factors that are insightful in the Vietnamese context. These are (1) price, (2) environmental awareness, (3) product quality, (4) brand image awareness, (5) product's versatility in the consumption process, (6) Consumer identity and style, (7) community influence.



Fig. 1. Research model 1

3. Theories research

Currently, there are many different opinions on consumer behavior. According to Leon et al. (2005), Consumers' behavior is not only a dynamic interaction of factors affecting cognition, behavior, and environment but also changes people's lives. Consumer behavior is the behavior that consumers exhibit in finding, buying, using, evaluating the products and services that they expect to satisfy their needs. In particular, the definition fits the buying behavior of modern consumers since now information sources are easy-to-find, consumers' needs are easier to satisfy. The research team will use Philip Kotler's consumer behavior model. The model offers 5 steps for consumers to make purchasing decisions: Firstly, needs recognition: The first step in the buying process is that consumers are aware of the problem and are able to identify their needs for a certain type of goods. Secondly, seeking information: When consumers can identify their purchasing needs, they will do research on different sources of information such as personal information, information from advertising, or from their personal experience. Third, evaluate options: When consumers have got the information about the products they want to buy, consumers will evaluate the options that they have. Fourthly, the buying decision-making process: After evaluating the options, they will make their final decision. Questions we need to answer are: "How much are they going to buy?" "Where will they buy it? Finally, Post-purchase behavior: "Will their buying behavior be repeated in the future? Another theory used is Theory of Reasoned Action (TRA) by Al-Suqri & Al-Kharusi (2015), authors point out that Consumer intent is the best predictor of consumer behavior, and consumption behavior is affected by subjective attitude and standards of customers. Therein, Attitude is measured by product awareness and appreciation, that is, consumers will pay attention on the benefits of the product. The subjective standard factor can be measured through the pressure of influencer around. In order to assess subjective standards that influence consumption trends through two basic factors we need to focus on two factors: The degree of influence and the motivation for consumers to follow those who are associated with. These two factors have positive relationships meaning the stronger the level of intimacy and trust of the people involved with the consumer, the greater the influence on the intention to buy. However, TRA is limited when it comes to predicting the behavior of consumers that they cannot control because this model ignores the importance of social factors. In addition, the research is based on Green Purchasing Theory. "Green purchasing" (also known as "Eco-purchasing") is the term used to refer to the purchase of environmentally friendly products and services. It is the consideration of environmental issues when buying a product along with the consideration of when deciding to purchase, in order to minimize the impact on health and environment. This consideration may address one or all of the adverse environmental impacts throughout their entire life cycle (including production, transportation, use, and regeneration or disposal) (Le Hoang Lan, 2007). According to Chuang et al. (2018) green consumption is the trend of the future. Making conversations and dialogues about environmental issues have become familiar in Vietnam. Nielsen's research in 2011 pointed out that most of the Vietnamese consumers have become environmentally conscious. However, this only stops at thinking and discussing the problem, yet not many actions have been taken. The figures in Nielsen report also shows that up to 91% of

consumers believe that businesses should take action to protect the environment, but only 52% of them are willing to buy green products. This contradictory result has raised the question: How to identify and produce green products effectively in line with consumer segments and Why consumers are environmentally conscious yet they still decide not to buy green products?

4. Research methodology

It is assumed that the demand for recycled from plastic waste fashion products is governed by socio-economic variables and some expected theoretical behavioral variables including attitudes and personal assessments. The consumption behavior of recycled from plastic waste fashion products comes from the following factors: Price, environmental awareness, product quality, brand awareness, the flexibility of products in the consumption process, consumer’s fashion style, and ultimately the community influence. The data used for analyzing factors that influence the consumption behavior towards fashion products recycled from plastic waste were directly calculated by the authors based on the primary data collected through the online survey submission. The survey respondents are Hanoi residents. The questionnaire was sent via email to individuals, then screened to remove invalid submissions. After collecting, filtering, and removing questionnaires that did not meet the criteria set out, the research gathered 425 observations. In addition, the study also uses secondary data collected and aggregated from previous studies, Hanoi City Statistical Office’s reports from 2012 to 2019, socio-economic reports, Hanoi’s economic development report from 2012 to 2019.

Data processing method and estimation models

To demonstrate the impact of independent variables on the dependent variable, the research uses the comparison method, statistical inference, analysis and synthesis methods, deduction, and induction method to consider which variables have meaning in the explanation for the dependent variable. Based on consumer behavior theory of Philip (2001), the research proposes a number of variables that can influence the consumption behavior towards fashion products recycled from plastic waste. After that, the research shows the relationship between variables through the Binary Logistic regression model:

$$\log (P (Y=1)/ P (Y=0)) = a + b_i X_i$$

where

Y: The decision to buy Recycled from plastic waste fashion products, received 2 values (0: does not buy; 1: buy).

- | | | |
|--|-------------------------|---------------------------|
| X1: Product's versatility in the consumption process | X5: Community influence | X10: Education attainment |
| X2: Environmental awareness | X6: Consumer identity | X11: Income |
| X3: Product quality | X7: Price | |
| X4: Awareness of brand image | X9: Age | |

In which, b_i is the coefficients of the independent variables to the dependent variable Y. The second research model identifies a change in consumer behavior:

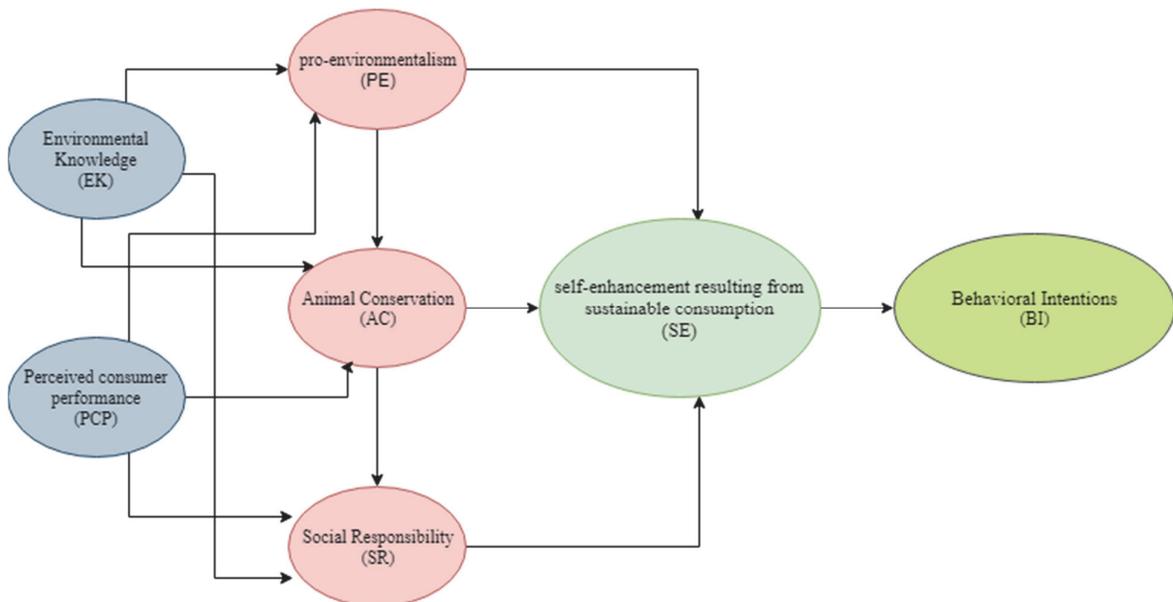


Fig. 2. Research model 2

Inside:

EK: Developed from the research of Kim (1998) and Jung & Oh (2019) including 6 items measured by a 5-point Likert scale from 1 that totally disagree to 5 being totally agree.

PCP: Developed from research by Ellen et al. (1991); Kim (1998) and Jung & Oh (2019) consist of 5 items that are measured on a 5-point Likert scale of 1 that completely disagree and 5 being totally agree.

PE; AC; SR: Developed from research by Kim (1998) and Jung & Oh (2019) including PE: 5 items; AC: 3 items; SR: 4 items measured on a 5-point Likert scale of 1 disagree completely and 5 completely agree.

SE: Developed from the research of Abdul - Muhmin (2007) including 9 items measured by the Likert scale of 5 points from 1 being totally disagree to 5 being totally agree.

BI: Developed from research by Jung & Oh (2019) including 8 items measured by a 5-point Likert scale from 1 that totally disagree to 5 being totally agree.

The research hypotheses are as follows:

- H1: Environmental Knowledge has a positive impact on Pro-environmentalism.
- H2: Environmental Knowledge has a positive impact on Animal Conservation.
- H3: Environmental Knowledge has a positive impact on Social Responsibility.
- H4: Perceived performance has a positive effect on Pro-environmentalism.
- H5: Perceived performance has a positive effect on Animal Conservation.
- H6: Perceived performance has a positive impact on Social Responsibility.
- H7: Pro-environmentalism has a positive effect on Self - enhancement results from sustainable consumption.
- H8: Animal Conservation has a positive effect on Self - enhancement results from sustainable consumption.
- H9: Social Responsibility has a positive impact on Self - enhancement results from sustainable consumption.
- H10: Self - enhancement results from sustainable consumption have a positive effect on Behavioral Intentions.

To analyze data of the second research model, we use Smart PLS 3.6 software to analyze data, the standards are collated in accordance with the instructions of Hair et al. (2011, 2014, 2017) and Hesenler et al. (2009; 2015).

5. Results

Hanoi is the capital of Vietnam. The city is located in the northern region of Vietnam, situated in Vietnam's Red River delta Hanoi, to the north by Vinh Phuc and Thai Nguyen provinces, to the south by Ha Nam and Hoa Binh provinces, to the east by Bac Giang, Hung Yen, Bac Ninh, and Hoa Binh, Phu Tho to the west. The city covers an area of 3,324.92 km² after the expansion of the administrative boundaries in August 2008. In general, the city has a quite diverse terrain with low mountains, hills, and plains. Most of the area of the city is plains, descending from northwest to southeast in the direction of the Red River. This also greatly affects the city's construction planning and socio-economic development. The inner city and surrounding areas are low-lying areas on soft ground, the Red River water level in flood season is about 4-5m higher than the city average. In addition, Hanoi also has many lakes and lagoons that are favorable for fisheries and tourism development, but due to its lowness, it is not entirely convenient for rapid drainage, causing frequent local flooding in the rainy season. The low and medium hills and mountains in the north of Hanoi are favorable for construction, industrial development, forestry, and organizing various types of tourism. Hanoi has now become a major industrial center, playing a leading role in the country's economy, and has continued to strongly shift towards modernization. The city's economy tends to grow fast and sustainably. If the period of 2008-2017 reached an average growth of 7.41%/year, in 2019, the GRDP has increased by 7.62% with a scale of VND 920,270 billion, and the average income per capita of Hanoi has reached over VND 120 million/year, equivalent to 5,194 USD. GRDP structure in 2019 has also shifted in a positive direction, increasing in the proportion of industrial and construction services; while the proportion of agriculture, forestry, and fishery has decreased.

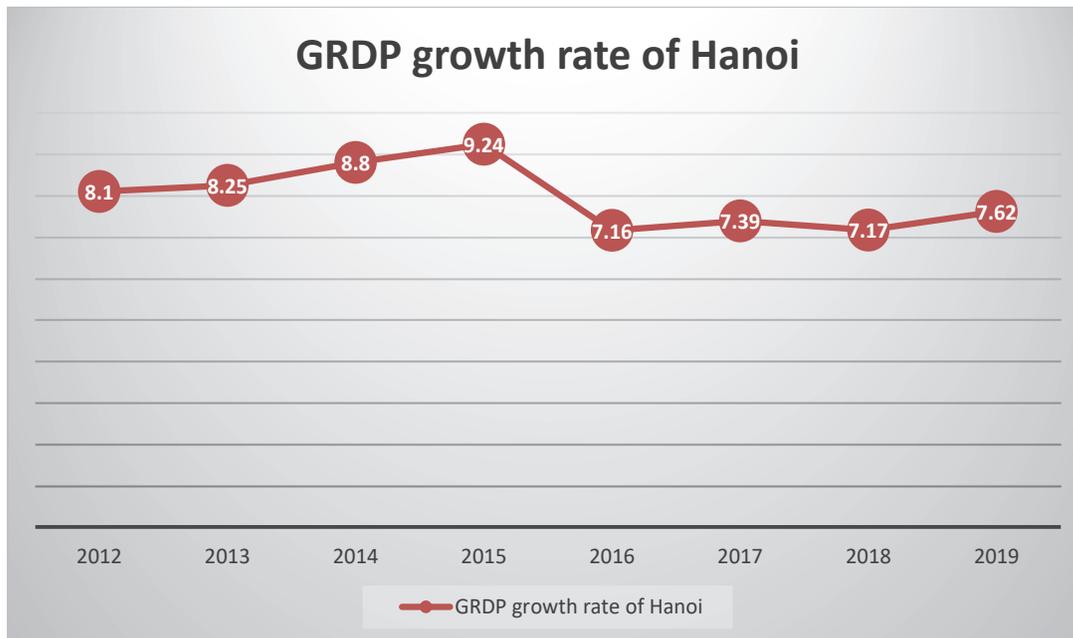


Fig. 2. GRDP growth rate of Hanoi in the period of 2012-2018

Source: Hanoi Statistical Office

The city economy in 2019 continued to grow and achieved positive results: Gross domestic product (GDP) was increased by 7.62%, exceeding the planned target (7.4% -7.6%). The amount of investment capital in the area were increased by 13.5%, attracting foreign investment of 8.05 billion USD - reached its highest point after more than 30 years of renovation and integration. The Index of industrial production (IIP) was increased by 8.46%; total sales and sales of social services were increased by 12%; export turnover was increased by 20.3%; State budget revenues were increased by 7.4%; attracting foreign investment and establishing new businesses; continue improving food security and livelihoods. The results of the 2019 Census show that Hanoi's population is about 8,053,663 people along with 2,224,107 households. The population distribution is uneven and there is a big difference between urban districts and suburban districts. Compared to 6.35 million people in the 2009 Census, the population of Hanoi has increased rapidly (over 33%, equivalent to 3.3% / year). The average population density is 2,338 people / km², the urbanization rate develops relatively fast while the population density in the districts is quite high (the average population density of 12 districts is 11,486 people / km², in which the highest is Dong Da district with 42,422 people/km), 4.9 times higher than the average population density of the whole city. It is stated by the National Assembly's Legal Committee that the Capital Construction Master Plan estimated the population to increase by 7.3 million to 7.9 million by 2020. However, with the average growth rate of 3%/year, by 2020 the estimated population will be 10,489,772 people (nearly equal to the projected population until 2050), far beyond what is expected. As of early 2019, according to the Party Central Standard, Hanoi City has 4,112 poor households, accounting for 0.2% and 3,939 near-poor households, accounting for 0.19% of the total households. The rate of poor households has decreased from 2.97% to 0.2%.

Currently, there are 8,692 poor households in Hanoi, accounting for 0.42% and 41,937 near-poor households, accounting for 2.01% of the total households. The rate of poor households according to the City standard has decreased from 3.64% to 0.42% (decreasing 52,212 households). The policy credit capital has been deployed to 100% of the city's communes, wards, and townships, creating favorable conditions for the poor and social policy beneficiaries in need in a timely manner. The policy has also helped nearly 147,000 poor households, near-poor households, and newly-escaped poor households get loans, contributed in helping over 52,000 households escape poverty; attracted jobs for over 184,000 workers; helped nearly 9,000 students in difficult circumstances to borrow loans to study, not allowing any students to drop out of school because of financial difficulties; reconstruct nearly 217,000 rural clean water and environmental hygiene works and build more than 4,000 houses for poor households. In summary, Hanoi continues to play a leading role in the country's economy. In 2019, the socio-economic of Hanoi has achieved quite comprehensive results, the economy has grown well, the budget revenue exceeded the plan, attracted high investment capital, the market price was stable, inflation was controlled, social security was guaranteed. People's lives are fully met both physically and mentally. In addition, Hanoi residents have a respectively high income, which leads to high demand for fashion products in general and recycled-from-plastic-wasted fashion products in particular. Therefore, the research will be easier to perform and the results will be more insightful. At the beginning of the survey, respondents were asked about their perception of environmental issues and their attitudes towards recycled fashion products. In the first question, we want to find out about the respondents' concerns and their attitude towards environmental issues. According to the survey results, most people are concerned about the current environmental problems (21.6% are very concerned, 74.4%

are concerned); 12 people (accounting for 2.8%) were indifferent and 5 people (accounting for 1.5%) show no interest in environmental problems.

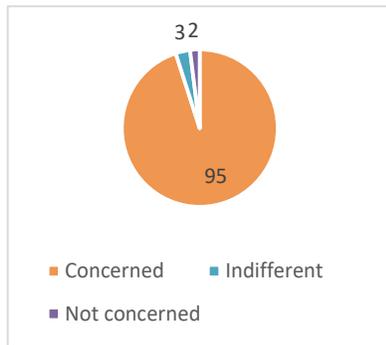


Fig. 3. Attitude towards environmental issues

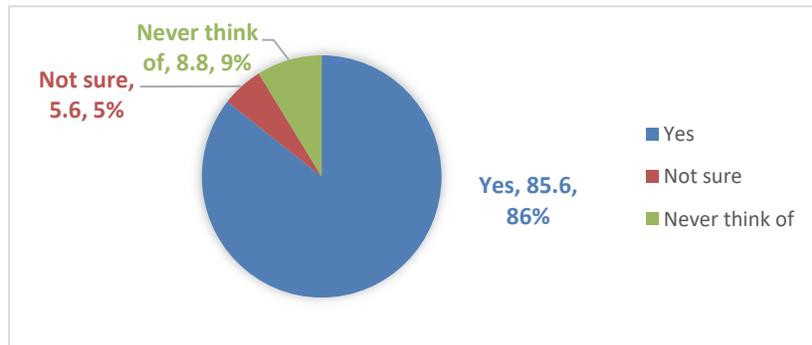


Fig. 4. Awareness of the ability to apply recycled plastic waste in the fashion sector

Source: Compiled from author results and surveys, 2020

As for fashion, when being asked about the ability to apply recycled plastic waste in the fashion making process, many people were surprised, but there were also many who believe that clothing can be made from recycled plastic. Specifically, there are 364 people who think that it is possible, accounting for 84.4%; 24 people are not sure (accounting for 5.6%) and 37 people have never thought of it (accounting for 8.7%). In the next part of the survey, the paper analyzes the relationships and the impact of the independent variables on the dependent variables. Using the Wald test with a significance level of 5%, the results show that the Product Quality, Community Influence, and Price variables are significant in explaining the dependent variable that is the intention of using fashion products recycled from plastic waste.

Table 1

Variables in the regression model

Variable	Coefficient	Prob
C	-2.988	0.245
Product's versatility	-0.297	0.250
Environmental awareness	0.128	0.598
Product quality	0.547	0.034
Awareness of brand image	-0.121	0.588
Community influence	0.557	0.021
Consumer identity	-0.017	0.94
Price	-0.572	0.020
Gender	-0.647	0.090
Age	0.104	0.056
Educational attainment	0.537	0.104
Income	0.176	0.402

Source: Extract results from the Binary Logistic Model

For Product Quality variable: This variable has a positive slope coefficient (0.547) indicating that Product Quality and Intention to consume recycled from plastic waste fashion products have a positive correlation. That is, the higher the quality of the product, the more willing they are to consume. This is entirely reasonable because quality is one of the factors affecting consumer buying decisions in all cases, not just recycled products. In addition, these recycled products must have different features from other products to motivate consumers to purchase them.

For the Community Influence variable: This variable has a positive slope coefficient (0.557) which shows that the impact from the community and the intention to consume recycled from plastic waste fashion products has a positive correlation, meaning that the more the media or influencers talk about the product, the more likely it is that these products will become trendy and attracts many more people buying them. This is in line with the fact that most shoppers are interested in the newest fashion trends, and they usually look up to how celebrities mix and match their outfits. This shows that the influencing power from the surrounding community is remarkably huge and it will strongly affect consumers purchasing decisions.

For the Price variable: This variable has a negative slope coefficient (-0.572) which shows that the price of products and the intention to use recycled from plastic waste fashion products are in the opposite correlation. The higher the price, the fewer consumers are willing to buy the product. This is consistent with the fact that price has always been an important factor that affects consumers purchasing decisions. In spite of the fact that most of the Hanoi residents have relatively high incomes, they

still have to pay for many other expenses, and they're also likely to take careful consideration of pricing before buying the product. From these regression coefficients, we can build the equation:

$$\left[\frac{P(Y=1)}{P(Y=0)}\right] = 0.547 \times \text{Product quality} + 0.557 \times \text{Community influence} - 0.572 \times \text{Price}.$$

This research also has a number of conclusions that coincide with the results of previous studies. For Hanoi residents, products' price and quality strongly influence their consumption behavior towards recycled from plastic waste fashion products. However, the research results further point out the influence of the community on the consumption intention towards this product. This is our new contribution compared to previous works. Previous studies have chosen different research areas, such as the research conducted in the UK by Yukie Nakano (2007) or Magnier et al. (2018) conducted in the UK, Netherlands. These above-mentioned countries are developed countries and have a high Per capita income. Therefore, it is necessary to conduct studies in Vietnam to find out meaningful insights that are appropriate in the Vietnam context. By selecting the scope of the study in Hanoi, the paper will draw more accurate and specific conclusions of the selected location. The results of this study will help to specify the Hanoi residents' consumption decision toward recycled from plastic waste fashion products through four main factors:

First, what is the relationship between the influence of community and social networks and the consumption behavior towards recycled from plastic waste fashion products?

Second, does the product's quality affect consumers' buying decisions?

Third, what's the reasonable price for recycled from plastic waste fashion products?

From there, the research paper will select and point out some recommendations that are suitable for the scope of the study.

Test of the second model with the results of the general reliability of the scales satisfying the conditions of Hair et al. (2011, 2014, 2017). Factors with factor loading all > 0.5 satisfy the conditions for further analysis (Heseler et al. 2009, 2015).

Specific results are as follows:

Table 2
Construct Reliability and Validity

	Cronbach's Alpha	rho A	Composite Reliability	Average Variance Extracted (AVE)
(AC)	0.945	0.945	0.945	0.774
(BI)	0.932	0.935	0.932	0.775
(EK)	0.872	0.877	0.872	0.695
(PCP)	0.982	0.983	0.982	0.661
(PE)	0.838	0.842	0.839	0.635
(SE)	0.947	0.949	0.948	0.645
(SR)	0.920	0.920	0.920	0.697

From Table 2 results show that all latent variables have Cronbach's Alpha coefficient > 0.8, which is a very good result (Hair et al., 2011, 2014). All potential variables have very large correlation coefficients close to 0.9 and AVE coefficients are greater than 0.6 compared with Heseler et al. (2009, 2015) and Hair et al. (2013) AVE values only need > 0.5 to satisfy the conditions for conducting the next analysis.

Table 3
Discriminant Validity (Fornell-Larcker Criterion)

	(AC)	(BI)	(EK)	(PCP)	(PE)	(SE)	(SR)
(AC)	0.880						
(BI)	0.273	0.880					
(EK)	0.169	0.393	0.834				
(PCP)	0.181	0.293	0.007	0.813			
(PE)	0.359	0.236	0.220	0.207	0.797		
(SE)	0.381	0.366	0.315	0.335	0.339	0.803	
(SR)	0.237	0.379	0.431	0.465	0.222	0.538	0.835

Table 3 shows that the maximum value outside the diagonal of 0.538 is still smaller than the smallest value on the diagonal of 0.797 according to Heseler et al. (2009, 2015). The research variables satisfy the condition of discriminant validity to perform the test of research hypotheses. The test results of research hypotheses conducted by Bootstrap technique on Smart PLS 3.6 software are as follows:

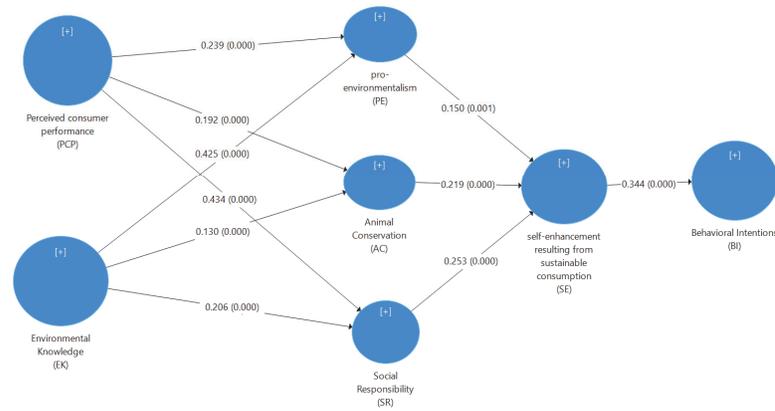


Fig. 5. Test results of research hypotheses

From the results in Figure 3, all the research hypotheses are supported, the research hypotheses are at 1% significance level ($P_value = 0.000$). Specifically, PCP impact on PE is quite strong with impact coefficient of 0.239 at 1% significance level ($P_value = 0.000$). PCP impacts on AC with medium impact level with an impact coefficient of 0.192 at 1% significance level ($P_value = 0.000$). The PCP has a very strong impact on the SR with an impact level of 0.434 at 1% significance level ($P_value = 0.000$). EK has a strong impact on SR with the impact level of 0.206 at the 1% significance level ($P_value = 0.000$). EK impact on AC is weakly weak with an impact level of 0.130 at the 1% significance level ($P_value = 0.000$). EK has a strong impact on PE with an impact level of 0.425 at the 1% significance level ($P_value = 0.000$). PE has a strong impact on SE at 0.150 impact level with 1% significance level ($P_value = 0.000$). AC and SR strongly impact on SE with impact level corresponding to impact level of 0.219 and 0.253, respectively and at the 1% significance level ($P_value = 0.000$). Finally, SE has a strong impact on BI at 0.344 impact level at 1% significance level ($P_value = 0.000$). With the above impact results, most consumers are well aware of consumption efficiency, which creates sustainable environmental protection behaviors. When aware of sustainable consumption performance, they will have behaviors in support of environmental protection, protection of rare animals and animals in the value chain, food chain as well as in its inherent ecosystem. Next is an awareness of sustainable consumption behavior that will make consumers more socially responsible. For environmentally conscious consumers, the impact on environmental protection behaviors is even better. Consumers with a good understanding of the environment will have a better social responsibility, be more aware of animal protection and always support sustainable environmental protection. When behaviors as well as awareness about advocating for environment protection, animal protection and socially responsible are evaluated by consumers as important and prioritized in choosing green consumption, especially for green products. Recycled fashion products will help them to raise awareness about sustainable consumption, green consumption, responsible consumption and enhance green consumer intent and behavior.

6. Conclusions and recommendations

Sustainable consumption in general and environmentally friendly fashion products consumption, in particular, are becoming the future of consumer trends, especially in the context of environmental problems are getting more serious than ever. Applying the Circular economy model to the production of Recycled-from-plastic-waste fashion products will partly overcome the shortage of natural resources and minimize environmental pollution. In Vietnam, the production and distribution of these products have not met the increasing demands of society. This is partly because the popularity of Recycled-from-plastic-waste fashion products is not high. Moreover, the product research and development process has not been invested in, and research on demand for these products has not been conducted. In which, the demand for fashion products recycled from plastic waste has been analyzed by this research through the consumers' behavior and attitude towards fashion products recycled from plastic waste other factors related to socio-economic conditions. The research has shown that the demand for recycled-from-plastic-waste fashion products was governed by factors related to socio-economic conditions, including age, educational attainment, and income. The consumer's behavior and attitudes toward fashion products that are made from recycled plastic waste also affect the demand. There are 3 factors that affect the demand for fashion products made from recycled plastic waste out of a total of 11 selected factors studied. They are Price, Product Quality, and Community influence. In particular, Product quality and Community influence variables have a positive correlation with the decision of choosing to consume recycled-from-plastic-waste fashion products, while the Price variable has an opposite correlation with the consumer decisions. These variables are also practical, so the proposals are based on the research results, from which will give appropriate solutions, recommendations with high practicality. However, this research has many limitations, especially due to the small sample size, which does not fully reflect the nature of the regional population. Increasing the sample size will lead to an increase in results accuracy and reduce the estimation errors so that the final results will be more practical. In addition, it is possible to add to the model other variables, from which there will be new related proposals for deeper research purposes of the topic.

In Vietnam, the production and distribution of these products have not met the increasing demands of society. This is partly because the popularity of recycled from plastic waste fashion products is not high. Moreover, the product research and development process has not been invested in, and research on demand for these products has not been conducted. Therefore, we can draw some proposed solutions for businesses based on the research result as follows.

(1) Pricing solutions: Promote the promotion of promotions, loyalty programs, constantly changing new forms of promotions to suit the modern trend.

(2) Communication and advertising solution: Developing periodic advertising strategies, combining ads with famous singers and artists or influencers; keep close relationships with reporters, TV stations, newspapers; Improve company staffs 'communication and public speaking skills.

(3) Improve product quality solution: Focusing on research and development, continuing to do research on the material of the product, designs and ' features to meet the market needs. Improving the production process to ensure the output quantity, and always stay creative, innovative in the design process to promptly meet the general trend of the market.

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