

# Environmental Awareness and Attitude of Vietnamese Consumers Towards Green Purchasing

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**Abstract.** Along with a variety of actions to protect the environment, environmentally preferable purchasing (EPP), often referred to as “green purchasing”, has been an emerging trend over recent decades all over the world. This trend is considered as a strategic alternative for all stakeholders in society to promote the sustainable development of the global production chain with the active involvement of consumers. Research in many countries reveals the fact that although consumers today are more frequently encouraged to behave in a friendly manner towards the environment through making home improvements, saving energy, or purchasing environmentally friendly products, many consumers have not been sufficiently aware of the significance of those behaviors, especially green purchasing. In Vietnam, there has been very little evidence of the awareness of consumers of environmental issues and of friendly behavior towards the environment. This paper explores the environmental awareness of Vietnamese consumers, their understanding of eco-products and attitude towards green purchasing through a questionnaire survey in three big cities of Vietnam - Hanoi, Ho Chi Minh City and Da Nang. Findings from the survey reveal that consumers with a high level of education are more concerned about environmental issues and have a sufficient knowledge of eco-products and green purchasing. Furthermore, the study also indicates that those highly environmentally conscious consumers have positive attitudes toward green purchasing and are extremely willing to practice it in the future. Therefore, some recommendations are proposed to foster green purchasing in Vietnam for the sustainable development of the country.

*Keywords:* Attitude towards green purchasing, environmental awareness, eco-products, consumers, Vietnam.

## 1. Introduction

The past decades have witnessed a dramatic increase in environmental consciousness

worldwide. Survey results in developed and developing nations show that citizens rate the environment as an immediate and urgent problem (Dembkowski and Hammer-Lloyd, 1994; Chan, 1996; Follows et al., 2000; Barr and Gilg, 2006), and believe that pollution and other environmental damage are impacting their

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everyday lives (Hines et al., 1987; Ellen, 1991; Worcester, 1993; Junaedi, 2007). Although there is an increase of interest in environmental problems around the world, the amount of interest and the impact of this concern on consumer purchasing behaviors may not be the same (Arbuthnot and Lingg, 1975; Chan, 1996; Lee and Holden, 1999; Kaufmann et al., 2012; Shahnai, 2012). It is apparent that not all cultures, nor segments within them, face the same problems or face them in the same manner when the problems are similar (Arbuthnot, 1975; Schlegelmilch et al., 1996), as individuals from different cultures process information differently (Hofstede, 1980). Consumers of countries that have high environmental problems may view the problem differently and have purchasing behaviors different from consumers in less environmentally focused countries. Nevertheless, green purchasing is still an emerging trend in response to concern for the environment in many countries. There is a range of green purchasing practices and initiatives around the world. Countries or regions associated with green purchasing best practice include the UK, Canada, Scandinavia, Germany, Japan and Korea. In Vietnam, consumers seem to be rarely exposed to the concept of green purchasing. Since green products (eco-products) are relatively new for Vietnamese people, there have been few formal studies about eco-products and green purchasing in Vietnam.

Given such a context, this paper explores the environmental awareness of Vietnamese consumers, their understanding of eco-products and their attitude towards green purchasing through a questionnaire survey in the big cities of Vietnam including Hanoi, Ho Chi Minh City and Da Nang.

The remainder of this paper is structured into four parts. Part one will discuss the

background of the study. Part two will explain the research methodology. The results and discussion will be presented in the third part and followed by implications and conclusion in the final part.

## 2. Background

There has been a rapid growth in the world's population, especially in developing countries. The added population has led to an increase of manufacturing and product consumption and finally environmental problems. Currently, the environment is threatened in a wide variety of ways such as global warming, ozone depletion, shortage of drinking water, loss of biodiversity, and land degradation. According to the United Nations Environment Program (UNEP), one quarter of the earth's land is threatened by desertification, which is a process of land degradation in arid, semi arid, and dry sub-humid areas, resulting from various factors including human activity (United Nations Chronicle, 2000). Pollution is another important environmental problem resulting from economic growth. Industrial waste from manufacturing plants and untreated sewage (Serrill, 1998), coal fired power plants, gas and diesel powered vehicles, etc are some examples of the primary causes of this pollution (Shahnai, 2012). Such serious environmental issues have gained prevalence and have consistently become of more interest to the mainstream population worldwide. People are gradually realizing the importance of sustainable actions, such as production and consumption, to long-term development of the planet and human lives.

In today's society, "green" is becoming a pervasive buzzword. Companies are going

green, information technology is going green, and even consumers are individually trying to go green. Consumer behavior is the key to the impact that society has on the environment. The actions that people take and choices they make – to consume certain products and services or to live in certain ways rather than others – all have direct and indirect impacts on the environment, as well as on personal (and collective) well-being (Jackson, 2005). This is why the topic of ‘sustainable consumption’ has become a central focus for national and international policy in recent years.

It is believed that consumer action can be a catalyst for wider action. The most important role that individuals play is not simply reducing their own environmental impacts, but building support for leadership from government and business. As research continues to illustrate the impact of individual consumption on environmental quality, governments and other organizations have started considering the role of individuals in helping to address ongoing environmental concerns (Barr and Gilg, 2006; Bonini and Oppenheim, 2008). One green behavior that consumers encounter on nearly a daily basis is the choice to purchase environmentally-friendly consumable products or eco-products. This buying behavior is called green purchasing or environmentally preferable purchasing (EPP). It refers to the consideration of environmental impacts in the procurement of goods and services. It is not limited to the purchase of green products alone, but deals more broadly with the full range of procurement alternatives. For example, the purchase of a more fuel-efficient vehicle in preference to a less fuel-efficient one can be considered a green purchase, without the smaller vehicle necessarily being a green product. Green purchasing is also about process

improvements; for example, consolidating multiple user orders with a given supplier into a single order. This will result in a single delivery, thus reducing shipping costs and carbon emissions. In other words, green purchasing is about integrating environmental considerations into purchasing decisions. That might be switching to recycled paper, changing your lighting to energy efficient bulbs or using less toxic cleaning products around the building. The ultimate goal is to reduce the environmental impacts of sourcing and to increase resource efficiency.

Internationally, green purchasing has been strongly promoted by many governments and NGOs since the late twentieth century. Germany undertook structured green public procurement activities in the 1980s followed by other European countries like Denmark (1994), France (1995), UK, Austria (1997) and Sweden (1998). The US EPA developed Guidance for Environmentally Preferable Purchasing, while Japan enacted the Green Purchasing Law in May 2000 to promote green purchasing as national policy. The law requires all governmental bodies including local governments to practice green purchasing and report the summarized purchasing records to the public. In Japan, the Green Purchasing Network (GPN), formed in 1996 to promote green purchasing, grew from 73 to over 3,000 member organizations. Two years later, the International Green Purchasing Network (IGPN) was launched to promote green purchasing worldwide. The Korean government issued a Green Purchasing law in 2005 and till now, over 5,400 products are certified for green purchasing. In Thailand, government departments started green purchasing in 2009. In addition to government actions to practice green purchasing, consumers are also showing

their increasing intention to turn to green purchasing. Recent worldwide polls show that consumers are more and more in favor of eco-products and many of them are willing to switch to more environmentally friendly brands when they are knowledgeable about emerging environmental issues. Many studies have found that the more consumers are aware regarding the societal and environmental issues, the more they are involved in pro-social and pro-environmental behaviors such as green purchasing (Hines et al., 1987; Chan, 1999; Lee and Holden, 1999; Follows and Jobber, 2000; Larouch et al., 2001; Panni, 2006; Junaedi, 2007; Kim, 2011; Shahnaei, 2012).

Despite the fact that many developed and developing countries have adopted the concept of green purchasing and have acted to promote green purchasing nationwide as a response to environmental problems, green purchasing still seems to be a brand-new concept in Vietnam. It is reported by the Ministry of Justice that there are 300 legal documents in the field of environmental protection to regulate the behaviors of individuals, organizations, economic activities, technical procedures and raw material production processing. However, these legal documents are incomplete, inconsistent and unstable. Many new amended legal documents have to be reviewed, changed and complemented. As a result, the effects of these legal documents on adjusting individual and organizational behaviors in environmental protection are limited. In 2009, the Vietnam Green Purchasing Network (VNGPN) was established by the Vietnam Productivity Center (VPC) for the first time. This network aims at:

- Raising awareness of organizations, businesses and consumers in making their choices of consuming environmentally friendly products (green products);

- Spreading and promoting technological advances in research and production of green products;

- Assisting businesses to advertise their green products to international buyers and consumers;

- Developing a network to share experiences and applications of technological advances in production.

However, it is still doubtful whether Vietnamese consumers have any concern of environmental problems and know what they should do to protect the environment by practicing daily activities such as green purchasing. In light of this fact, this research addresses the following critical questions about environmental awareness and green purchasing in Vietnam:

1. What is the awareness of Vietnamese consumers of environmental issues and eco-products?

2. What are their attitudes towards green purchasing?

3. Is there a prospect of green purchasing development in the coming years?

### 3. Research methodology

To address the research questions, a survey questionnaire was developed to gain a better understanding of Vietnamese consumers' environmental awareness and attitudes towards green purchasing. The questionnaire items were developed on the basis of a thorough literature review. The questionnaire was structured into two main parts. The first part consists of five questions to get general information about the respondents such as age, gender, average monthly income, level of education and

occupation. In the second part, a set of questions, most of which were designed based on the Likert five-point scale, was used to obtain information about these following issues:

- (1) Interests in environmental issues and sources of information about environmental issues,
- (2) Attitudes towards green purchasing behaviors,
- (3) Awareness of eco-products and intention to make a green purchase

The structured questionnaire then was distributed to a random sample of 900 consumers in three big cities in the North, the middle and the South of Vietnam - Hanoi, Da Nang, and Ho Chi Minh City. From this sample, a total of 315 usable responses were received including 118 in Hanoi, 93 in Da Nang and 102 in Ho Chi Minh City, representing a response rate of 35 per cent. SPSS software was used to analyze the data.

The sample composition was slightly over-represented by male (52.7 percent), and middle income people (37.1 per cent). Moreover, most of the respondents (88.6 percent) were quite

young - aged from 18 to 45. The sample also contained a higher proportion of graduates (58.7 percent). Regarding the occupation of respondents, a quite even distribution was found in the sample, of which 24.8 percent are businessmen, 23.8 percent governmental staff, 23.5 percent workers and the rest are students, NGOs staff and retired people.

#### 4. Findings and discussion

Firstly, this research aims to figure out how aware Vietnamese consumers are of environmental issues, so the surveyed consumers were asked to indicate their concern about emerging environmental issues on a five-point Likert scale ranging from “1 = *Not interested at all*” to “5 = *Very interested*”. The survey results reveal that most of the environmental issues posed in the questions drew above medium interest from consumers regardless of their gender, occupation and level of education (Table 1).

Table 1: Rank of environmental issues by level of concern

Rank	Issues	Average Degree of Interest	Percentage of “Very interested” respondents (%)
1	Air pollution	4.16	52.1
2	Waste problems	4.08	50.5
3	River pollution	3.93	35.9
4	Forest destruction	3.91	37.1
5	Ecosystem destruction	3.85	32.7
6	Energy/resource depletion	3.81	32.1
7	Marine pollution	3.75	27.6
8	Global warming	3.71	26.3
9	Ozone depletion	3.71	24.8
10	Soil pollution	3.63	25.7
11	Desertification	3.32	15.2

Source: Survey results in this research.

It is noteworthy that more than half of the total respondents report that they are very interested in *air pollution* and *waste problems*, reaching a percentage of 52.1 percent and 50.5 percent respectively. These two figures are far beyond the percentage of interest in other environmental issues that score only about 28 percent, on average.

Furthermore, potential respondents were asked about the sources from which they would get information on current environmental issues. Survey results indicate that the mass media plays a key role in broadcasting environmental problems and consequently raising the environmental awareness of Vietnamese consumers. The rank of information sources is presented in Table 2 below.

Table 2: Rank of information sources about environmental issues

Rank	Source of information	Frequency	Percent
1	Television	272	86.3
2	Internet	264	83.8
3	Newspaper	185	58.7
4	Radio	127	40.3
5	Magazines	100	31.7
6	Educational institutions	56	17.8
7	Governmental publications	50	15.9
8	Word of mouth from friends	55	17.5
9	Descriptions on products	44	14.0
10	Other	11	3.5

Source: Survey results in this research.

As shown in Table 2, the two most popular and effective channels communicating environmental issues to the public are television and the Internet, which bring to the general public visible and vivid pictures of the true environmental problems all around the world. This fact is understandable because Vietnamese people nowadays spend most of their leisure time with the television and the computer with Internet connection, particularly young people. On the other hand, very few respondents get information about environmental issues from descriptions on any product, which means the enterprises seem to have very low influence in raising consumers' awareness of environmental problems in Vietnam.

The second purpose of this research is to explore Vietnamese consumers' attitude towards green purchasing. Thus, potential respondents were questioned about their intention to do some particular green purchasing behaviors. The main question was "Taking into account environmental issues, to what extent do you usually do the following in your daily life?" The respondents were expected to answer on a Likert five-point scale with "1 = Not applicable to me" to "5 = Always intend". The survey results show that consumers with different levels of education have quite dissimilar responses. Table 3 below presents the percentage of consumers who report that they always intend to do the questioned activities on a daily basis.

Table 3: Intention to do green purchasing behaviors on a daily basis

No.	Daily activities/behaviors	Percentage of respondents with extremely high intention (%)			
		Secondary School Graduates	High School Graduates	Graduates	Post Graduates
1	Buy products with eco-labels	19.0	22.2	22.7	44.4
2	Buy electric home appliances that consume less electricity	67.7	56.7	57.8	55.6
3	Buy products in refillable containers	32.3	27.8	26.5	66.7
4	Buy recycled products and products using recycled materials	19.4	26.7	21.1	44.4
5	Buy used products	19.4	20.0	10.8	55.6
6	Select and buy products that would last for a long time	74.2	63.3	61.6	100
7	Buy toilet paper containing recycled paper	19.4	16.7	19.5	55.6
8	Do not buy products with excessive packaging	22.6	23.3	27.6	55.6
9	Carry a shopping bag with me and do not get plastic bags at supermarkets or convenience stores	22.6	22.2	23.2	55.6
10	Buy foods that use less agrochemicals	54.8	50.0	50.8	77.8
11	Do not use disposable products (disposable nappies, etc.)	41.9	17.8	20.5	44.4
12	Use public transport instead of driving cars	22.6	17.8	21.1	66.7
13	Buy only enough and only necessary items	67.7	45.6	60.0	77.8

Source: Survey results in this research.

From the survey results, it is apparent that consumers with higher education levels have better understanding of various actions to protect the environment, particularly green purchasing behaviors. Consequently, they are more willing to do most of the behaviors daily. It is also worthy to notice that the secondary school graduates mainly focus on behaviors that save their money and protect the environment to some extent, such as buying electronic home appliances that consume less electricity, buying products that would last for a long time or buying only enough and only necessary items. They show a rather low intention in doing pure

green purchasing actions which include buying products with eco labels, buying recycled products, buying toilet paper containing recycled paper and the like. Conversely, the graduates and postgraduates show a higher intention to make environmentally preferable purchases. The percentages of respondents with an extremely high intention for each questioned behavior are always higher than those of lower educational level. In conclusion, the research results indicate that high educational level consumers seem to have a more positive attitude towards green purchasing behaviors.

Moreover, another goal of this research is to identify whether Vietnamese consumers understand about eco-products as the concept of eco-products and green purchasing has only been mentioned in recent years. In literature, eco-products are products that meet eight assessment criteria, including weight reduction, product longevity, resource recycling, ease of disassembly, energy efficiency, information disclosure, packaging materials and environmental conservation. Therefore, it is doubtful whether Vietnamese consumers have a sufficient understanding of these things. To gather information about how aware consumers are of eco-products, the authors questioned the consumers about ten features of eco-products by raising the question: "Thinking of eco-products, what products spring to your mind?" These features include the followings:

- (1) Products consuming less resources and energy (ECO1);
- (2) Agricultural products/timbers considering production place (ECO2);
- (3) Superior in durability and aftersale service and long lasting (ECO3);

(4) In containers that can be used repeatedly or refilled (ECO4);

(5) In packaging generating less waste (ECO5);

(6) Having collecting/recycling system (ECO6);

(7) Use more recycled materials or reused parts (ECO7);

(8) Free from chemical substances (ECO8);

(9) Less health implications during use (ECO9);

(10) Produced not to damage nature and bio-diversity (ECO10).

Being asked such a question, consumers with a high level of education, particularly the post graduates, reported more sufficient knowledge of eco-products with a higher percentage of responses to almost all features compared to those of other groups (Figure 1). Moreover, it is clear that secondary school graduates have the lowest percentages of responses to every questioned feature, which means they are believed to have less knowledge of eco-products than those with a higher education.



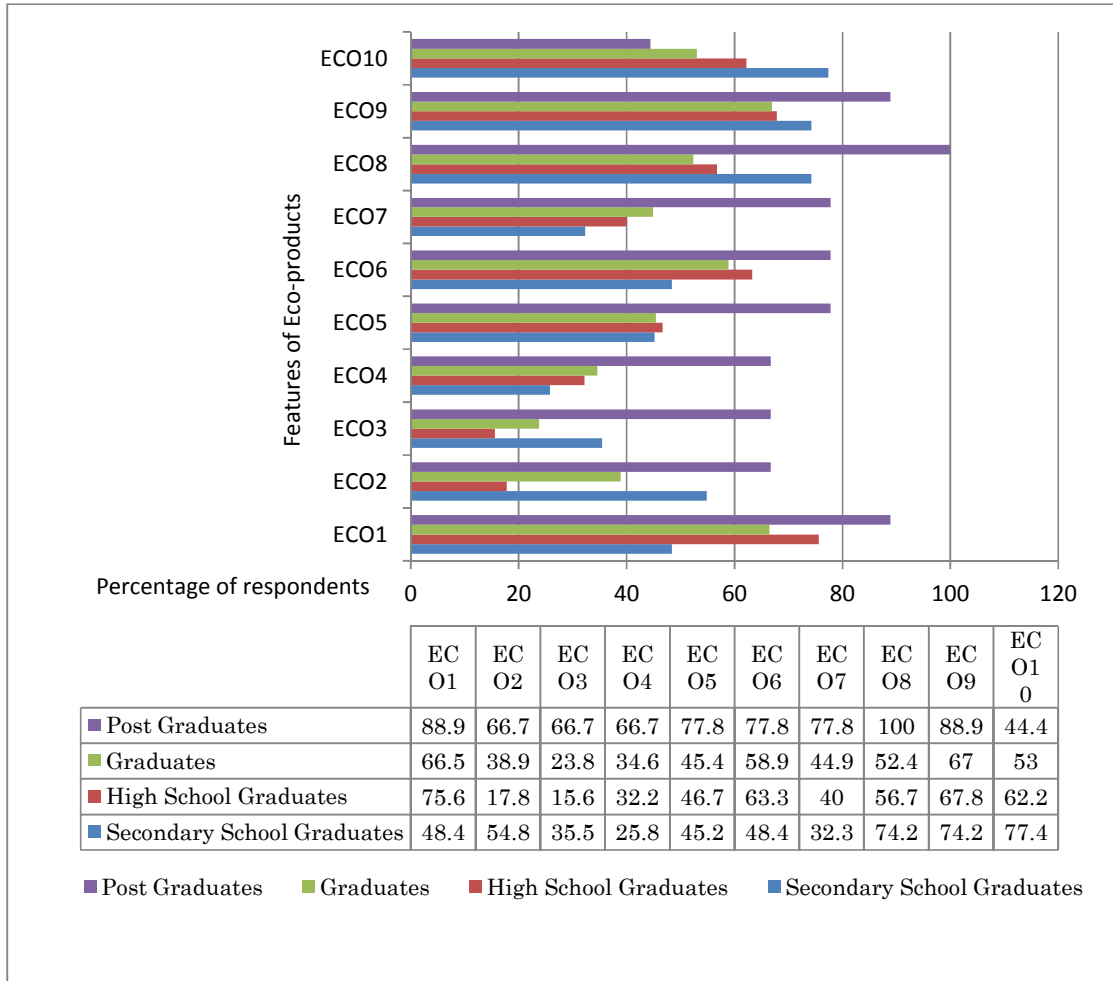


Figure 1: Features of eco-products  
 Source: Survey results in this research.

In addition to exploring Vietnamese consumers’ understanding of eco-products, the authors also aim to know their intention to buy such kinds of products in the future. Thus, another question was raised “To what extent do

you intend to buy eco-products in your daily life?” with four choices “1 = Do not intend at all”, “2 = Do not intend much”, “3 = Intend somewhat” and “4 = Always intend”. Figure 2 below represents the survey results.

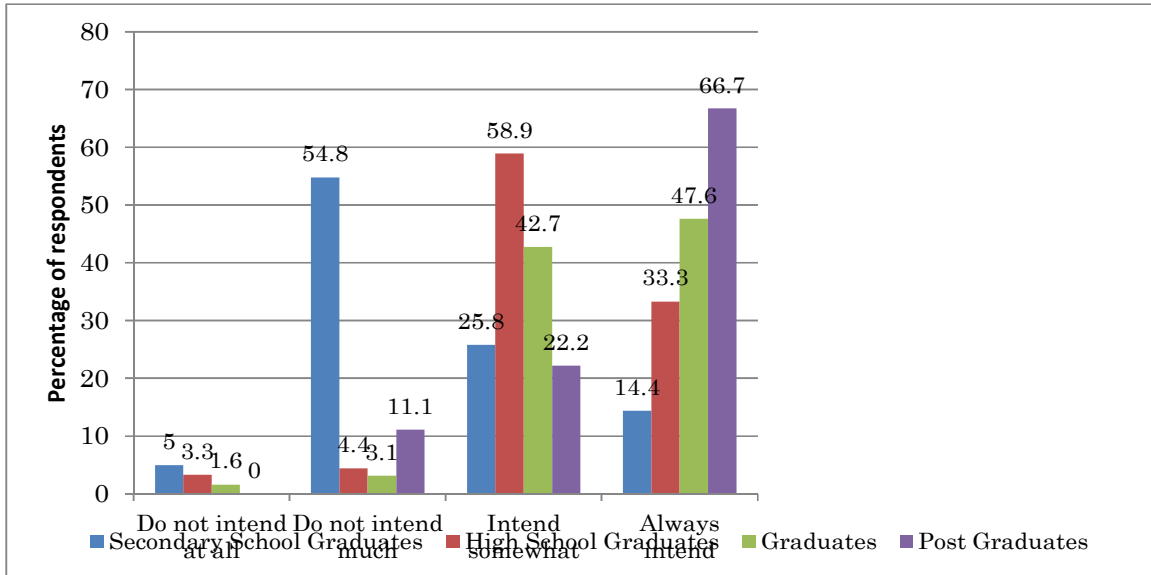


Figure 2: Intention to buy eco-products  
 Source: Survey results in this research.

It is clear that the higher the educational level, the more intention the consumers have to buy eco-products. In this research, 66.7 percent of post graduates report that they always intend to buy eco-products while only 14.4 percent of secondary school graduates have the same intention. It is interesting that nearly 60 percent of high school graduates just intend “somewhat” to buy eco-products and about 55 percent of secondary school graduates indicate

that they “do not intend much” to make an eco-product purchase. From all of the above-mentioned points, it is proved in this research that the intention to buy eco-products varies from consumer to consumer with different levels of education. Nevertheless, all respondents claimed that they would consider several factors when making a purchase. The following table shows the details of their answers.

Table 4: Considerations of consumers when purchasing eco-products

Factors	Percentage of respondents (%)			
	Secondary School Grads	High School Grads	University Grads	Post Grads
Descriptions on products	48.4	65.6	60.5	77.8
Information from TV	41.9	37.8	44.3	33.3
Information from radio	16.1	20.0	27.0	33.3
Newspaper, magazine ads	6.5	23.3	30.3	22.2
With or without eco-labels	12.9	30.0	33.5	33.3
Recommendations from shop clerk	9.7	16.7	24.9	22.2
Recommendations from friends	9.7	24.4	21.6	33.3
Point-of-sale materials at shops	25.8	22.2	16.8	22.2
Information from Internet	64.5	51.1	49.7	55.6

Source: Survey results in this research.

Table 4 reveals the fact that several most important factors that consumers consider when making an eco-product purchase include: descriptions on products, information from TV and information from the Internet. Besides, it is certain that the graduates and postgraduates seem to consider all factors when making a purchase, while the secondary school and high school graduates focus mostly on information from the Internet and descriptions on products.

### **5. Implications and conclusion**

This section summarizes some of the major issues relating to environmental awareness and attitudes towards green purchasing in Vietnam. Accordingly, several suggestions are proposed to foster green purchasing in Vietnam for the sustainable development of the country in the coming years.

The reality is that recent high levels of economic growth and consumption have led to increasing pressures on the environment in Vietnam. Many environmental issues such as deforestation, resource depletion, and pollution, are a particularly visible manifestation of these processes, leading to serious climate change. As a consequence, protecting the environment has become increasingly important not only for policy-makers but also householders. Thus, Vietnamese consumers should soon be aware of their role in environment protection by changing their purchasing habits. Green purchasing is recommended to help better the environment. On the basis of this research, several implications and suggestions are presented as follow.

Firstly, it is concluded in this research that environmental issues are appealing to the public enormously in recent years. The environment is

increasingly polluted by socio-economic development activities, or in other words, production and consumption activities of human beings. Therefore, the key actors to solve the environment problems are no other than human beings, and consumers play a key role in this process. However, consumers are only encouraged to protect the environment when they are aware of how the environmental problems affect their life and their future generations. As a result, it is strongly recommended that the government should use the mass media to broadcast more environmental issues of the country, focusing on hot issues and especially educate consumers to protect the environment by changing their daily habits of using and buying products. In terms of education, the young people should be the target group of education. So the government may seek ways to integrate several training modules of environmental issues and green purchasing into the training programs of kindergartens, elementary schools, secondary schools, high schools and even universities.

Secondly, it is concluded in this research that Vietnamese consumers' understanding of eco-products is still limited. Only the well-educated consumers seem to have better knowledge about eco-products. It is reported in this research that few consumers get information about environmental issues and eco-products from descriptions on products, which reveals the fact that companies have not put enough effort into marketing eco-products. On the other hand, most of the surveyed consumers do take description on products into consideration when they intend to make a green purchase. Therefore, it is necessary to have better communication about eco-products to the public. Moreover, companies producing eco-products should take into consideration green design, green manufacturing, and foster marketing campaigns of their products.

Thirdly, as mentioned in the survey results, consumers with different levels of education do not have the same intention to purchase green products or eco-products. Currently, it is shown that consumers select products based on a trade-off regarding a variety of value attributes ('greenness' being only one). Even environmentally concerned consumers are less prepared to pay for green products at the expense of quality or performance. Product performance is a key factor for consumer adoption and continued use of green products and consumers have established perceptions about performance and quality of green products relative to their conventional counterparts. Nevertheless, it is indicated that many consumers will better understand eco-products in the future given comprehensive marketing campaigns of businesses and the government green purchasing movement. Thus, there are positive signs that the market of green purchasing in Vietnam will steadily prosper in the coming years.

From all the above-mentioned points, it is quite clear that Vietnamese consumers still have a limited understanding of eco-products and green purchasing. The difficulty and barriers to green purchasing in the private sector of Vietnam come from different backgrounds and development including:

- Cultural and economic development, e.g. consumers are used to buying cheap products or imitation products on the street;
- Green procurement is only at the beginning in Vietnam so it will take time to build up awareness and allow promotion to get to all people and organizations;
- Support from top management in enterprises, government and consumers is weak and hopefully will build up over time in the near future.

Despite these barriers, it is estimated that green purchasing is becoming more popular in Vietnam and the market for eco-products is emerging dramatically. Correspondingly, there should be further studies in the field of green purchasing in Vietnam to explore the influences that different stakeholders in the society have on green purchasing

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