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Thesis Topic:

FACTORS INFLUENCING

THE INTENTION AND BEHAVIOR GAP

of GREEN CONSUMPTION IN VIETNAM.

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ABSTRACT

“Attitude and behavior gap” is mentioned many times in the literature to explain the term that consumers have a positive attitude toward sustainable consumption, however, they are still not willing to do purchase green products. Indeed, the attitude-behavior gap has been investigated over time, but the intention and actual behavior still have space for scholars to get involved, thus, it remains an investigation on how close the gap. It is qualified for the nature of research by both quantitative and qualitative research. This thesis focused on the gap between green intention and actual behavior by developing and testing three key moderators to the relationship, namely perceived behavioral control, habits and green product availability, respectively. The research is conducted in Vietnam, where environmental issues and sustainable development are strongly concerned by the government and society. The data is collected from 220 consumers from big cities in Vietnam in order to provide evidence to support the hypothesis. The study result might contribute to the green consumption literature by explaining the inconsistency in intention and actual behavior, while most of the studies only focus on the attitude-behavior gap. Implications and recommendation for future research are also mentioned.

***Keywords:** green consumption, habit, perceived behavioral control, product availability, sustainable consumption, sustainable development, Theory of Planned Behavior.*

TABLE OF CONTENTS

| | |
|--|------------|
| ACKNOWLEDGEMENTS | II |
| ABSTRACT..... | III |
| TABLE OF CONTENTS | IV |
| LIST OF TABLES | VI |
| LIST OF FIGURES..... | VI |
| 1. INTRODUCTION..... | 1 |
| 2. LITERATURE REVIEW | 4 |
| 2.1. CONCEPTS..... | 4 |
| 2.1.1. <i>Green consumer and Green consumption</i> | <i>4</i> |
| 2.1.2. <i>Sustainable consumption in Vietnam</i> | <i>6</i> |
| 2.2. RELEVANT THEORIES..... | 8 |
| 2.2.1. <i>Green consumption behavior – a big picture</i> | <i>8</i> |
| 2.2.2. <i>Socio-demographics.....</i> | <i>12</i> |
| 2.2.3. <i>Attitude-Behavior Research.....</i> | <i>14</i> |
| 2.2.4. <i>Values, norms and other psychological models.....</i> | <i>15</i> |
| 2.2.5. <i>Habit and the new framework.....</i> | <i>17</i> |
| 2.2.6. <i>The gap between intention and actual behavior.....</i> | <i>19</i> |
| 2.3. HYPOTHESIS DEVELOPMENT | 22 |
| 2.3.1. <i>Perceived behavioral control</i> | <i>24</i> |
| 2.3.2. <i>Habits</i> | <i>26</i> |
| 2.3.3. <i>Green product availability.....</i> | <i>28</i> |
| 2.3.4. <i>Antecedents to green consumption intention.....</i> | <i>30</i> |
| 3. RESEARCH METHODOLOGY | 32 |
| 3.1. RESEARCH DESIGN | 32 |
| 3.2. RESEARCH CONTEXT | 32 |
| 3.3. DATA COLLECTION..... | 33 |
| 3.4. CONSTRUCTION OF THE QUESTIONNAIRE..... | 34 |

| | | |
|-----------|---|-----------|
| 3.5. | MEASURES..... | 34 |
| 3.5.1. | <i>Independent variables</i> | 35 |
| 3.5.2. | <i>Dependent variables</i> | 36 |
| 4. | RESULTS..... | 38 |
| 4.1. | SAMPLE CHARACTERISTICS..... | 38 |
| 4.2. | MEASURE RELIABILITY AND VALIDITY | 39 |
| 4.3. | DESCRIPTIVE STATISTICS | 41 |
| 4.4. | HYPOTHESIS TESTING | 44 |
| 4.4.1. | <i>Testing the antecedents to green consumption intention</i> | 44 |
| 4.4.2. | <i>Hypothesis testing</i> | 45 |
| 5. | DISCUSSION AND RECOMMENDATIONS..... | 49 |
| 5.1. | DISCUSSION OF THE RESULTS | 49 |
| 5.2. | MANAGERIAL IMPLICATION..... | 53 |
| 5.3. | LIMITATION AND FUTURE RESEARCH..... | 55 |
| 5.4. | CONCLUSION | 58 |
| | REFERENCES..... | 59 |
| | APPENDIX..... | 76 |
| | PART 1: FIGURE | 76 |
| | PART 2: TABLES | 77 |
| | PART 3: QUESTIONNAIRE | 80 |
| | <i>English version</i> | 80 |
| | <i>Vietnamese Version</i> | 83 |

LIST OF TABLES

- Table 2.1. Social-demographics and sustainable behaviors
(Diamantopoulos et al., 2003) (p.13)
- Table 4.1. Demographics (own elaboration) (p.37)
- Table 4.2. Reliability analysis results (Cronbach alpha) (own elaboration) (p.38)
- Table 4.3. Independent variable and dependent variable – exploratory factor analysis
(EFA). (own elaboration) (p.39)
- Table 4.4. Descriptive statistics (own elaboration) (p.41)
- Table 4.5. Linear regression result of green consumption intention as dependent variable
(own elaboration) (p.44)
- Table 4.6. Linear regression result with green consumption behavior as dependent
variable (own elaboration) (p.47)
- Table A. List of Studies affecting green consumption behavior
(Joshi and Rahman, 2015) (p.76)
- Table B. Factors affecting green consumption intention and behavior
(Joshi and Rahman, 2015) (p.78)

LIST OF FIGURES

- Figure 2.1. The funnel approach (Lanzini, 2018: 121) (p.19)
- Figure 2.2. Green consumption behavior testing mode (Ajzen, 1991; own elaboration)
(p.31)
- Figure 4.1. “Green consumption intention” mean vs “Green consumption behavior”
mean. (own elaboration) (p.42)
- Figure A. Green consumption behavior – a big picture (Jackson, 2005, Lanzini, 2018)
(p.75)

1. Introduction

Vietnam has been developing remarkably over the past 30 years with the averaged GDP growth rate of 6.28 percent between 2000 and 2018 (Trading Economics, 2019). From 1986, under Doi Moi, the country has transformed from a highly centralized planned economy to market economy and brought Vietnam from one of the poorest countries in the world to lower middle-income nations (World Bank, 2018). With the increasing population of over 95 million, and ranked 15th in the world (Worldometers, 2019), Vietnam also has a massive market with a large profile of the consumer. The consumptions are changing to match the increasing needs of consumers as a result of the process (Schmidt, 2009; Speece and Nair, 2000; Speece, 2002). The rapid economic growth, the industrialization, and urbanization, therefore, have the negative impacts on the environment such as pollution, deforestation, and degrading of natural resources (Thong et al., 2017). Nevertheless, the ongoing trend of migration into urban centers is causing serious problems: congestion, pollution, water supply, power, drainage to the environment (Dixon and Drakakis-Smith, 1997). Urban citizens stress about air pollution, food safety, and waste, especially plastic waste (De Koning et al., 2015). However, only small amount of Vietnamese consumers know how to increase the sustainable living of their homes and surroundings to change the situation.

As the environment becomes worse, Vietnamese government realizes the urgency of the problem and the need to promote green industry and sustainable development. Therefore, in 2012 Vietnamese government has approved the “National Green Growth Strategy for the period 2011-2020 with a vision to 2050” with the objective to reduce greenhouse gas (GHG) emission and become a low carbon economy with sustainable economic development. The strategic tasks are reducing GHG and promoting the use of clean energy, green production, and green lifestyle together with establishing sustainable consumption behaviors (NGGS, 2012). Although strategies and some environmental laws are taking place in Vietnam, actual effectiveness is still a question without serious actions from stakeholders (Meessen, 2015).

McGougall (1993) insists that consumers are crucial to make a green revolution succeed in a country. There is evidence given by Grunert (1993) that private households’

consumption activities are accounted for 30%-40% of environment degradation. It is essential that consumers can prevent and decrease environmental damage by shifting to green purchases and green lifestyle. As a consequence, the profit-driven companies will be strongly influenced and adjust their business strategies toward the concept of green production, green products, and green marketing to meet the environmental concern of customers (Chan, 2001). A strong interaction between sellers and buyers will be the major force to advance the whole country green revolution (Ottman, 1993).

However, previous works of green consumption have only focused on profiling green consumers which are lacking in understanding the green behaviors (Peattie, 2001). Lately, few researchers have addressed the factors that explain green consumer behavior. Most studies tended to focus on explaining the intention of behavior (Liu et al., 2017). Some further studies on actual behavior (Joshi and Rahman, 2015), from examining the individual factors: emotions (e.g Makatouni, 2002; Chan and Lau, 2000), habits (Padel and Foster, 2005; Lanzini, 2018), perceived consumer effectiveness (Webster, 1975), perceived behavioral control (Wang et al., 2014), values and personal norms (Chen et al., 2012, Padel and Foster, 2005), trust (Bang et al., 2000, Tung et al., 2012), knowledge (Chan et al., 2000), to understand situational factors: price (Connell, 2010), product availability (Young et al., 2010; Padel and Foster, 2005), subjective norm and reference groups (Lee, 2010). The theory of reasoned action (TRA) and planned behavior theory (TPB) are applied the most to explain consumption behavior with the stream studies of understating the “attitude-behavior” gap but not the bridge between the intention and the actual behavior (Nguyen et al., 2018). It is correct that the positive attitude, strong environmental values, and intentions often fail to transform to the actual behavior of purchasing green products (Pettie, 2010). Therefore, scholars have addressed these limitations and called for further study.

The aim of this thesis is to study the gap between green intention and actual behavior by developing and testing three key moderators to the relationship, namely perceived behavioral control, habits and green product availability, respectively. Together with the Vietnamese environment context, the main research question is: “What are the factors that moderate the gap between green consumption intention and actual behavior in urban areas in Vietnam?”.

The study also needs to address several other dimensions to concrete the input, starting with the attitude about the environment and green consumption. Adopting the theory of planned behavior, social norms and attitude also need to be determined before measuring the intention and actual behavior gap. Finally, this research examines several factors that influence on the gap.

This study thus contributes to the literature. First, the finding from this research help to explain the intention-behavior gap of green consumers, why they have the intention to act environmentally but fail into making an actual behavior. In fact, there is a gap between the intention and actual behavior but studies in consumer behaviors usually consider the intention as the same or correlated with actual behavior. Therefore, this research also contributes to the literature on “intention-behavior” of green consumer. Second, it provides a better understanding of the factors that moderate the intention and actual behavior of green consumers in urban areas in Vietnam. This might help companies, entrepreneurs, and marketers to establish strategies for advancing green consumption.

This thesis has five chapters. In the second chapter, the theoretical framework is mentioned including the models to explain the relationship between intention and the actual behavior of green consumers. In chapter 3, the research methodology describes the data collection and measures used. Next, chapter 4 provides the result of hypothesis tests. Following chapter 5, the conclusions are given according to the findings in the previous chapter, this section also shows the limitations when taking the studies as well as recommends some suggestions for future research.

2. Literature Review

2.1. Concepts

2.1.1. Green consumer and Green consumption

Recently, the consumer has become aware of the degradation of the environment, they concern more about their behavior that impacts on the environment. The term “green marketing” had already begun with the ecological concept since the 1970s by developing new technologies to reduce the severe environmental problems producing by the production of many industries (Hennison and Kinnear, 1976). However, sustainability was only broadly adopted as a goal by the world’s government and corporations after the 1992 Rio Earth Summit (Peattie and Charter, 2003). Sustainability is sometimes considered as “sustainable development” and defined as: *“fulfilling the needs of the present without compromising the ability of future generations to meet their own needs”* (Brundtland Commission, 1987, p.6). According to Nielsen’s research (2015), 86 percent of the respondents are willing to pay a premium price for sustainable goods and services. Despite the fact that consumers concern about environmental issues, and the growing of green products in the market, consumers are still not buying green products as expected (Gleim et al., 2012). Only less than four percent of green products are estimated in the worldwide market share (UNEP, 2005), which means the global demand for sustainable products is small. One of the reasons that lead to lack of consumer acceptance of green products is the absent knowledge of environmental-friendly products or sustainable consumption concept, the availability of the green products besides the premium price (VEM,2019). So, what are green products? According to European Commission (2016), the green products and services should be energy-saving, free of toxic, long lasting, easy to fix, made of reused or recycled materials and minimize impacts on the environment such as reducing or eco-friendly packaging. Understanding the concept of green goods and services is useful to explain the definition of the term to the respondents and illustrate the survey.

While not everyone purchases green products, there are significant numbers of consumer who appear to be potentially green (Ginsberg and Bloom, 2004). According to de Koning et al. (2015), 96 percent of Vietnamese consumers have tried to save energy,

80% reported that quality is the most important factor when purchasing food. It is obvious that some consumers have already shown a green attitude in their habits and buying behavior. Soonthonsmai (2007) said that consumers who concern about environmental issues are green consumers. In other words, green consumer is the one who refrains products and services that threatening the wellbeing of consumers, wasting energy, damaging the environment by the production, use or disposal (Elkington and Hailes, 1989). Marketers, however, segment the market based on the levels of environmental concern of consumers (Ginsberg and Bloom, 2004). There are five shades of green consumer defined by the Roper survey: “true blue-green”, “greenback greens”, “sprouts”, “grouzers” and “basic browns”. True blue-greens are consumers who have strong environmental values, try their best to make a positive change. Greenback greens are not politically active but more willing to purchase eco-friendly products than the average. Sprouts state they concern about the environmental issues but rarely purchase a green product if they must spend more, however, they can change their mind if buying green is appropriately appealed. On the contrary, grouzers are not educated about environmental problems and doubtful if their change can give an impact on the environment. They also think green products do not perform well and more expensive compared to the competition. The last segment is “basic browns”, the group that only cares about day to day issues but the environment and social issues. However, it seems that to understand green purchasing behavior, it’s easier to analyze the purchase than the purchaser (Peattie and Charter, 2003).

The term “green consumption” is not always consistent and clear (Peattie, 2010). It can be related to socially responsible consumption (Antil, 1984), environmentally responsible consumption (Gupta and Oden, 2009), ecologically conscious consumption (Fraj and Martinez, 2006) and pro-environmental consumption (Welsch and Kuhling, 2009). It is interesting that the term green consumption has a problem itself of meaning, the “green” involves something related to conservation of environmental resources while the “consumption” implies the destruction (Peattie, 2010). Even the term has been used differently but it still has the common theme that to minimize the negative impact on the environment (Kim et al., 2012). The “green” in this context should be considered more widely as “oriented toward sustainable development” (Peattie, 2010, p. 197). Thus, this

thesis is using the definition of Antil (1984), Antil and Bennett (1979) that green consumption is the practice of purchasing and consuming goods and services, which do not harm the natural ecosystem and human wellbeing.

2.1.2. Sustainable consumption in Vietnam

Together with economic development, the consumption in Vietnam has been increasing significantly. The data collected by the General Statistics Office (GSO, 2012) showing the rising number of people buying a car, eating meat, owning air-conditioning. From 2002 to 2012, the proportion of urban households owning telephones, motorcycles, and fridge grew up dramatically from 32.5-91.4%, 56.7-88.6%, and 33.7-74.7% respectively. Even though the consumption levels in developed countries are higher than emerging economies in general, the material consumption of natural resources is growing fast and significantly, especially in Asian countries (UN, 2015), where having large populations and addressing big challenges regarding air, water, and soil pollution. Indeed, Vietnam is facing the rapid changes and significant environmental challenges such as deforestation and soil degradation, pollution, waste management problems (The World Factbook CIA, 2015) according to the population explosion (almost 95 million of people) with the following result: the higher in the household consumption level. Therefore, it is crucial and urgent to apply green consumption, green purchasing strategy in Vietnam to encourage the sustainable production and consumption aiming for sustainable development (Vergragt et al., 2014). Research of de Koning showed that 60 percent of respondents paid attention to the energy efficiency of the product and 96 percent was trying to save the energy or consumption less energy. While 74.3 percent of consumer reported that they tried to use less water or using water efficient devices, for example washing machines or toilets. The reason for this practice was related to the financial status of households. Thus, it is a positive signal of practicing a sustainable lifestyle and green consumption in Vietnam. Moreover, according to a reliable market research company, Vietnamese consumers concern about sustainable development the most among Southeast Asian countries (Nielsen, 2017). 86 percent of Vietnamese consumer are willing to pay a higher price for products and services by the companies that are committed to having positive impacts on environment and society, while only 76 percent

of Pacific Asian consumer has this interest. However, many Vietnamese consumers do not understand the concept of green products or differentiate green products from competitors. The green product availability also prevents the consumer from purchasing green products (VEM, 2019). In addition, the premium price is also a factor that affects the green buying decision process. Some sustainability factors that influence consumer purchase are health/wellness, quality and safety, brand trust and the environment, according to Nielsen research in 2015. The survey indicates that the most important sustainability factor affecting the purchase intent of Vietnamese consumers is high-quality products, the products that give the benefits for health and organic products. The products that claim for its high standard of safety is also the factor that Vietnamese consumers seek when purchasing the product.

Nevertheless, other environmental issues such as air pollution and waste management, particularly plastic waste are also taking the attention of the Vietnamese consumers. Research from Yale University showed that Vietnam is one of the top air polluted countries in the world and mostly caused by transport vehicles (Vietnamnet, 2017). Vietnam plastic waste issue is at “Alarm threshold” due to the fact that Vietnam ranked fourth, after China, Indonesia, and the Philippines in contributing plastic waste in the world and Vietnam is one of the five countries that emit 60 percent of ocean plastic waste (Vietnamnet, 2018). Therefore, applying sustainable consumption should be considered seriously in a fast developing country like Vietnam to slow down the negative impacts of consumerism on the environment.

Finally, sustainable consumption research on Vietnamese consumer is sparse that need more scholars to investigate this topic. There have been some studies about consumption such as a study of consumption of Vietnamese middle class (Maruyama and Trung, 2017) or opportunities for the supermarket (Nguyen, 2003), yet neither of them mentioned sustainability. Only a few studies have used the term “sustainable consumption” or “green consumption” as listed: “Sustainable consumption and production in Vietnam” (Thong et al., 2017), “Sustainable consumption in Vietnam” which focused on urban middle class (de Koning et al., 2015), Perception of organic food (Truong et al., 2012) and more recently, Organic food purchase in Vietnam (Nguyen et al., 2019). Only two studies have applied the theory of Planned Behavior (Ajzen, 1991) to

explain the green intention and consumption: one study is conducting only in Hochiminh City and explaining consumers' buying intention toward green electricity products (Nguyen and Tran, 2014), while another study is tested in Hanoi, the capital of Vietnam, which concentrated on urban Vietnamese consumer and their attitude toward green consumption (Nguyen et al., 2017). Thus, there is a need to have more studies in this potential market (50% of the population in two biggest cities in Vietnam (Hanoi and Ho Chi Minh City) purchases organic products monthly). The research should be able to explain the intention and behavior gap of consumers focusing on green or sustainable consumption in order to design a better strategy to persuade consumers practicing sustainable consumption.

2.2. Relevant theories

Green marketing is a trend and has become a source of competitive advantage in business (Peattie, 2001). Therefore, sustainable or green consumption has become a crucial topic all around the world that got the attention of many researchers (Liu et al., 2017). There are several studies addressing sustainable behaviors and its features. Many factors have been claimed that influence on green consumer behavior such as socio-demographic factors (Wagner, 1997), alternative products, perceived consumer effectiveness (Webster, 1975), values and personal norms and other factors (Dembkowski and Hanmer-Lloyd, 1994). However, the findings are often inconsistent and sometimes contradictory (Kilbourne and Beckmann, 1998).

2.2.1. Green consumption behavior – a big picture

Before analyzing some factors that I suppose influencing the green consumption behavior based on previous literature in this study, a big picture of the green consumption behavior needs to be showed to have an overview of what other researchers have studied in this field and the directions they are concentrating on.

Firstly, a quick glance of consumer behavior studies will be mentioned. In the field of consumer behavior study, consumer behavior is multidisciplinary in nature, which started to be investigated since the 1960s and studied within a wide range of fields containing sociology, psychology, management, and marketing. There are three

perspectives focusing on the role of conscious and rational economic measurements, external factors and information processing or can be considered as rational, behavior and cognitive perspective, respectively. The rational perspective assumes that behaviors as the results of making choices that optimize the level of an individual's benefit or utility and most of the conventional economics theories are inherited the idea that all consumers are behaving rationally. On the other hand, behavioral perspective concentrates on the role of external determinants in the decision-making process. Thus, integrated marketing communications are the key factor in influencing consumer behaviors. The last but not least, the cognitive perspective emphasizes the importance of information processing when consumers making the decision. The individuals are aware of collecting information, analyzing the inputs to make an optimal decision without being guided by just external factors. However, these perspectives mainly investigate the purchasing behaviors without concerning wider activities that connect to consumer behavior such as consumer behavior. Thus, in this thesis, I am not only focusing on purchasing but extending the scope of the study by including activities that might not relate to purchase but consumption to understand how individuals develop their behavioral choices.

Green consumption or sustainable behavior is an important topic over the world because of degrading of the environment that urges people to take action and change their behavior, therefore a number of studies have been addressing green consumption behaviors and its related aspects to understand how people behave and find the factors that influence the consumer's behavior. Many studies have been conducted from time to time with different views and method of research. The first effort of analyzing green consumption behavior was based on socio-demographic items to profile the typical green consumer. This approach focuses on collecting the information of the individuals such as gender, age, education, and income; which is simple to conduct and easy to measure. The method is still widely used today to segment the market and identify the characteristics of each segment or to describe the profile of the target customer. Other variables have been used in the research to study green consumption behavior such as psychographic variables and seem to have a stronger capability to explain the behavior than socio-demographic variables. Environmental concern is also a construct that has been studied with the measurement developed by Dunlap and his team (1978), which is called The

New Ecological Paradigm (NEP). However, after the 1980s and 1990s, the approaches that based on demographic or psychographic segmentation are replaced by more complex models that require the involvement of a set of the variable to explain the intention of behavior and actual behavior.

Green consumption behavior research since then can be divided into two main branches, one is based on the rationalistic perspective and the other one is rooted in an automatic performance of behaviors which so-called habits (Aarts & Dijksterhuis, 2000; Verplanken & Aarts, 1999). However, the rationalistic perspective is more concerned by the researchers on the field of sustainable behaviors. Rational perspective is assumed that the behaviors are influenced by a cognitive process based on a rational measurement of all available alternatives. In the branch of rationalistic perspective studies, two directions are well-developed as attitude-behavior research and altruistic-based or moral-based model. The attitude-behavior research is well known with the term of the theory of reason action (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980) and theory of planned behavior (Ajzen, 1991) with the meaning that we behave in a particular way because we build the intention to do it and it has a close correlation between intentions and actual behavior. Meanwhile, the moral-based models are connected to the norm-activation model (Schwartz, 1977; Schwartz & Howard, 1981), Value-belief-norm theory (Stern et al., 1999), which are used when the green consumption behaviors have pro-social motivations (Park & Ha, 2014).

The set of approach mentioned above: attitudes, values, habits and personal norms, are conceived as internal factors, can be defined as proper predictors of green consumption behavior. This internal perspective implies that consumers are atomistic agents autonomous of social structure (Jackson, 2005), which will be illustrated more carefully in the next sections. However, an individual's behavior is not only affected by internal determinants but also external forces such as fiscal and regulatory incentives, institutional constraints and social practices (Jackson, 2005). In this approach, consumers are constrained operators programmed by external factors beyond their control. Not surprisingly, there is an internal-external dichotomy in theories of consumer behavior that need a further debate concerning the relationship between human action and the social institutions that create the framework for human action. Thus, some integrative theories

of consumer behavior have been proposed and widely accepted. For example, structuration theory (Giddens, 1976, 1984), consumption as social practices (Spaargaren and van Vliet, 2000), Attitude-Behavior-Context Model or ABC model (Stern, 2000), Triandis' Theory of Interpersonal behavior (Triandis, 1977), Motivation-Opportunity-Abilities model or MOA (Ölander and Thøgersen, 1995). Giddens's structuration theory (1984) draws an interconnection between routine social institutions. While Spaargaren and van Vliet (2000) propose a model of consumption with two main influencers, one is social norms and lifestyle choices and the other is institutions and structures of society. On the other hand, ABC model (Stern, 2000) plays an important role to solve the internal and external dichotomy in previous studies by including two important dimensions as attitudes and contextual factors in the model. However, ABC model is still missing one key element, it is the role of habit, therefore, Stern (2000), after that, proposes a new integrated model consisting of four factors: attitudes, contextual factors, personal capabilities, and habits in the later study. Interestingly, this approach has the same ideas with the Theory of Interpersonal behavior (Triandis, 1977) about facilitating condition. MOA model (Ölander and Thøgersen, 1995), on the other hand, tries to combine motivation, habitual and contextual factors into one pro-environmental behavior model. All these sophisticated models try to illustrate a robust picture of the predictors that shape and constrain consumer choice as well as propose some crucial areas for further examination in promoting pro-environmental behavioral change. However, with the small scope of studying, I only adopt some specific variables to investigate and apply the simpler model theory of planned behavior (Ajzen, 1991) for my research.

Before investigating more in detail some variables that I have mentioned above in the next sections, I would like to propose a synthesis of the evolution and different streams of research on sustainable consumer behavior or green consumption behavior in particularly in figure A, which could be found in the Appendix, Part 1. Figure A will illustrate the main streams of sustainable consumer behavior studies that the researchers mainly concentrate recently. The reader can find more information about related research in the table that I created and figure A in the appendix section.

2.2.2. Socio-demographics

The early researches of sustainable behavior were mainly focused on the green consumer instead of the sustainable consumer, which using social-demographic features such as age, gender, education and income to segment the consumer, or profile the typical green consumer. The investigations were targeted to answer the questions of whom is more sustainable. Empirical studies were not difficult to conduct because all the data required was some sort of behavioral measure and used together with social-demographic variables, which were more readily available, to analyze the consumption behavior (Lanzini, 2018). This approach still is used by the current research because of the proved relationship between sustainable behaviors and socio-demographics. The purpose of such correlational studies is to label the attributes of the sustainable consumer or to find out the features that are popular among individuals and influence green consumer behavior. However, the weakness of socio-demographics is a great managerial concern: if the social-demographic variables have no role in describing the consumer behavior, as the result, the marketers must choose the alternative solutions which are more complex and targeting (Wedel and Kamakura, 2000). Some studies of the relationship between socio-demographic variables and sustainable behaviors in the 1990s are shown in table 2.1.

Many studies reveal the linkage between gender and sustainable behavior with the vast of authors stating that males tend to have higher environmental awareness than females. However, despite having higher and better knowledge about green issues, males exhibit lower concern (Davidson and Freudenburg, 1996) and participate less frequently in many types of green behavior (Diamantopoulos et al., 2003). Another finding showing there is not sufficient evidence that females are less knowledgeable about environmental issues than their male counterparts and hold a stronger attitude towards green consumptions. Women display more often greener habits and are more likely to recycle than men (Diamantopoulos et al., 2003).

Age is also a variable that has been used to determine the relationship between socio-demographic and sustainable behavior. However, the linkage is not significantly strong. Some findings indicate the negative association between age and attitude, in other words, younger people tend to have a higher concern about environmental quality than the old one. On the contradictory, some studies have found that older people exhibit

higher levels of green behavior (e.g., Van Liere and Dunlap, 1980; Schahn and Holzer, 1990; Vining and Ebreo, 1990; Scott and Willits, 1994). It is reasonable that such inconsistencies due to the financial status that prevents them from taking actual action to protect the environment.

**Table 2.1 Social-demographics and sustainable behaviors
(Diamantopoulos et al., 2003)**

| Variable | Study | Sample size | Location |
|-----------|------------------------------|-------------|-----------------|
| Age | Grunert and Kristensen, 1992 | 1476 | Denmark |
| | Shrum et al., 1993 | 3690 | US |
| | Lyons and Breakwell, 1994 | 1089 | UK |
| | Scott and Willits, 1994 | 3632 | US |
| | Altenburg et al., 1996 | 400 | The Netherlands |
| | Widegren, 1998 | 1018 | Sweden |
| Gender | Baldassare and Katz, 1992 | 641 | US |
| | Roberts, 1996 | 605 | US |
| | Witherspoon and Martin, 1992 | 1422 | UK |
| | Shrum et al., 1995 | 3690 | US |
| | Altenburg et al., 1996 | 400 | Germany |
| | Widegren, 1998 | 1018 | Sweden |
| Education | Grunert, 1991 | 1476 | Denmark |
| | Roberts, 1996 | 605 | US |
| | Berger, 1997 | 43000 | Canada |
| | Witherspoon and Martin, 1992 | 1422 | UK |
| | Scott and Willits, 1994 | 3632 | US |
| | Meffert and Bruhn, 1996 | 1544 | Germany |

The impact of education on sustainable behavior has been investigated by many pieces of research. A large number of studies indicating a significant linkage with the findings that the better-educated people are more knowledgeable about green issues. They are somehow more likely to practice green activities. However, a study of Diamantopoulos et al. (2003) showing that there is no significant difference in the attitude toward the environmental issues between people have a different level of education. The study also reveals that only partial studies stating that people with higher education level are participating in green activities such as recycling.

Other socio-demographic variables such as income, social class, are also considered in many studies. Income is the variable that has been used frequently in many pieces of research, however, as studies resulted in either a positive or negative correlation between income and environmental attitudes and behaviors. Some studies suggest that consumerist lifestyle has the negative impact on the environment, so the rich are less environmental-friendly compared to the lower income individual. While, there are arguments that the lower income could not practice the sustainable behavior because green activities often involving extra costs (Lanzini, 2018). Social class is also reported to have an association with green behavior. Again, the findings of Diamantopoulos et al. (2003) stating that there are no differences in the environmental concern in higher or lower social class. The study also indicates that the social class has no significant influence on their participation in green behaviors.

2.2.3. Attitude-Behavior Research

Among many theories have been used to explain the green consumption behavior, the most adapted to green consumption is probably the theory of reasoned action (TRA), the theory of planned behavior (TPB) and its extension. (Biswas & Roy, 2015; Hanss et al., 2016; Peattie, 2010). Two theories are regulated by a considered cognitive process, which rationally evaluating the available information and alternatives. The TRA and TPB are near to traditional perspective of rational choice and has been widely applied in economic studies (Lanzini, 2018), food consumption (e.g., Vermeir & Verbeke, 2008), general green consumption (e.g., Wu & Chen, 2014).

The beginning point of the TRA is the expectancy-value construction which can be explained as people behave according to their belief about the consequence of their behavior and the values of the outcomes. These two variables beliefs and values lead to an attitude, which is one of the two main factors of the people's intention. The intention, according to Fishbein-Ajzen model, is the main driver of actual behavior (Jackson, 2005). On the other hand, subjective norms reflect social pressure or as an individual belief about what others expect them to behave in a specific way. In sense, if a person intends to do something, it seems that he will probably do it, but it does not always happen as predicted. This case happens when there are some hinder factors that prevent the stream of the behavior. For example, a consumer intends to buy organic fruits, but when she arrives at the supermarket, she could find that product because it is out of stock, therefore, she has to buy alternative fruit. Although she intended to buy organic fruits, she has to change her plan and buy something else.

The example above is also pointing out the lack of explanation when it appears contextual or subjective (e.g. skills) factors that prevent the likelihood of performing given activities. To eliminate this limitation, Ajzen (1991) introduced the theory of planned behavior (TPB), which is an extension of the TRA with new variable known as perceived behavioral control (PBC). The perceived behavioral control is not only an additional indicator of intention but also action. PBC can be perceived as self-efficacy or self-efficacy beliefs (Hanss et al., 2016), it is explained as the individual's belief as how easy or difficult to perform an activity and can be applied directly to forecast actual behavior. The TPB, therefore, has been used commonly in marketing studies and in literature with a wide range of domains and sustainable behavior is not an exception.

2.2.4. Values, norms and other psychological models

Psychological factors have been the object of many empirical studies and have a better prediction and more complex form than social-demographic variables. The psychological factors that affect consumer behavior have been divided into four main groups: individual's motivation, learning, perception, beliefs, and attitudes (Callwood, 2013). Gilg et al. (2005), on the other hand, categorized the psychological influences into four groups: Perceived consumer effectiveness (PCE), self-efficacy, social responsibility

and the interaction of the effect of price, quality and brand loyalty. Perceived consumer effectiveness (PCE) is defined as the consumer's belief that his environmental behaviors can make a difference or have a positive impact on the environment. It has been claimed that consumers who have a high level of PCE will have a better impact on the environment (Kinnear et al., 1974; Tucker, 1980; Roberts, 1996). Self-efficacy is defined as one's own ability to practice green consumption (Sparks and Shepherd, 1992). While social responsibility, relating to which a person feels moral to take the responsibility of practicing responsible consumption (Schwepker and Corwell, 1991). Despite the fact that there are many different psychological factors that affect consumer behavior, it is not adopted in this study, but needed to say that these factors are large in number and heterogeneous in nature.

There are various models have been used to determine how individuals make the decision and develop their behaviors. Values and norms are such objectives to be used by researchers to examine the impact of those factors on green consumer behavior. Some models are widely adopted such as norm-activation theory (Schwartz, 1977; Schwartz & Howard, 1981), value-belief-norm theory (Stern et al., 1999), new ecological paradigm (NEP) (Dunlap & Van Liere, 1978; Dunlap et al., 2000).

Indeed, the norm-activation model by Schwartz is the first theory investigated in pro-social behaviors and has been applied with some success. Schwazt (1977) argues that there are two variables activating personal norms: Awareness of consequences and Ascription of responsibility. While personal norms refer to the belief of moral obligation to alleviate environmental problems, awareness of consequences is understood as a person aware of his negative impact if he does not act pro-socially and ascription of responsibility indicates the individual feelings of the action he initiates could avoid such consequences. Many studies provide supportive evidence to the norm-activation model and confirmed its theory (Stern et al., 1986; Stern et al., 1993; Guagnano et al., 1994; Guagnano, 1995).

While Schwartz suggests that there are two dimensions driving the personal norms, value and beliefs which reflect the general social values without mentioning specific environment concerns, Dunlap and his colleagues argues that the rise of the environmental movement is connected to the New Ecological Paradigm (NEP) (Dunlap

and Van Liere, 1978, 1984; Dunlap et al. 1992). This paradigm is probably the most widely adopted social-psychological measure in the study of environmentalism (Stern et al., 1999). The NEP scale is made up of fifteen items that measure broad beliefs about the habitat and the impact of human behavior on it. In other words, NEP evaluates the awareness of very general detrimental consequence of environment, whereas the norm-activating model measures the specific problem of consequences (Stern et al., 1995).

Stern and his group (1999), however, inherits two theories above and developed a new theory to study the determinants of sustainable called Value-belief-norm theory. The theory is explained by a chain of three accounts and five variables: Values (egoistic values, traditional values, especially altruistic values), new ecological paradigm, awareness of consequences beliefs, the ascription of responsibility beliefs and pro-environmental personal norm. The chain starts from the personality and beliefs of an individual to more concentrated beliefs about the relationship between human and environment, the action that they might threaten the biosphere and the responsibility for their behavior, finally initiating moral obligation to take action that supports the pro-environmental goals. They suppose that each factor in the chain affects directly the next and maybe affect the further factors in the chain.

All models are based on a rationalistic view proposing that behaviors are the result of the complex cognitive process in which the norm-activation model and value-belief-norm are used when sustainable behavior have pro-environmental motivations. However, this study has not yet mentioned the other cognitive view related to self-interest which will be explained in the next part using the theory of reasoned action (Fishbein & Ajzen, 1975, 1980), the theory of planned behavior (Ajzen, 1991).

2.2.5. Habit and the new framework

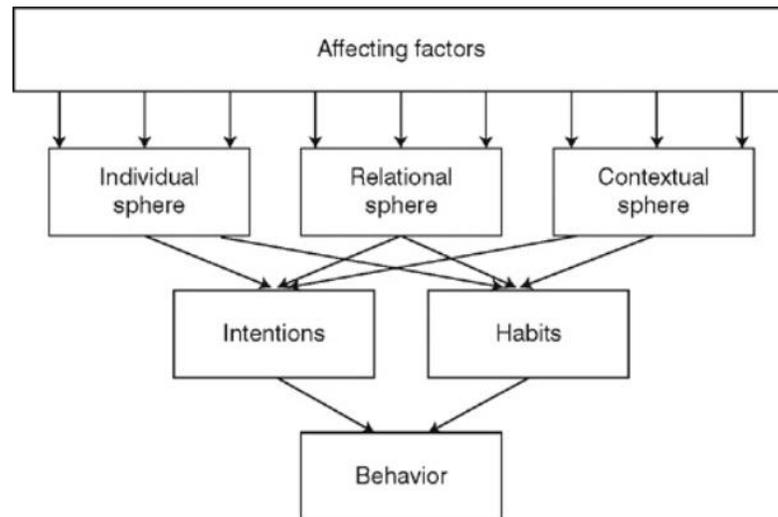
According to Lanzini (2018), a behavioral study in the domain of sustainability can be sorted into two main directions, based on either in rationalistic view or on the role of habits in initiating the behavior. Habits are activities that perform automatically, without evaluating rationally all other alternative options of action. People often seem to act instinctively, automatically, or sometimes led by emotion, out of routine or habit (Jackson, 2005) and beyond the intentions. Thus, there is a clearly problematic existence

for the models using intention to mediate the actual behavior. Habits are playing a role in shaping behavioral patterns. Moreover, many habitual activities contribute a significant impact on the environment (Lanzini, 2018). Our daily lives are full of repetitive actions: turning on and off the light, disposing of waste paper running the shower: the decisions are made with a very little conscious thought and cognitive effort. This leads to a challenge to motivate pro-social or pro-environmental behavior (Jackson, 2005). Even though people are convinced to change their attitudes and beliefs in pro-environmental behavior and gotten into internalizing pro-environmental norms, yet it is not certain that people will act pro-environmentally. Although the habit is not significantly relevant as predictors of behavior according to theories of rational choice, habits can carry the likely of defeating a consideration of alternatives and responding automatically to specific indication or stable contexts (Lanzini, 2018). Lanzini and Khan (2017) state that habit can act as the moderators of the intention-behavior relationship. In sense, when an activity is repeated over time, decisions are not influenced by rational evaluation as much as habits (Aarts et al., 1998).

Acknowledging that rational cognitive processes and habits are showed as determinants of behaviors, different studies have suggested the integration of such approaches. For example, Triandis (1997, 1980) suggested a model in which habits and intentions collaborate in predicting behavior. Lanzini (2018), on the other hand, uses the term interpretative framework to adopt holistically and flexible evaluation perspective on sustainable behaviors. He assumes that no one-size-fits-all model that can be adopted in every scenario and for everyone. And in the studies of consumer behavior, influencers such as family and community hold a crucial role in contributing the course of action. The framework is complex and multi-level interpretation and not just narrowed by a simple and partial model with three layers of analysis. One layer is understood as proper predictors of sustainable behaviors: attitude, norms, habits, values, etc. or labeled as intentions and habits. The second level is shown by three categories: individual, relational and contextual factors. And the third level is illustrated as the actual behavior. This approach, thus, demonstrates a big picture and comprehensive direction for studies, which have an interest in responsible consumer behavior.

Figure 2.1 synthesizes the funnel approach with 3 layers, which illustrates in the figure below:

Figure 2.1. The funnel approach (Lanzini, 2018: 121)



2.2.6. The gap between intention and actual behavior

While many studies in sustainable consumption have applied TRA or TPB, some just concentrate on either behavior or intention, with the top cited studies using attitude-behavioral patterns, or just try to explain the attitude and actual behavior gap but intention-behavior gap. (Liu et al., 2017). In these researches, the intention and the behavior are often assumed to have a very high correlation or the same (Nguyen et al., 2018). This correlation is also the first aspect that researchers are arguing if the intention can explain or fully translate into actual behavior. Hassan et al., (2016) also points out that obtaining a maximum intention-behavior correlation is important for the researcher to achieve the best prediction of actual behavior and questions if intention fully mediates the behavior by the effects of the antecedents of the TPB (Hassan et al., 2016). This assumption is not true because there is an opportunity that the consumer has the intention to buy a green product but end up not buying it because he could not find where to buy that product or he must pay a higher price for the green product that he could not afford. Even though the intention and the behavior are closely akin, it is also hard to explain if the green consumers have a positive attitude toward environmental protection or

sustainable consumption and then have the intention to actualize the green consumption intention (Peattie, 2010; Young et al., 2009). Recently, empirical research has claimed that the relationship between green consumption intention and actual behavior is close but never come to unity (Wu & Chen, 2014; Nguyen et al., 2015). In addition, Ajzen and Fishbein (2005, p.178) also confirm the gap between intention and behavior after reviewing some factual evidence in many fields for TRA and TPB models. The correlations between intention and behaviors are between 0.45 and 0.62 in many fields of study. (Ajzen & Fishbein, 2005) and sometimes the correlations are even lower showing that intention is not always an indicator of behavior (Ajzen, 2011). Ajzen et al., (2004) warn that the investigation based on intention as a proxy for actual behavior must be used cautiously. Also, a meta-analysis shows that changing intentions does not guarantee a change in actual behavior (Fife-schaw et al., 2007; Webb & Sheeran, 2006; Rhodes & Dickau, 2012; Sheeran & Webb, 2016).

Secondly, in order to understand the intention and actual behavior gap, most of the research tries to find out what affects the gap between intention and behavior and finds solutions to bridge the gap (Carrington et al., 2010; 2014; Webb and Sheeran, 2016; Hassan et al., 2016). Researchers state that the transformation from intention to actual consumption behavior are poorly understood and investigated (Auger et al., 2003; De Pelsmacker et al., 2005; Belk et al., 2005; Szmigin et al., 2009) or suggest that consumption intention does not always translate into actual behavior (Morwitz et al., 1993; Young et al., 1998; Bagozzi, 2000; Ajzen et al., 2004). Carrigan and Attalla (2001), Auger and Devinney (2007) argue that the intention-behavior gap exists and believe that consumers are not ethically. Later, Carrington and his team (2010) suggest that the argument of Auger and Devinney (2007) is right but it just partly explains the intention-behavior gap of sustainable consumer and propose a conceptual model of intention-behavior gap with two moderators as situational context (Belk, 1975) and actual behavioral control (Ajzen and Madden, 1986; Sheeran et al., 2003) (Carrington et al., 2010). After that, in 2014, Carrington and his team again, reveal four interrelated factors that might influence the gap between intention and actual behavior: priority of concern, plans/habit, level of commitment and shopping modes. Fukukawa (2003) claims that studies focused on the attitude-intention-behavior relationship are ignoring the external

forces of environment or situation on purchase behavior while during the transition between intention and behavior, the individuals might contact to a physical and social environment (Philips, 1993) and these factors can affect their decision making. Fukukawa (2003) also confirms that cognitive approaches oversimplify the complex transition of buying intention into actual behavior by assuming constant condition without consideration of social and environmental variables.

In Carrington et al.'s model (2010) intention-behavior gap is mediated by implementation intentions/plans (Gollwitzer, 1999), and moderated by actual behavioral control and situational context. On one hand, implementation intentions and plans help individuals to change their habits or minimize the influence of moderating factors to actualize the green consumption behavior (Ajzen, 2002; Gollwitzer and Sheeran, 2006). Indeed, habits reduce the intention-behavior consistency, bypass intentional control (Verplanken & Aarts, 1999; Wood & Neal, 2007), and play an important role in influencing the intention and behavior as I mentioned in the previous section. On the other hand, actual behavior control and contextual context also moderate the green gap. However, because of the difficulty of operationalizing actual behavioral control, previous researchers have the intention of using perceived behavioral control as a proxy for actual behavioral control (Sheeran et al., 2003). In this thesis, I also apply the perceived behavioral control and assume this approach as a proxy for actual behavioral control. Besides, there is a factor like contextual variables which might affect the transformation of intention into behavior (Ajzen & Fishbein, 2005). The contextual factors are used in literature, such as financial status, trust, habits, availability of green products, knowledge (Peattie, 2001; Ottman et al., 2006).

Indeed, there is a gap between intention and behavior, this can be explained as consumers have a positive attitude and an intention to act environmental-friendly but fail into taking an actual action (Hanss et al., 2016; Peattie, 2010). There are some empirical investigations have shown this gap. In 2005, a study shows that 89% of UK consumers have a positive attitude toward the green consumption but only 30% convert it into intentions and only 3% actualize the green purchasing (Futerra Sustainability Communications Ltd, 2005). Another research also illustrates that 46-67 percent of Swedish consumers in food category have positive attitudes toward organic food, but

only 4-10 percent actually purchase the food (Magnusson et al., 2001). Young et al., (2009) found out 30% of UK consumers report that they concern about the environment but they are not successful to translate it into action. In 2016, Hassan and his group report that their empirical case study shows the low correlation between intention and behavior. They report that 15 articles find 45% of variance in behavior can be explained by intention and PBC. They also claim that the empirical evidence is limited that makes it hard to quantify more accurately the gap between intention and behavior. It might be concluded that the actual behavior is only driven by attitude or intention when it happens in a favorable context. Thus, Peattie has concluded that despite the common use of TPB and TRA theories in green consumer behavior, there are still have some obvious limitation (Peattie, 2010). Therefore, there are calls for research to understand the attitude-behavior, especially green behavior. (Hanss et al., 2016; Liu et al., 2017; Azjen, 2011). This limitation perhaps is the reason of development of other theories such as Motivation-Opportunity-Ability (Olander & Thøgersen, 1995) and Attitude-Behavior-Context model (Stern et al., 2000), the funnel approach (Lanzini, 2018) which are using both intention and contextual variables to determine consumer behavior.

After reviewing some arguments in sustainable consumption, I will use three factors that might fill the gap in the literature: habits, perceived behavioral control and product availability as a contextual factor. Habits are adopted from the Lanzini's interpretative framework, in this approach, habits influence both intention and actual sustainable consumption. While Peattie (2001) points out that product availability as a contextual factor might facilitate the gap and is the factor that influences the buying process decision. The last but not least, Perceived behavioral control (Azjen, 1991) is also received a wide range of studies, and sometimes perceived as contextual factors or self-efficacy or self-efficacy beliefs (Hanss et al., 2016) and proved to have the impact on the intention and actual behaviors.

2.3. Hypothesis development

In this thesis, I am using the TPB model as the main structure to illustrate the relationship between green intention-behavior and purchasing behavior. While perceived behavioral control is already adopted in the model as a predictor of behavior and also

affects the intention, two other predictors: individual and situational factors as habits and product availability, respectively, are applied to fill partly the gap of the TBP. First of all, understanding what intention is and what factors moderate intention are useful to develop some hypothesis and answer the research question. According to Ajzen (1991), an individual's intention to actualize a given behavior is a center factor of TPB. The intention is understood to capture the motivational factors that impact behavior, it can be seen as the willingness to try an individual, the effort that person put in order to perform the behavior. Thus, green consumption intention can be applied as motivational determinants of an individual to initiate green consumption behavior. Intentions and behaviors are strongly correlated under TRA or TPB, only when specificity is measured at the same level and when intention and behavior happen in short time (Ajzen & Fishbein, 2005; Conner & Armitage, 1998). Indeed, Sheeran (2002) found that the correlation between intention and behavior is 0.53 in general and many empirical research on green consumption also reported a high correlation between intention and actual behavior (Wu & Chen, 2014; Nguyen et al., 2015). Therefore, I propose a similar result in green consumption but there are no formal hypotheses for the relationship to be proposed in this thesis.

Even when the TPB model is applied carefully, it contains random measurement error (Ajzen, 2011). The reliabilities are rarely reached 0.75 or 0.80 in the measure of attitude, subjective norm, perceived behavioral control, intention, and behavior. Thus, the expected correlations among the theory's constructs are ranged from 0.59 to 0.66 (Ajzen, 2011). It happens the same in green consumption as considered as the gap between attitude and behavior (Hanss et al., 2016, Peattie, 2010; Young et al., 2010). Ajzen (1991) states that the stronger the intention, the more likely the behavior is performed, however, he also claims that a behavioral intention can only be translated to behavior if it is undertaken under volitional control. Moreover, some behaviors may follow the trace of TPB, on the other hand, there is the number of performance affected by such non-motivational factors as availability of need opportunities and resources (e.g., time, skills, money, collaboration with others) (Ajzen, 1985). Thus, scholars have been calling for further researches on situational and individual factors that may control the gap between the intention and green behavioral consumption (Hanss et al., 2016). In this study, I

propose using the structure of TPB theory as a guideline to understand the cognitive behavior, supported by two more variables that may influence the relationship between the intention and the behavior, namely habits and green product availability, corresponding to two predictors: individual and situational, respectively. Perceived behavioral control is also another predictors as Ajzen (1991) claimed that it impacts on intentions and actions.

2.3.1. Perceived behavioral control

According to the TPB, intentions and perceived behavioral control can predict behavior. TPB is an extension of TRA (Ajzen & Fishbein, 1980) which solving the original model's limitations of the behavior under incomplete volitional control or behaviors that enacted without non-motivational factors such as time, money, skill. Collectively, these factors depict people's actual control over the behavior. This concept has already mentioned in more general models of behavior with the concept of "facilitating factors" (Triandis, 1977), "the context of opportunity" (Sarver, 1983), "action control" (Kuhl, 1985) and lately perceived as self-efficacy (e.g., Fishbein and Cappella, 2006; Hanss, 2016). Indeed, perceived behavioral control plays an important role in the TPB, it is assumed to impact on intentions and actions (Ajzen, 1991). Perceived behavioral control can vary across situations and actions while locus of control is expected to be stable across situations and actions. Much of Ajzen's conclusion about the importance of perceived behavioral controls comes from Bandura's concept of perceived self-efficacy (Bandura, 1982). Self-efficacy can impact the choice of activities, preparation for an activity and the effort during the performance as well as emotional reactions. The TPB, thus, locates the construct of perceived behavioral control or self-efficacy belief within a more general framework and together with behavioral intention, can be adopted directly to predict behavioral achievement. There are two reasons for this hypothesis. The first reason is the likeliness to perform an action increasing with perceived behavioral control if we keep intention constant (Ajzen, 1991). For example, even if two people have equally strong intentions to buy green products, and both try to do so, the person who has more knowledge about green products is more likely to actualize the green action than the person who has no ideas about the product. Secondly,

Ajzen (1991,p: 184) also argues that we can expect a direct relationship between perceived behavioral control and actual behavior due to the fact that perceived behavioral control can often be applied as an alternative for a measure of actual control. Moreover, past theory and intuition lead us to expect the synergy between motivation and control (Ajzen, 1991). In the context of TPB, motivation is understood as intention and control imply the perceptions of behavioral control. Needed to mention that perceived behavioral control is not particularly realistic when a person does not have much information about the behavior or when new and unfamiliar factors have joined the situation. (Ajzen, 1991). Hanss (2016), on the other hand, believes that empirical evidence, which traditionally hypothesizes that one's ability can affect the expected outcomes, might have a reversed relation. He adopts the term perceived effectiveness of one's actions or outcome-directed approach as a reversed relation to explaining consumer's intentions to purchase sustainable groceries. More precisely, self-efficacy beliefs are adopted as consumers' perceived ability to actualize the green consumption and sustainable development. Doubts about someone's self-efficacy also prevent him from purchasing sustainable products, especially when green products are often more expensive than normal products (Hanss, 2016). The empirical literature has proved that self-efficacy is a predictor of purchasing sustainable foods and cosmetics: the consumer, who believes that his purchasing or using environmentally friendly products can impact the environment (Hanss and Bohm, 2010). Thus, self-efficacy or perceived behavioral control has two approaches to explain the relationship between green intention and actual behavior: the perceived ability and outcome expectation. However, in this study, I only focus on investigating traditional relations between perceived behavioral control and actual green consumption.

From above arguments and evidences, I propose the first hypothesis that:

Hypothesis 1. *The perceived behavioral control moderates the relationship between the green consumption intention and the actual behavior.*

2.3.2. Habits

Peattie (1999) suggests that the smartest way to understand green consumer behavior is by studying each individual's consumption behavior as a series of purchase decisions. These decisions may be not connected to situational factors or might be inter-related by common values. Biel and Dahlstrand (2005) shows that there are different kinds of choice processes in everyday purchase situations: with the high demand of mental resources, a decision is guided by value and memory-based choices to implement intention; while with the low demand of mental resources and a decision or motivated choices are guided by the need and habit is involved in the choice processes. It can also be understood that habits may guide many daily purchasing decisions. A survey in the UK also finds that green consumers consider environmental issues when purchasing products (a weekly activity), but involve more often in habitual household activities such as switching off lights and recycling (Barr & Gilg, 2006). This leads to the question if the habits could affect the choice processes or could be used to predict the green consumerism. Thus, in this part, I will not focus on the cognitive decision-making process but the habit, the automatically behavior, with no rational evaluation of the alternatives courses of action.

We agree that, as individuals, we often act automatically, instinctively, sometimes our actions occur despite our best intention to act otherwise (Jackson, 2005). Psychological scholars agree that mental processes were either "controlled" or "automatic" (Johnson and Hasher, 1987). Automatic processes is assumed not to involve intention, control, cognitive effort and awareness (Bargh, 1994). Recently, it is agreed that controlled processes often become automatics ones when they are learned and ingrained in us. (Jackson, 2005). For example, the consumer has to differentiate carefully the green label when she is activating the act of buying organic food, but when she gets used to the label or the place the organic food sell, she might go there automatically without noticing the signal board or green labels. Moreover, the mental process generally combines both controlled and automatic attributes simultaneously and "heuristic" is a simple cue to describe the spectrum between control and automaticity. This is familiar with consumer research when consumers often make choices on the simple signals like brand or price (Jackson, 2005) and after that setting routine or habitual purchases. Indeed,

our daily lives are full of repetitive actions, sometimes we might aware that we are acting from habit and the actual performance requires very little cognitive effort. The reason is that routine behavior is highly automatic and from the range from control to automaticity, habits locates near the automatic end (Jager, 2003). Habits play an important role in building behavioral trajectories and have the potential of crucially affecting consumer processing choices (Lanzini, 2018). Habitual behavior is notably successful as a strategy when it appears no change in decision contexts. In this case, deliberation is justified in believing that come up with the same answer. This explains the reasons why habit is powerful in the situation of daily decision-making and hard to change even sometimes routine or habits conflict with rational deliberations, are against the social norms and confuse our best intentions to change (Jackson, 2005). This leads to the harder task in achieving pro-environmental behavior change, some scholars have proposed some models that offer useful tools into how to negotiate behavioral change (e.g. Resistance to change, Oreg, 2003).

On the other hand, Fishbein and Ajzen acknowledge habits as a potential moderator of intentions, yet plays a minor role; or past behavior when it turns to a routine, has the potential to affect later behavior. Also adopting the habit concept, Thogersen (1994) introduces an extension of the TPB model where motivation represents the former behaviors. In Thogersen's model, habits have the potential to influence beliefs and evaluations that activate the attitude. Aarts and his team (1998) claim that habits can also act as mediators of the intention and behavior relationship; when the decisions are influenced by repetitive activity than by rational evaluations. Moreover, Triandis (1977, 1980) also proposes a theory of interpersonal behavior, in which, intentions and habits affect each other in forecasting behaviors: the stronger the habit, the weaker the relationship between intention and behavior. Again, many studies have found out the intention-behavior relationship. Tsakuridou et al., (2008) show that habit has a significant obstacle to green products purchasing, Padel and Foster (2005), Vermeir and Verbeke (2006) both claim that habits influence negatively on consumer green purchase behavior. After reviewing the above evidence and arguments, I formally hypothesize:

Hypothesis 2. *Habits moderate the link between green consumption intention and actual behavior.*

In the context of Vietnam, where consumers concern about environmental issues. They are paying more attention and practicing purchasing organic products and eco-friendly products. Moreover, Vietnam is the 4th country in the world of contributing plastic waste to ocean, the government is trying to raise the awareness of the Vietnamese consumer on the environment issue and encourages them to act pro-environmentally as well as use less plastic packaging. Thus, the 2nd hypothesis will be split into two minor hypotheses:

H2a: Buying organic food habit positively influence the relationship between the intention and actual behavior.

H2b: Using plastic bag to carry food habit negatively influence the relationship between the intention and actual behavior.

2.3.3. Green product availability

One of the reasons for less green consumption is the lack of availability of green products (De Pelsmacker et al., 2005). Thus in this thesis, green product availability is discussed to clarify if the availability of green products can facilitate the link between green consumption intention and behavior. Joshi and Rahman (2015) state that most studies show the major barriers to purchasing environmentally friendly products are the limited availability and difficulties in accessing green products. On the other hand, consumers don't want to spend too much time on searching for green products, they prefer convenient products or to be more specific, they look for convenience in purchasing and avoid products that take them more effort to evaluate, especially the products with lower value or groceries (Young et al., 2010). Indeed, green consumption is a choice by consumers among other options of different shades of eco-performance (Pettie, 2001, 2010). In spite of the fact that green products are often assumed to be more expensive, the actual cost burden for consuming the green product is not the high price but the cost of time to look for the green products. The consumers often claim that they don't have time to search for the green product and they decide to choose the most convenient products when they are rushed into doing something (Young et al., 2010). An example from Young and his team show that the trade-off of wanting shop as ethically as possible is the limited time and how much the customer look into it. In retrospect,

consumer would care more about how the company commits to the environmental issues but in the meantime the consumer's family has just moved to a new house and needed facilitates, the consumer does not have much time to consider between alternatives of different levels of eco-performance, he or she ends up with doing as much as is easily available. This compromise is a crucial issue in green consumption if the consumer has to take extra time and effort in exchange quality and extra costs (Peattie, 2001). Even consumers have a positive attitude and intention to behave environmentally, they will not buy or use green products if their total benefits are not adequate or lower than the cost that they have to pay for a green product (Ottman et al., 2006). Availability of green products can make green products more appealing and may lead to lower such perceived costs (Ottman et al., 2006). Empirical research showed that the limitation in supply might hinder green consumption actual behavior (Bonini and Oppenheim, 2008).

On the other hand, Ajzen and Fishbein (2015) argue that intention can be transformed into actual behavior depending on the situation that consumer can recall their intention and it can be applied in case of green consumption. In this scenario, the availability of green products acts as a situational factor that can help the consumer remind their green behavioral intention (Nguyen et al., 2018). Availability of green products can recall the consumer's memories of consuming green products that they might behave in the past. It can be also interpreted as the availability of green products reminds consumer to behave in accordance with his established intention (Ajzen & Fishbein, 2005). There are a number of empirical research concerned about this factor and provided some results. Tarkiainen and Sundqvist (2005) report that the availability of a product has a positive correlation with green purchase intention and behavior. Padel and Foster (2005) state that limited availability and difficulties in accessing green products prevent the consumer from purchasing environmentally sustainable products or consumer prefer products that are easily accessible and don't like spending a lot of time searching for green products (Tanner and Kast, 2003). A qualitative study conducted by Gleim and his group (2013) shows that the top reasons for the green consumer not to buy a green product is the unavailability of a green alternative.

After reviewing the above evidence and arguments, I formally hypothesize:

Hypothesis 3. *The availability of green products moderates the link between green consumption intention and actual behavior.*

It can be hypothesized again as the more available of green product, the stronger of a positive relationship between the intention and actual behavior.

2.3.4. Antecedents to green consumption intention

Under TRA and TPB, the key factors that influence the intention: attitudes and subjective norms, and Perceived Behavioral Control have been tested in many different green consumer behavior studies (e.g., Chan, 2001; Wu & Chen, 2014). In this thesis, I have already mentioned the relationship between Perceived Behavioral Control, thus, only attitudes and subjective norms are listed below.

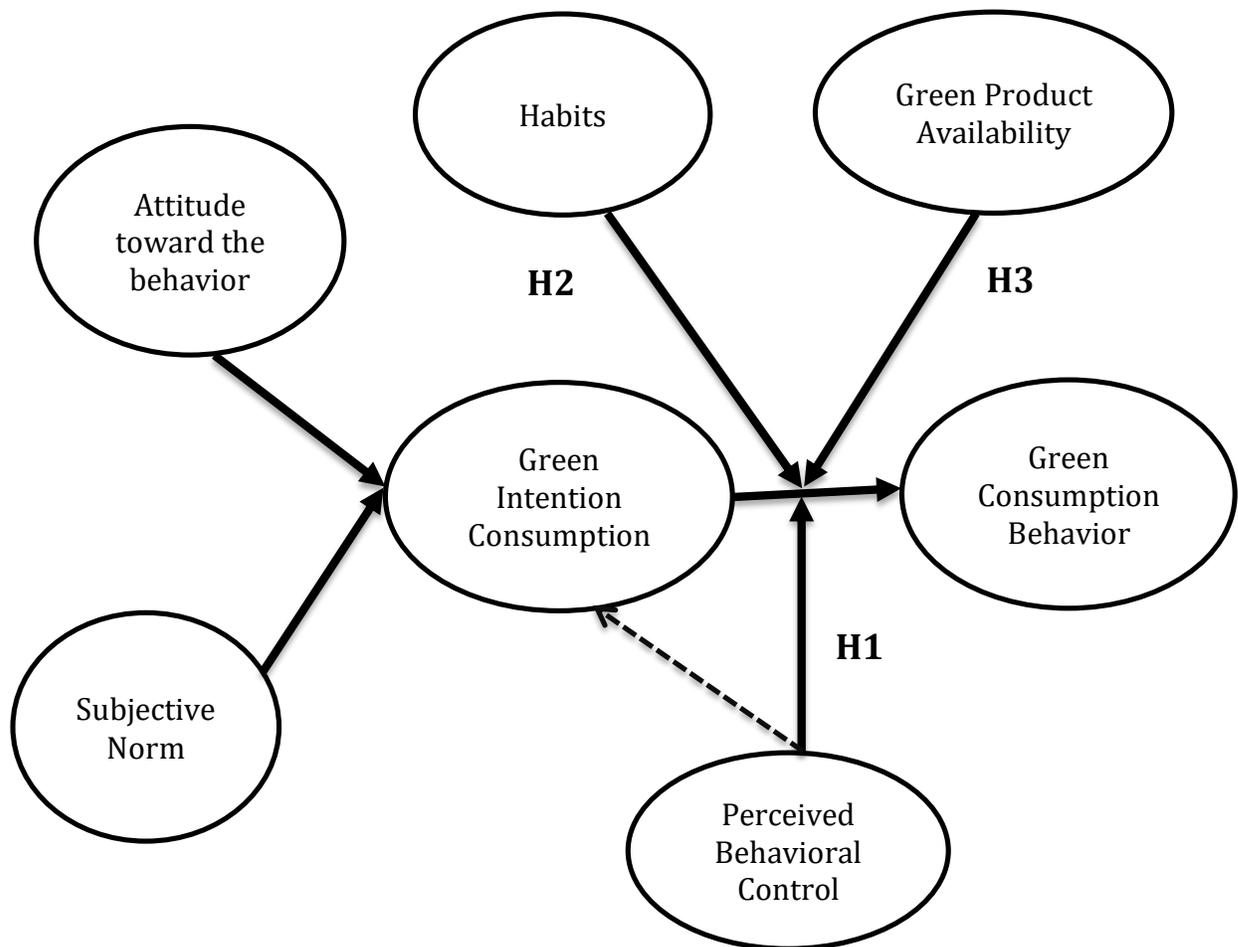
The first determinant of intention is the attitude toward the behavior and refers to the positive or negative predisposition to which a person has a favorable or unfavorable evaluation or appraisal towards a specific behavior (Ajzen, 1991). Attitude can be a judgment on good or bad behavior (Leonard et al., 2004), it also an important predictor of behavior intention (Kotchen and Reiling, 2000). Moreover, in the context of green consumerism, many studies show that attitude has a positive relationship with the behavioral intention (Mostafa, 2007). In research of Birgelen and his team (2009), if the consumer has a positive attitude towards protecting the environment, they prefer eco-friendly beverage packaging. It also happens in the green tourism context that attitude influence positively on the intention (Han and Yoon, 2015; Chen and Tung, 2014). Scholars also found out the positive relationship between attitude and intention in organic food choice behavior (Dean et al., 2012; Zhou et al., 2013).

The second determinant of intention is the subjective norm, which implies what we believe others expect us to do and can be understood as social pressure. The others, in this case, are who close or important to the consumer and influence his/her intention and decision-making process. They can be his family, close friends, colleagues or business partners. Indeed, the consumers who have positive subjective norms toward pro-environment, are more likely to have positive green intention-behavior. Empirical research has shown that subjective norm is an important predictor of intention-behavior. Some examples that note the positive relationship between subjective norm and intention

are organic food purchase intention (Ha and Janda, 2012; Dean et al., 2012), environment conscious consumption (Moser, 2015, Tsarenko et al., 2013).

In this thesis, the relationship between attitudes, subjective norms and green consumption intention will be tested again to ensure the reliability of the model results without supposing any further hypothesis. The tested model is illustrated in Figure 2.2.

Figure 2.2. Green consumption behavior testing mode (Ajzen, 1991; own elaboration)



3. Research Methodology

3.1. Research design

This thesis focused on the moderators that influence the green intention-behavior gap. The attitude-behavior gap has been investigated over time, but the intention and actual behavior still have space for scholars to get involved, thus, it remains an investigation on how to close the gap. It is qualified for the nature of research by both quantitative and qualitative research. However, this research only uses quantitative research method to test the hypothesis due to the fact that the attitude-behavior gap is well addressed and tested in past studies. This means that the well-built constructs are available to apply for this specific study context. I use mainly existing validated constructs to create the questionnaire and to test the formulated research questions.

3.2. Research context

The research is conducted in Vietnam, an emerging economy with the urbanization has accelerated significantly since 1986 knowing as “Doi Moi” (Reform). During the 2000s, the urbanization rate was estimated as 3,4%/year (Alan et al., 2006), however, at the end of 2013, the urban rate reached 33,47% which is appropriate 29,72 million people (Phung, 2009). Moreover, with Vietnam’s population of more than 90 million, the fast urbanization process has led to different challenges to the nation and its socioeconomic. It’s more concerned in large cities such as Ho Chi Minh and Ha Noi about the degradation of the environment, poor urban planning and infrastructure and high corruption (Nguyen et al., 2015).

In big cities in Vietnam, environmental issues are one of the biggest challenges that need to be solved. In fact, nearly 50 percent of the urban population are located in the two biggest cities: Hanoi and Ho Chi Minh City in 2012. It is stated that the urbanization process has grown faster than the country’s governance capacity (Quertamp & Miras, 2012). Even though the government has involved its best with participating in international sustainable agreements and issuing many different strategies and regulations on environmental preservation, it has been agreed that environmental protection is not equivalent with the country’s sustainable growth (VNGovernment, 2012). Moreover, the

government's regulations only focus on green production strategies, which impact on firms but the consumer. It seems that the government should have more regulations or action to encourage green consumption in the country (Nguyen & Nguyen 2017).

Indeed, Vietnamese consumers are more concerned about environmental problems that affect directly to their life, especially organic foods. Thus, according to a research of Nielson (2015), the Vietnamese consumers state that they are willing to pay a premium price for a sustainable product. Even though the green production consumption in Vietnam has limited data, there are some pieces of evidence from newspapers, social network, shows that green products have been attracted attention from consumer and increased in demand, especially from big cities. Being aware of the importance of practicing green consumption, authorities have conducted several green consumption campaigns which concentrated on the awareness and pricing to encourage sales.

3.3. Data collection

Data was collected from consumers living in some large cities in Vietnam (Ho Chi Minh, Ha Noi, Da Nang, Nha Trang, Da Lat, and some other cities) because the environmental issues are more challenging, and the consumers might have a higher awareness of green purchasing and environmental problems in these areas. In this study, convenience sampling is used to collect data. This allows me to use my network to spread the questionnaire. Thus, this represents a limitation of the study, because the network is often composed of people who share the same interests or values, thus it does not represent the overall population. The questionnaire was first formulated in English and then translated to Vietnamese. Both versions were tested on 5 people to check if the questions were not ambiguous and clear enough in order not to misunderstand or multiple interpret. I used paper sheets and Google Forms to visualize the questions and used social media (Facebook), coffee shop to circulate the survey. 30 questionnaires were handed in a coffee shop and 220 questionnaires were sent through social media, groups that the student is participating. A message was written to address the respondents through Facebook Messenger and to explain the topic without mention specific questions to avoid bias, while the student introduced the topic by herself to the respondents in the coffee

shop. After 7 days, 220 questionnaires were collected. The survey was conducted between 10th and 17th April 2019.

3.4. Construction of the questionnaire

The questionnaire consists of four parts 1) Antecedents to green consumption intention: Attitude toward the behavior, environment, and social norms; 2) Factors affects the intention-behavior gap; 3) Intention and behavior; 4) Demographic information. The sample of the survey is in the appendix both English and Vietnamese versions.

The questionnaire begins with the questions on antecedents to green consumption intention including attitude towards environment and attitude towards sustainable behavior and social norms. It is also used as introductory questions of this research because the questions point out the related topic. The second section focuses on the factors that I suggest influencing the intention and actual behavior. The respondents are asked to state their agreement toward each statement of perceived behavioral control, product availability, and habit. In the third part, respondents are presented with four statements of their intention and asked to answer the question of how likely you think you will do a specific behavior in the next occasion if you have the chance. I use Likert scale 7-point ranging from very unlikely to very likely. The actual behavior statements are also performed in this section by using a seven-point scale ranging from never to always to answer the question of how often the respondent practices sustainable consumption behavior. The questionnaire is ended up with four questions of demographic and general background: gender, age, educational level and which city the respondent is living.

3.5. Measures

The measures applied in this study are modified from previous research to construct a reliable research method. However, not all scales fit the research purpose and questions are adjusted to be suitable for the Vietnamese context and the purpose of this research. The measurements of each question are mentioned as follows, it provides information and remarks if the scale was modified. Most of the question are used a 7-point Likert scale ranging from strongly disagree to strongly agree. Some other questions

are measured by “unlikely to likely”, “never to always” scale. Especially, the questions of attitude toward sustainable behavior adopt many different scales to make the answers more reasonable and equivalent to the context. Questions related to demographics are also used in a different form of a question as multiple choices questions.

3.5.1. Independent variables

The first part of the questionnaire is contributed to the independent variable. The first question is about the attitude of the respondent towards the environment and it is measured by asking the respondent about his/her agreement towards three statements. Two statements are developed by Nguyen et al., (2018) and the last statement is self-developed. An example of this scale is: “Vietnamese people are using too much plastic bags.”

The second factor affects the intention “Attitude towards sustainable behavior” is modified from Chan (2001), two statements coded by 7-point scales were employed to measure the attitude. Two other statements are adopted from Chan (2001) but divided into 2 parts as purchasing and using green products and I also modify the scale ranging from unpleasant to pleasant. One example from this part is: Purchasing green products for me would be... (on a scale 1 to 7: 1 = very unpleasant, 7 = very pleasant).

The scale “subjective norm” developed by Tarkiainen and Sundqvist (2005) is used to measure the influence of family, friends or business partners on consumer intention. The scale has three items and was adapted to the research context. One of the three items is: “People who are important to me want me to buy green products.”

Perceived behavioral control measures to what extent a person’s belief as how easy or difficult to perform an activity. The statements are self-developed but using some suggestion by Ajzen and Fishbein (1980) of non-motivational factors that might compose the perceived behavioral control such as money and skill and knowledge. An example of a new statement is: “I don’t know the differences between green products and normal products.”

The availability (unavailability) of green products are modified from the items in the research of Kim and his group (2012). It is used to identify if green products are

available in the usual shopping routine of the consumer. One of the three items is: “I cannot easily find green products unless I look for them carefully”.

Habits are investigated based on the Self-reported Habit Index (SRHI) (Verplanken & Orbell, 2003). Two behaviors that I suppose that might influence the green intention and actual behavior are buying green organic foods and using a plastic bag to carry food. Thus, I apply two behaviors as subjects of habits to measure whether they affect the gap of intention-behavior. One sample of this question is shown below: “Buying organic food is something...”. The answer using a 12-item index of habit strength without any adjustment.

3.5.2. Dependent variables

This research has two dependent variables: 1) green consumption intention and 2) green consumption behavior.

The scale “Green consumption intention” is modified based on a scale developed by Chan (2001) to answer the question how likely you will behave a specific action if you have a chance to do so. Two statements are taken from Chan’s research and two statements were self-created to fit the research context and my purpose of investigating in “using plastic bag behavior”. All for items are coded on a 7-point scale ranging from 1= “Very Unlikely” to 7 = “Very likely”. Following is one of the statements for this variable: “Using fewer plastic bags when I go shopping.”

To measure consumers’ green consumption behavior, respondents are asked to express their views on all the items. Four behavioral items are used with the answer of the 7-point self-reported scale ranged from 1 = “never to 7 = “always”, indicating the frequency of green behavior: purchasing and recycling. The scale could be said adopted from Chan’s scale (2001), self-developed and corresponding to items listed in green consumption intention to make it relevant when building the model and testing the gap. One of four items is: “I switch to other brands for ecological reasons”

To ensure that respondents understand the concept of green products and green consumption in the same way, the definition is shown in the introduction of the questionnaire before questions are asked. 5 people were asked to check both English and

Vietnamese version to make sure if the Vietnamese translation is appropriate and keeps the original concept of the questions.

4. Results

4.1. Sample characteristics

The final number of valid questionnaires in this research is 214 out of 220 because of six unfinished answers. Most of the respondents were female (64.5%) and the largest group was aged from 19 to 40 (91.6%). 90.2 % of respondents have a high education level: university level and higher. The respondents are mostly from the biggest cities in Vietnam: Ho Chi Minh City (57.9 %), other respondents are mostly from the top 15 cities with a large population in Vietnam. For more information, see table 4.1 below:

Table 4.1. Demographics (own elaboration)

| | | N (214) | % |
|--------------------------|--------------------|----------------|----------|
| Gender | Male | 74 | 34.6 |
| | Female | 138 | 64.5 |
| | LGBT | 2 | .9 |
| Age | Under 18 | 8 | 3.7 |
| | 19-40 | 196 | 91.6 |
| | 40-60 | 10 | 4.7 |
| Educational Level | High School | 13 | 6.1 |
| | Under Graduated | 122 | 57.0 |
| | Graduated and Post | 71 | 33.2 |
| | Graduated | 8 | 3.7 |
| | Others | | |
| Living City | Ha Noi | 12 | 5.6 |
| | Ho Chi Minh | 124 | 57.9 |
| | Da Nang | 9 | 4.2 |
| | Nha Trang | 2 | .9 |
| | Da Lat | 39 | 18.2 |
| | Others | 28 | 13.1 |

4.2. Measure reliability and validity

To evaluate the reliabilities and validities of the measures, Cronbach alpha test is first carried out then exploratory factor analysis (EFA) is determined in SPSS. To reduce common method bias, independent and dependent variables are tested separately (Podsakoff et al. 2003). Measured items are valid if the Cronbach's alpha is over 0.7 and the corrected item-total correlation is over 0.4 (Allen et al., 2014). Factor "Attitude toward the environment" has the Cronbach's alpha below 0.7 (0.601) is eliminated because it is not a new concept to the respondents to accept the alpha over 0.6 but smaller than 0.7. The item "I am willing to spend more money to buy green products" of the factor "Perceived Behavioral Control" has the corrected item-total correlation is under 0.4 (0.3), thus it is left out to improve the reliability of the measure. Table 2.2 shows the overview scales together with the result of the tests.

Table 4.2. Reliability analysis results (Cronbach alpha) (own elaboration)

| Factor | Items | α |
|---|--------------|----------------------------|
| Attitude toward green consumption | 4 | 0.814 |
| Social Norms | 3 | 0.827 |
| Perceived Behavioral Control | 2 | 0.915 |
| Product availability | 3 | 0.757 |
| Habit (Buying organic food is something . . .) | 12 | 0.880 |
| Habit (Using plastic bag to carry food is something...) | 12 | 0.908 |
| Green consumption intention | 4 | 0.834 |
| Green consumption behavior | 4 | 0.797 |
| N=214 | | |

After finishing the Cronbach's Alpha test, exploratory factor analysis (EFA) is carried out. Especially, items for the attitude toward green consumption, subjective norms, perceived behavioral controls, availability of green products are subjected to EFA with KMO and Bartlett's Test to measure of sampling adequacy. Habits are not included in this test because I suppose the items have different meanings, which lead to a more

complex and not reliable result. The factor of attitude toward environment is not tested due to the fact its Cronbach alpha is smaller than 0.7 and during this process, I eliminate 1 item with low factor loading (item “I am willing to spend more money to buy green products” of the factor “Perceived Behavioral Control”). The result shows that KMO = 0.702, which is acceptable in the condition that $0.5 < KMO < 1$, meaning that EFA has an adequate sample. Moreover, the Bartlett test has $Sig. \leq 0.05$ (.000), the variances are not the same and the items have correlations with the main factor. In total, four factors have a total extracted variance of 73.049%. It means 73.094% changes of factors are explained by items. The factor loadings are shown in table 4.3. I also use the same method to measure the EFA, which subjective are items for green consumption intention and green consumption behavior. The green consumption factor has a total variance extracted of 67.735% while green consumption factor draws a total variance extracted of 64.093%.

Table 4.3. Independent variable and dependent variable – exploratory factor analysis (EFA). (own elaboration)

| Factor | | Indicator | Factor loading |
|--|-----------------------------------|--|-----------------------|
| Independent variable | Attitude toward green consumption | -I like the idea of purchasing green products. | 0.745 |
| | | -Purchasing green products for me would be pleasant | 0.769 |
| | | -Using green products for me would be very pleasant | 0.787 |
| | | -I have a favorable attitude toward purchasing a green version of a product. | 0.838 |
| | Subjective Norm | -People who are important to me think I should buy green products. | 0.824 |
| | | -People who are important to me would approve of my purchasing. | 0.788 |
| -People who are important to me want me to buy green products. | | 0.903 | |

| | | | | |
|--|------------------------------|--|--|-------|
| | Perceived Behavioral Control | -I know how to recycle plastic, paper or glass. -I know the differences between green products and normal products | 0.948 0.955 | |
| | Product availability | -I do not know where green products are sold | 0.781 | |
| | | -Green products are not sold at stores close to where I live | 0.838 | |
| | | -I cannot easily find green products unless I look for them carefully | 0.836 | |
| | Dependent variable | Green consumption intention | -Buying green label products (organic foods or energy-saving products) | 0.877 |
| | | | -Switching to other brands for ecological reasons | 0.828 |
| -Using fewer plastic bags when I go shopping | | | 0.816 | |
| -Recycling paper, glass and plastic | | | 0.767 | |
| Green consumption behavior | | -I buy green label product (organic foods) -I switch to other brands for ecological reasons -I use less plastic bag to carry foods (I use fabric bag, reusable bag) -I recycle paper, glass, plastic. | 0.837 0.876 0.811 0.662 | |

4.3. Descriptive statistics

Before testing the hypothesis, in this section, a general view of the findings is given by table 4.4. Seven-point Likert scale is used to measure most of the items with construct 1 means strongly disagree and 7 means strongly agree. Because the factor “Attitude toward environment” is not reliable because of its low alpha point, thus it is not mentioned in the table as a variable of the study.

Table 4.4. Descriptive statistics (own elaboration)

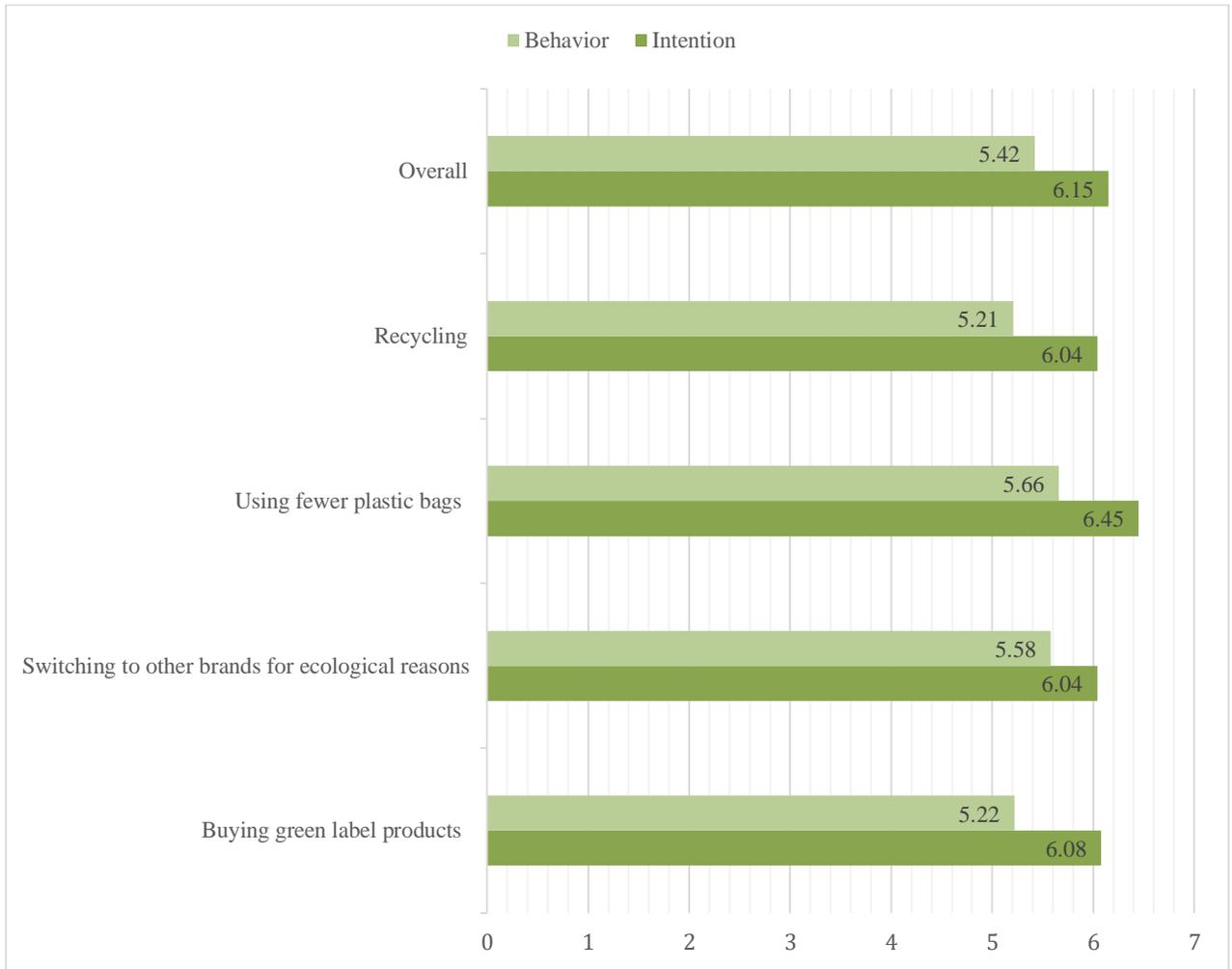
| | Mean | SD |
|---|-------------|-----------|
| Attitude toward green consumption (ATT) | 6.247 | 0.819 |
| Subjective Norm (SN) | 5.246 | 1.186 |
| Perceived Behavioral Control (PBC) | 4.563 | 1.665 |
| Product availability (PA) | 5.051 | 1.354 |
| Habit (Buying Organic Food) (HB1) | 4.129 | 1.221 |
| Habit (Using plastic bag to carry food) (HB2) | 3.913 | 1.254 |
| Green consumption intention (GI) | 6.152 | 0.931 |
| Green consumption behavior (GB) | 5.421 | 1.107 |
| N=214 | | |

Table 4.4 is showing that respondents have a positive attitude towards green consumption with high $\mu = 6.247$, $sd = 0.819$. In four items of the factor attitude towards green consumption, respondents really like the idea of purchasing green products with the highest $\mu = 6.33$, $sd = 1.069$. They also feel pleasant to use a green product with $\mu=6.27$, $sd=0.935$. Purchasing the green product and purchasing a green version of a product also so have high means ($\mu=6.21$, $sd= 1.047$; $\mu= 6.18$, $sd = 1.033$; respectively). Next, the subjective norms have high $\mu=5.246$, $sd=1.186$ indicating that respondents' decisions are influencing by the people who are important to them. In fact, they agree that their family would approve their purchasing ($\mu=5.49$, $sd=1.324$), and interestingly that their friend or family think the respondents should buy green products ($\mu=5.15$, $sd=1.417$) but slightly less want them to buy a green product ($\mu=5.09$, $sd=1.384$). With the factor Perceived behavioral control, I eliminate the item "I am willing to spend more money to buy green products" to keep the measure reliable, thus the new $\mu=4.563$, $sd=1.665$ suggests that the respondents have fairly skill and knowledge about green consumption, or to be clearer they know how to recycle ($\mu=4.47$, $sd=1.658$) and can differentiate green products and non-green products ($\mu=4.66$, $sd=1.808$). Unavailability $\mu=5.051$, $sd=1.353$ which demonstrates that green products are less available in the near or regular stores. Respondents have to give more effort to find green products. They mostly agree that it is harder to find green products if they do not look for the products carefully ($\mu=5.53$, $sd=1.531$). They also agree that green products are not sold near where they live ($\mu=5.05$,

sd=1.658) or they do not know where to buy ($\mu=4.57$, $sd=1.753$). Respondents seem to have a positive habit toward buying organic food with $\mu=4.129$, $sd=1.221$ as they know it is better for their health, it is also a positive signal that the respondents are less using a plastic bag to carry food because they are having a weaker habit of consuming plastic bag $\mu=3.913$, $sd = 1.254$.

From table 4.4, we can also see the clearly different between green consumption intention and green consumption behavior. Knowing that their consumption can impact on the environment, respondents have very high intention to buy green products on the next occasion if they have the chance to do so ($\mu=6.152$, $sd=0.931$). Especially, the intention of using fewer plastic bags when shopping has the highest mean $\mu=6.45$, $sd=0.947$, this indicates the good signal that the Vietnamese consumers have an awareness of using too much plastic and wants to reduce it. However, when respondents report their green consumption behavior, it shows that they don't really actualize what they said, or they committed and as a result the mean is clearly lower $\mu=5.421$, $sd = 1.107$. They report that they try to use less plastic bag to carry foods ($\mu=5.66$, $sd = 1.356$), often switch to other brands for ecological reasons ($\mu=5.58$, $sd = 1.241$) buy green label product ($\mu=5.22$, $sd = 1.365$) and often do recycling $\mu=5.21$, $sd = 1.627$). Figure 4.1 will show the different mean between green consumption intention and green consumption behavior to have an overview of the gap of green consumption behavior.

Figure 4.1. “Green consumption intention” mean vs “Green consumption behavior” mean. (Own elaboration)



4.4. Hypothesis testing

4.4.1. Testing the antecedents to green consumption intention

In this section, regression analyses with the dependent variable as green consumption intention are run to ensure the theoretical framework with suitable collected data. The result shows that there is no multicollinearity in the model due to the low variance inflation factor ($VIF < 10$) (VIF of ATT, SN, PBC are 1.203, 1.165, 1.050; respectively) (Allen et al., 2014). The result independent variables such as attitude toward green consumption, subjective norms and perceived behavioral control all have a positive impact on green consumption intention as theoretical antecedents and are in line with previous works of literature. Table 4.5 will show the results of the regression analyses

with the unstandardized coefficients, standardized coefficients, t and significant. R^2 of the model is 29.9% with the ANOVA test ($F=29.875$, $df=3$, $sig=0.000$). Moreover, the table shows that attitude toward green consumption behavior is the most significant predictor with the highest $B=0.490$ and p -value <0.001 . Following is the subjective norm is also significant with the level of 0.05 (p -value = 0.009 and $B=0.129$). The perceived behavioral control variable can be accepted if the significant level is reduced to 0.1, at that level, PBC can be accepted with $p = 0.86$ and $B=0.057$.

Table 4.5. Linear regression result of green consumption intention as dependent variable (own elaboration)

| Independent variable | B | Std. Error | β | t | Sig. |
|---|----------|-------------------|---------------------------|----------|-------------|
| (constant) | 2.155 | 0.427 | | 5.045 | 0.000* |
| Attitude toward green consumption | 0.490 | 0.072 | 0.431 | 6.807 | 0.000* |
| Subjective Norm | 0.129 | 0.049 | 0.164 | 2.626 | 0.009* |
| Perceived behavioral control | 0.057 | 0.033 | 0.102 | 1.727 | 0.086 |
| <i>Note: green consumption intention as dependent variable.</i> | | | | | |
| * $p < 0.05$ | | | | | |
| $R^2 = 0.299$, Adjusted $R^2 = 0.289$ | | | | | |
| $N = 214$ | | | | | |

4.4.2. Hypothesis testing

The relationship between dependent variable: green consumption behavior and independent variables: perceived behavioral control, product availability, the habit of buying organic food and habit of using a plastic bag to carry food are assessed by linear regression analysis. Moreover, the moderation analysis is also conducted by subjecting perceived behavioral control, product availability, and habit as the moderator of intention and behavior relationship and uses linear regression to test the model. This is used to test

the hypotheses that I proposed in chapter two and demonstrate if the model fits the data and confirm factors influence the gap.

In the research model, hypotheses are tested by calculating the mean of each item from each factor to form the variable for that factor. Multiplication variables are formed by multiplying the independent variables and the moderator to test the moderation effects. Independent variable is green consumption intention and moderator variables are perceived behavioral control, the product availability, and two habits. The independent variables and moderator variables are centralized before taking the multiplication to eliminate the nonessential correlations between the multiplication variables and the independent variables that create them (Hayes, 2013). To test the model, I use ordinary least squares (OLS) regressions or simply linear regression. I propose two models to compare the differences between two models, model one (M1) has only dependent variables and independent variables and model two (M2), I add the multiplication variables. Two population regression models below show the predictors on green consumption behavior.

$$\mathbf{M1:} \text{ Green consumption behavior} = \alpha + \beta_1 x \text{ Perceived Behavioral Control} + \beta_2 x \text{ Product availability} + \beta_3 x \text{ Habit 1} + \beta_4 x \text{ Habit 2} + \beta_5 x \text{ Intention} + \varepsilon \quad \varepsilon \sim n(0, \sigma)$$

$$\mathbf{M2:} \text{ Green consumption behavior} = \alpha + \beta_1 x \text{ Perceived Behavioral Control} + \beta_2 x \text{ Product availability} + \beta_3 x \text{ Habit 1} + \beta_4 x \text{ Habit 2} + \beta_5 x \text{ Intention} + \beta_6 x \text{ Perceived Behavioral Control} x \text{ Intention} + \beta_7 x \text{ Product availability} x \text{ Intention} + \beta_8 x \text{ Habit 1} x \text{ Intention} + \beta_9 x \text{ Habit 2} x \text{ Intention} + \varepsilon \quad \varepsilon \sim n(0, \sigma)$$

Before testing the model, the bivariate correlation test is conducted to check the correlation between independent variables and dependent variables. In model 1, Perceived behavioral control, the habit of buying organic food and green consumption intention has a positive relation with green consumption behavior and the correlation is significant at the 0.01 level (2-tailed). In model 2, all the multiplication variables have a significant Pearson correlation at the 0.01 level (2-tailed). Perceived behavioral control,

the habit of buying organic food and green consumption intention also have a positive relation toward green consumption behavior with significant P-value smaller than 0.001.

With the dependent variable as green consumption behavior, two models – M1, M2 are tested (Table 4.6). After analyzing the models, the results show that multicollinearity does not appear and causes any problems in the estimates with the highest variance inflation factor (VIF) of 3.872, which is smaller than 10 (if the $VIF > 10$, the multicollinearity problem needs to be solved). The models are applicable because of the acceptable regression results. R^2 for the full model (M2) is 55.6%, which means 55.6% of the variance in the green consumption behavior variable can be explained by independent variables collectively. This R-squared is also higher than the model without multiplication variables (M1) ($R^2 = 54.2\%$). It can be seen from two models that the green consumption intention is the most important positive predictors of green consumption behavior as supposed. In M1, the habit of buying organic food variable has significant effects on green consumption behavior as expected with the significant confidence levels of 99.9%. While the perceived behavior control variable only has significant confidence levels of 90%. In M2, the multiplication variable of using plastic bag to carry food habit and green consumption behavior has significant effects on green consumption behavior as expected at confidence levels of 99.9% while the habit of buying organic has the significant level of 90%.

Notably, the regression analysis results illustrate that the multiplication variable between the habit of using plastic bag to carry food and green consumption intention has a negative effect on green consumption behavior with the p-value < 0.01 , while it is a positive relationship between green consumption intention and green consumption behavior. Thus, the habit of using plastic bag to carry food has a negative moderating effect on the link between green intention and behavior. Therefore, hypothesis H2b is supported. In contrast, the multiplication variable between the habit of buying organic food and green consumption intention has a positive effect on green consumption behavior (significant confidence level of 90%) when there is a positive relationship between green consumption and intention. Therefore, the habit of buying organic food has a positive moderating effect on the link between green consumption intention and behavior. Thus, Hypothesis H2a is supported.

Finally, the multiplication variable between unavailability of green products and green consumption intention has a negative effect on green consumption behavior yet the hypothesis is not supported because the significant confidence level is less than 90%. Therefore, the availability of green products cannot be proved that has a moderating effect on the link between green consumption intention and behavior. Thus, H3 is not supported. Similarly, the multiplication variable between perceived behavioral control and green consumption intention has a positive effect on consumption behavior yet the hypothesis is not supported because the p-value is bigger than 0.1. Thus, the perceived behavioral control has no moderating effect on the relationship between green consumption intention and behavior and H1 is not supported.

Table 4.6. Linear regression result with green consumption behavior as dependent variable (own elaboration)

| Independent variable | M1 | M2 |
|--|-----------|-----------|
| Perceived behavioral control | 0.08* | 0.08* |
| The unavailability of green product | -0.06 | -0.07 |
| Habit 1: Buying organic food | 0.31*** | 0.32*** |
| Habit 2: Using plastic bag to carry food | 0.02 | 0.01 |
| Green consumption intention | 0.53*** | 0.52*** |
| Green consumption intention x Perceived behavioral control | | 0.04 |
| Green consumption intention x the unavailability of green product | | -0.07 |
| Green consumption intention x Habit 1 | | 0.16* |
| Green consumption intention x Habit 2 | | -0.18** |
| R ² | 0.542 | 0.556 |
| R ² change | | 0.007*** |
| Adjusted R ² | 0.530 | 0.537 |
| <i>Significant at confidence levels of: *90%, **95%, ***99,9%. N = 214</i> | | |

5. Discussion and Recommendations

In this chapter, discussion and recommendations are the results of synthesizing four previous chapters. The aim of this thesis is to investigate the factors that influence the gap between green intention-behavior and the actual behavior of Vietnamese consumers in urban areas. The result, on one hand, wishes to help to contribute to intention-behavior gap literature. On the other hand, the proposed managerial implication might be useful for the company and policymaker to create a strategy to minimize the intention-behavior gap and encourage green consumption behavior. This last chapter also proposes limitations and some recommendations for further research.

5.1. Discussion of the results

In Western countries, green consumption or sustainable consumption has been concerned as an important research topic in the marketing literature (Peloza et al., 2013; Leonidou et al., 2013; Haws et al., 2014). Recently, because of the increasing awareness and level of concerns for the environment, especially in the emerging Asian economies, green consumption has just been concerned more in consumer behavior studies (Liu et al., 2017). The first effort of analyzing green consumption behavior was based on socio-demographic factors to profile the typical green consumer which is simple to conduct and easy to measure. The approach is still widely used today to segment the market and identify the characteristics of the different shade of green consumers but lacking explaining their behavior or their making the decision process. Thus, by focusing on behavior, which investigating in psychological and contextual perspectives, research in this field has improved in many countries, especially in emerging Asian economies (Hanss et al., 2016; Liu et al., 2017). Moreover, “attitude-behavior” gap or/and “intention-behavior” gap have been the major failure of actualizing environmental-friendly attitudes and values and being recorded in the many works of literature (Pettie, 2010; Hanss et al., 2016). Additionally, empirical research has shown that even consumers hold positive environmental attitudes and have the intention to purchase sustainable products but fail into taking an actual action (Young et al., 2009). This gap has been found and noted based on evidence from different economies (Lee, 2008; Young et al., 2009; Hassan et al., 2016). This study, therefore, tries to approach and take

an investigation into the gap that has been concerned by scholars. Vietnam is chosen in this thesis because there is not much empirical research have been conducted to understand the Vietnamese consumer. While Vietnam has a large population with a big market and national consumption considerably has a strong impact on the environment. Thus, it needs to have some research to investigate the Vietnamese consumer behavior and propose some feasible and efficiency implications to the government and company.

In this thesis, by reviewing some factors that moderate the gap between behavioral intention and sustainable consumption, I choose three main moderating variables including Perceived Behavioral Control, Habits, and Green Products Availability. The research was conducted in Vietnam and the respondents are from urban areas (Hochiminh: 57.9%; Da Lat: 18.2%, Ha Noi: 5.6 %, other cities: 18.3%) with high education (under graduated: 57%; graduated and post graduated: 33.2%). The female respondents account for 64.5% while male respondents take 34.6 % of this survey. The respondents are mostly from 19 to 40 years old (91.6%). The data help to confirm the hypotheses that the moderators influence the gap between intention and actual green consumption behavior. The findings of survey conclude that habit is identified as the key moderating variable, to be more specific, the habit of buying organic food helps to close the gap between intention and actual behavior while the habit of using plastic bags to carry food enlarges the green intention-behavior gap. The result also shows that attitude toward the environment and subjective norms are the antecedents to green consumption intention and have a positive impact on the intention.

The findings illustrate that Vietnamese consumers have a strong positive attitude towards green consumption $\mu = 6.247$, $sd = 0.819$, they like the idea of buying green products as well as feel pleasant to use green products. Indeed, this result is in line with research about sustainable development conducted by Neilsen in 2017 (Neilsen, 2017). Subjective norm also has a high mean ($\mu=5.246$, $sd=1.186$), which means the Vietnamese consumers' decisions are easily influenced by the people who are important to them. It is a good sign to actualize green consumption behavior in Vietnam because the attitude towards green consumption and subjective norm are confirmed as the main predictors of green consumption intention (Fishbein & Ajzen, 1975) and the intention is proved to be the most significant variable that influences the actual behavior in this study. This can be

understood that if the Vietnamese consumers hold a good attitude toward green consumption, it's more likely that they will take action in buying green products. From the results in chapter 4, attitude towards green consumption is the most important driver of green consumption intention with very high beta ($B=0.49$; $p<0.05$), and the second significant predictor is the subjective norm ($B=0.129$; $p<0.05$). However, Perceived Behavioral Control variable does not show a significant impact on the intention as it is confirmed in the previous literature (Ajzen, 1991). This is a limitation of this research and needs to be improved in future studies.

In fact, as same as previous research, the findings show the high correlation between intention and green consumption behavior after controlling for other variables (Wu & Chen, 2014; Nguyen et al., 2015). In this research, the standardized beta of green consumption intention after controlling for other variables is significant and equals 0.52. This beta shows the strong relationship between intention and green consumption behavior and intention can predict the actual behavior. The result shows that Vietnamese consumers have a high intention ($\mu=6.15$) of buying green products and acting sustainably. Especially, the intention of using fewer plastic bags when shopping is reported to be concerned the most by the respondents and they report that they try to use less plastic bag to carry food. Moreover, this behavior also has the highest frequency compared to three other activities (buying green label products, switching to other brands for ecological reasons and, recycling). This can be explained that the respondents are aware of plastic overconsumption issues in Vietnam and try to join hand to reduce the negative impact on the environment.

However, according to the findings, even the respondents report that they have the green consumption intention but they fall to translate it into actual behavior. This is, once again, in line with the findings of previous research, for example, 46-67% of UK consumers have a positive attitude toward organic food but only 4-10% actualize the purchases (Hughner et al., 2007; Young et al., 2009). Thus, the main aim of this study is to understand what factors moderate the relationship between green consumption intention and actual behavior. Firstly, the result indicates that perceived behavioral control (Ajzen, 1991), the habit of buying organic food (Larsen et al., 2018) and green consumption intention as independent variables have positive and significant relations

towards green consumption behavior. Secondly, the result confirms the moderating role of habit on the relationship between intention and actual behavior. In fact, habit is tested in much previous research and showed to be a reliable predictor of relationship between intention and actual behavior (Danner et al., 2008; Triandis, 1980; Bargh and Gollwitzer, 1994; Aarts, 1996; Bamberg, 1996; Aarts et al., 1998). It can be easily explained that the respondents, who have the habit of buying organic food, can easily translate their intention into actual action because they get used to with purchasing green or sustainable products. Moreover, when consumers have an intention to act sustainably, it is more likely that they will actualize the intention because the consumers, who already have the habit of buying organic food, might have the knowledge and ability to do it or they have a plan on shopping ethically (Carrington et al., 2014) . In contrast, the habit of using a plastic bag to carry food is found to enlarge the gap between intention and green consumption behavior or it can be understood that habit prevents the consumer from actualizing their green consumption behavior. Using the plastic bag to carry food can be considered as a bad habit, and when it is well established, it will weaken the intention and behavior relation (Sheeran & Webb, 2016). Even plastic waste is a serious environmental issue in Vietnam (Vietnamnet, 2018), the habit of using plastic bags to carry food is still common in Vietnam and actually affects the gap between intention and actual behavior. From my observation, one of the reasons that forming this habit is the convenience of using a plastic bag to carry food in Vietnam (a plastic bag costs 0 euro and is always available in the market, supermarket or any stores). In fact, it is harder for the respondents, who have the habit of using plastic bags, to take action of using less plastic bags to carry food or to bring their own bag when go shopping. Research of Carrington and his team (2014) shows that if the consumers have the habitual ethical shopping, they often seem effortless to carry their own bags when go shopping and avoid using plastic bags as well as purchase second-hand products. In addition, another factor that I use to test its moderating role in this thesis is the availability of a green product. Despite the fact that some studies have showed that the availability of green product has an impact on the green consumption behavior (De Pelsmacker et al., 2005; Joshi and Rahman, 2015; Young et al., 2010, Ottman et al., 2006) and it also moderates the intention-behavior gap (Nguyen et al., 2018). However, in this research, there is no significant evidence to

confirm the relationship between the unavailability of green product and green consumption as well as the moderating role of the unavailability of the green product on the intention-actual behavior gap as expected. Perceived behavioral control factor shows the positive effect on the consumption behavior as an independent variable yet fails to explain the moderating effect on the relationship between green consumption intention and behavior. These are also the limits of this thesis and will be discussed in the next session.

The result, however, contributes to a larger literature on the green consumption intention-behavior gap. In fact, the study confirms that habit is a moderator or a factor that influences the gap between intention and green consumption behavior. The findings are as same as the previous research that intention has a high correlation with actual behavior (Ajzen & Fishbein, 2005) but it also confirms that they are never the same. Therefore, this study helps to assure the role of intention in predicting behavior and explain its inconsistency between intention and actual behavior.

5.2. Managerial Implication

This study has some managerial implications. It informs marketing managers and policymakers about the main predictors of green consumption behavior and the mediators that influence the relationship between green consumption intention and the actual behavior of Vietnamese consumers in urban areas. The thesis provides useful implications for public policy as well as marketers to understand the drivers and barriers to green consumption behavior to develop a suitable marketing strategy to encourage green purchasing behavior. Findings reveal that green consumption intention is the main factor that motivates consumers to consume sustainably and habit is the mediator that enlarges or closes the gap between intention and actual behavior. Moreover, the attitude toward green consumption and subjective also join hand to build the green consumption intention of Vietnamese consumers. The general implications are increasing the awareness of Vietnamese consumer on the environmental issue as well as designing an environment for consumers to deconstruct the bad habitual consumption pattern and construct a new habitual routine to build an ethical lifestyle (e.g. Carrington, 2014).

Firstly, the managerial implications should aim to improve the green consumption intention by improving the attitude towards green consumption and subjective norms. Educating consumers and raising their awareness about environmental issues are always the first solutions of all time and countries, especially in those countries, where the awareness of the degrading environment is low like Vietnam. As a result, consumers who have knowledge about the environmental issue can influence others on acting sustainably. Indeed, we are influenced by our family, peers or people at work. However, the result shows that the factor impacts the green consumption intention the most is the attitude towards green consumption. To improve the attitude towards green consumption, building a good product is a crucial strategy and the core factor to develop a good marketing plan. In addition, the integrated marketing and communication of the company should make consumer be able to identify the green products, show the functional attributes, as well as the outstanding performance of green products, compare to the conventional products. The packaging is one of the solutions that help the consumers identify a green product in a better way, provide them information about the product. It also can help the consumers and the company to reduce the impact on the environment. For example, some big supermarket chains in Vietnam adopted an idea from some Thai supermarkets of using banana leaves instead of plastic to wrap the vegetable and food to get the intention of the consumers on one hand. On the other hand, this campaign raises awareness toward the environment and helps consumer cuts off the plastic waste (Vietnamnet, 2019).

Secondly, policymaker and the company should join hand to create an environment that helps consumers to build a good habit and break down a bad habit. The bad habit, in this case, is using plastic bags to carry food. In fact, using plastic bags to carry food is considerably convenient and cheap in Vietnam. There are a few ways that I suppose might deconstruct this bad habit. The policy maker should increase the tax of single-use plastic product in general to increase the price of plastic bags, or consumers have to pay for using bags to carry the grocery and food in supermarkets like what European supermarkets are doing. This can prevent consumers from using too much unnecessary plastic bags and encourage them to bring their own bag to carry food. Moreover, policymakers also need to implement the regulation that set a limitation of

plastic use at the supermarket and encourage retail stores, supermarket to use the biodegradable instead of single-use plastic bag. It will subjectively help the consumers to change their habit. Moreover, the marketer should promote the benefit of using organic, have more promotion campaigns to get the intentions from the new customer. Pricing strategy should be concerned because organic food is considered to be expensive in Vietnam. Moreover, the marketer also needs to create a community of sustainable lifestyle so that consumer can join and help others to keep the sustainable habit and encourage green consumption. The government should apply preferential duties to the companies, which have sustainable production or produce green product so that companies can reduce the cost and encourage consumption.

5.3. Limitation and Future Research

As mentioned above, this study has some limitations that need to be concerned in the future research.

Firstly, the convenience sampling method is used in this study and the result shows that the sample consists mostly of people between 19 and 40 with high education. Therefore, they might have a higher awareness of environmental issues. The respondents are mostly from my network, who share the same interests or value. Thus this result does not represent well the entire Vietnamese population in the urban area. Moreover, the survey was only online for a week due to time constraints. Even though a large number of respondents were gathered, it would increase the validity if I could collect more responses in a longer period. The survey was reported too long for respondents to answer so it might affect the reliability of their answers. Convenience sampling allows me to collect data in a relatively fast way, therefore, the results have a high chance of being influenced by the self-reported behavior (Hardin and Hilbe, 2001), which leads to a lower validity. In addition, the respondents are reported living mostly in Hochiminh City, not Vietnam entirely. All of the limitations mentioned above might affect the generalizability of its findings, thus, future studies need to employ a broader and more representative sample drawn from other range of age, education and other big cities. In this research, income and social class are not included due to the different range of wage in different cities in Vietnam that needs a more complex method of research and longer time to

conduct. However, I suppose income is an interesting factor that needs to be investigated in future research of green consumption behavior study, especially in the emerging Asian economies like Vietnam.

Secondly, the factor “Attitude toward the environment” and the item “I am willing to spend more money to buy green products” of the factor “Perceived behavioral control” are eliminated to improve the reliability of the measurement in this study. However, I still keep the idea that the attitude toward the environment might affect the intention of green consumption behavior as previous studies proved. In addition, the result from my study shows that the respondents confirm they are seriously concerned about environmental issues, thus, I suggest that the future research should investigate in this factor but use other measurements to improve the reliability of the study. On the other hand, the item “I am willing to spend more money to buy green products” is left out to increase the Cronbach alpha but I suppose this item is important and affects the buying decision because the green products often have a higher price compared to conventional products, which might prevent the consumers from purchasing sustainable products. For example, I have an intention to buy organic food, but when I arrive the shop and compare the price between organic and trade products, because of the budget constraint, I am only willing to buy a cheaper product, and in this case it is conventional product, this shows the gap between the intention and actual behavior. Thus, money should be a factor that needs to be focused on in future research because it easily influences someone’s behavior if that person has a limited budget.

Thirdly, this study does not have enough evidence to support the hypotheses that perceived behavioral control and the unavailability of green products can moderate the relationship between green consumption intention and actual behavior. The result also does not show the relationship between the availability of green products and actual behavior. From the regression model, it can be seen that the beta of variable unavailability of green products is significantly smaller compared to the beta of intention, therefore the green consumption behavior is not influenced by the availability of green products but strongly affected the intention in this case. That can be concluded that the respondents, who hold the intention of buying green products will purchase sustainable products without concerning the availability of the product. This might violate the fact

that the gap between intention and actual behavior is influenced not only by internal factors but also by situational context (Nguyen et al., 2018; Carrington et al., 2014; 2010; Joshi & Rahman, 2015). There is some research that shows the impact of situational context on the intention-behavior gap, product availability in particular in several qualitative studies in developed countries (Nguyen et al., 2018; Young et al., 2010; Tarkiainen and Sundqvist, 2005; Gleim et al., 2013; Seyfang, 2006) but it is still less concerned in Asian economies. Moreover, the availability of products can help to reduce the perceived cost and remind consumers of their established intention (Pettie, 2010; Ottman et al., 2006). Thus, this situational context should be focused more in future research, especially in Asian countries. On the other hand, perceived behavioral control in this thesis does not show its moderating role on the gap of intention and behavior even it is proved in other research (e.g. Nguyen et al., (2018) and confirmed that perceived behavioral control or perceived consumer effectiveness moderates the intention-behavior gap.). The perceived behavioral control implies someone's confidence (Pettie, 2001) of actualizing their environmental goals. Therefore, it also needs to be concerned in the future research but the researchers should adopt other methods of research or other measurement/questions to generate the expected result.

Another limitation and suggestion for future research that challenged me when creating the questionnaire are designing a suitable method to measure the situational context. According to Carrington and his team (2010), situational factor consists of physical surroundings, social surroundings, temporal perspective, task definition, and antecedent states, which needs mixed methods research to operationalize the conceptual model and I am not able to conduct due to the time and knowledge constraints. However, the situational factor is an important predictor because the intention-behavior gap is not affected only by the cognitive evaluation process of the consumer but also by the environment outside of their mind (Bagozzi, 2000). Therefore, the future green consumption studies need to address situational factor to understand how this factor moderate the relationship between intention and green consumption behavior to recommend some efficient implications to encourage the green or sustainable consumption, especially in Asian countries, where the environmental issues are in alert

but lack of concern from scholars and efficient implication from the government and companies.

5.4. Conclusion

To conclude, sustainable development is one of the most important fields, thus, it is crucial to concern and has more research to know how to stimulate sustainable consumption behavior. Insights in the intention-behavior gap and which factors influencing this gap are valuable information for marketers and policymakers. The result of my study shows that habit is a moderator of the relationship between green consumption intention and behavior. It also contributes to the literature on green consumption behavior as well as recommends some ideas for future research.

REFERENCES

- Aarts, H. (1996): Habit and decision making: The case of travel mode choice, Doctoral Dissertation, University of Nijmegen, The Netherland.
- Aarts, H., & Dijksterhuis, A. (2000). Habits as knowledge structures: automaticity in goal-directed behavior. *Journal of Personality and Social Psychology*, 78(1), 53–63.
- Aarts, H., Verplanken, B., Knippenberg, A. (1998): Predicting Behaviour From Action in the Past: Repeated Decision Making or a Matter of Habit? ; *Journal of Applied Social Psychology*, Vol. 28, No. 15, pp. 1355-1374
- Aiken & West (1991). Multiple Regression: Testing and Interpreting Interactions.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Ajzen, I. and T. J. Madden (1986), 'Prediction of Goal-Directed Behaviour: Attitudes, Intentions and Perceived Behavioural Control', *Journal of Experimental Social Psychology* 22, 453–474.
- Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behaviour*. Englewood Cliffs, NJ: Prentice-Hall.
- Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173–221). Mahwah, NJ: Lawrence Erlbaum Associates.
- Ajzen, I., Brown, T. C., & Carvajal, F. (2004). Explaining the discrepancy between intentions and actions: The case of hypothetical bias in contingent valuation. *Society for Personality and Social Psychology*, 30(9), 1108–1121
- Ajzen, I., (2002b), 'Residual Effects of Past on Later Behaviour: Habituation and Reasoned Action Perspectives', *Personality and Social Psychology Review* 6(2), 107–122
- Alan Coulthart, Nguyễn Quang, Henry Sharpe (2006), Chiến lược phát triển đô thị: Đối mặt với những thách thức về đô thị hóa nhanh chóng và chuyển đổi sang nền kinh tế thị trường, *Nxb Văn hóa Thông tin*, Hà Nội.
- Allen, P., Bennett, K., & Heritage, B. (2014). *SPSS Statistics version 22: a practical guide*. Cengage Learning Australia.

- Altenburg J, Balderjahn I, Buchholz P, deVries W, (1996). Bestimmungsgründe des Abfallverhaltens privater Haushalte: Ein internationaler Vergleich zwischen den Städten Leipzig und Amsterdam. *Jahrb Absatz Verbrauchsforschung* ;3:282 – 302.
- Antil, J. A., & Bennett, P. D. (1979). Construction and validation of a scale to measure socially responsible consumption behavior. In K. H. Henion, II, & T. C. Kinnear (Eds.), *The conserver society* (pp. 51–68). Chicago, IL: American Marketing Association.
- Antil, J. H. (1984). Socially responsible consumers: Profile and implications for public policy. *Journal of Macromarketing*, 4(2), 18–39. <https://doi.org/10.1177/027614678400400203>
- Auger, P. and T. M. Devinney. (2007), ‘Do What Consumers Say Matter? The Misalignment of Preferences with Unconstrained Ethical Intentions’, *Journal of Business Ethics* 76, 361–383.
- Auger, P., Burke, P., Devinney, T. M., & Louviere, J. J. (2003). What will consumers pay for social product features? *Journal of Business Ethics*, 42, 281–304.
- Bagozzi, R. (2000). The poverty of economic explanations of consumption and an action theory alternative. *Managerial and Decision Economics*, 21, 95–109.
- Baldassare M, Katz C. (1992). The personal threat of environmental problems as predictor of environmental practices. *Environmental Behavior*; 24(5): 602 – 16.
- Balderjahn. I, (1988). Personality variables and environmental attitudes as predictors of ecologically responsible consumption patterns, *Journal of Business Research*, Volume 17, Issue 1, Pages 51-56, ISSN 0148-2963, [https://doi.org/10.1016/0148-2963\(88\)90022-7](https://doi.org/10.1016/0148-2963(88)90022-7).
- Bamberg, S. (1996): Integration des Konstrukts Habit in die Theorie des geplanten Verhaltens; *Zeitschrift für Sozialpsychologie*, Vol. 27, pp. 295-310
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37, 122-147.
- Bang, H. K., Ellinger, A. E., Hadjimarcou, J., & Traichal, P. A. (2000). Consumer concern, knowledge, belief, and attitude toward renewable energy: *An application of the reasoned action theory*. *Psychology & Marketing*, 17(6), 449-468.
- Bargh, J (1994). The Four Horsemen of Automaticity: awareness, intention, efficiency, and control in social cognition. In Wyer R and T Skrull (eds) *Handbook of Social Cognition (2nd edition) Vol 1: Basic Processes*. Hillsdale, NJ: Lawrence Erlbaum.

- Bargh, J.A., Gollwitzer, P.M. (1994): Environmental control of goal-directed action: Automatic and strategic contingencies between situations and behaviour; Spaulding, W.D. (ed.): *Integrative Views of Motivation, Cognition, and Emotion, Nebraska Symposium on Motivation*, Vol. 41, pp. 71-124
- Barr S, Gilg A. (2006). Sustainable lifestyles: framing environmental action in and around the home. *Geoforum* **37**: 906–920. DOI: 10.1016/j.geoforum.2006.05.002
- Beck, L., & Ajzen, I. (1990). Predicting dishonest actions using the theory of planned behavior. *Journal of Research in Personality*.
- Belk, R., Devinney, T. M., & Eckhardt, G. (2005). Consumer ethics across cultures. *Consumption, Markets and Culture*, *8*(3), 275–289.
- Belk, R. (1975), 'Situational Variables and Consumer Behavior', *Journal of Consumer Research* *2*, 157–164.
- Berger IE, (1997). The demographics of recycling and the structure of environmental behavior. *Environment Behavior* ;*29*(4):515 – 31.
- Biel A, Dahlstrand U. (2005). Values and habits: a dual-process model. In *Environment, Information and Consumer Behaviour*, Krarup S, Russell CS (eds). Elgar: Cheltenham; 33–50.
- Biswas, A., & Roy, M. (2015). Leveraging factors for sustained green consumption behavior based on consumption value perceptions: Testing the structural model. *Journal of Cleaner Production*, *95*, 332–340. <https://doi.org/10.1016/j.jclepro.2015.02.042>
- Bonini, S., & Oppenheim, J. (2008). Cultivating the green consumer. *Stanford Social Innovation Review*, Fall, 56–61
- Brundtland, G. H. (1987). Report of the World Commission on environment and development: "our common future.". United Nations.
- Callwood. K, (2013). *Psychological Factors That Influence Consumer Buying Behavior*. Retrieved from http://www.ehow.com/list_7599973_psychological-influence-consumer-buying-behavior.html
- Carrigan, M. and A. Attalla (2001), 'The Myth of the Ethical Consumer – Do Ethics Matter in Purchase Behaviour?' *Journal of Consumer Marketing* *18*(7), 560–577

- Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010). Why ethical consumers don't walk the talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers. *Journal of Business Ethics*, 97, 139–158
- Central Intelligence agency. (2015). The World Factbook: East Asia/Southeast Asia: Vietnam. <https://www.cia.gov/library/publications/the-world-factbook/geos/vm.html>. Last access: 21/03/2019.
- Chan, R. Y. (2001), Determinants of Chinese consumers' green purchase behavior. *Psychology & Marketing*, 18: 389-413. doi:10.1002/mar.1013
- Chan, R. Y., & Lau, L. B. (2000). Antecedents of green purchases: a survey in China. *Journal of consumer marketing*, 17(4), 338-357.
- Chen, M.F., Tung, P.J. (2014). Developing an extended Theory of Planned Behavior model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management*. 36, 221–230.
- Chen, Y. S., & Chang, C. H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision*, 50(3), 502-520.
- Cohen & Cohen (1983). Applied Multiple Regression/Correlation Analyses for the Behavioral Sciences.
- Connell, K. Y. H. (2010). Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies*, 34(3), 279-286.
- Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28(15), 1429–1464. <https://doi.org/10.1111/j.1559-1816.1998.tb01685.x>
- Danner, U.N., Aarts, H., de Vries, N.K., (2008). Habit vs. intention in the prediction of future behaviour: The role of frequency, context stability and mental accessibility of past behavior. *British Journal of Social Psychology* ,47, 245–265
- Davidson DJ, Freudenburg WR., (1996). Gender and environmental risk concerns: a review and analysis of available research. *Environment Behavior*;28(3): 302 – 39.
- de Koning, J. I., Crul, M. R., Wever, R. and Brezet, J. C. (2015), Sustainable consumption in Vietnam: an explorative study among the urban middle class. *International Journal of Consumer Studies*, 39: 608-618. doi:10.1111/ijcs.12235

- De Pelsmacker P, Driesen L, Rayp G. (2005). Do consumers care about ethics? Willingness to pay for fair-trade coffee. *Journal of Consumer Affairs* **39**(2): 363–385. DOI: 10.1111/j.1745-6606.2005.00019.x
- Dean, M., Raats, M. M. and Shepherd, R. (2012), The Role of Self-Identity, Past Behavior, and Their Interaction in Predicting Intention to Purchase Fresh and Processed Organic Food1. *Journal of Applied Social Psychology*, 42: 669-688. doi:10.1111/j.15591816.2011.00796.x.
- Dembkowski, S. and Hanmer-Lloyd, S. (1994), The Environmental-Value-Attitude-System Model: A Framework to Guide the Understanding of Environmentally Conscious Consumer Behavior, *Journal of Marketing Management*, **10**(7), 593–603.
- Diamantopoulos. A., Schlegelmilchb. B. B., Sinkovicd. R.R., Bohlen. G.M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research* *56*, 465 – 480. doi:10.1016/S0148-2963(01)00241-7
- Directorate-General for Environment (European Commission) (2016), Environment policy and protection of the environment, *Green products and services, what's in it for you*, ISBN 978-92-79-58355-1, doi:10.2779/856898
- Doll, J., & Ajzen, I. (1990). The effects of direct experience on the attitude-behavior relation: Stability versus accessibility. Unpublished manuscript, Psychologisches Institut I, Universität Hamburg, Hamburg, West Germany.
- Drakakis-Smith, D., Dixon, C. (1997). Sustainable Urbanization in Vietnam. *Geoforum*. Vol.28, No. 1, pp. 21-38.
- Dunlap, R. E., Van Liere, K. D., Mertig, A. G., & Jones, R. E. (2000). New trends in measuring environmental attitudes: measuring endorsement of the new ecological paradigm_ a revised NEP scale. *Journal of Social Issues*, 56(3), 425–442.
- Elkington, J., & Hailes, J. (1989). *The Green Consumer's Supermarket Shopping Guide: Shelf by Shelf Recommendations for Products Which Don't Cost the Earth*. London: Victor Gollancz.
- Fife-Schaw, C., Sheeran, P., & Norman, P. (2007). Simulating behaviour change interventions based on the theory of planned behaviour: Impacts on intention and action. *British Journal of Social Psychology*, 46, 43–68. doi:10.1348/014466605X85906

- Fishbein M, Cappella JN. (2006). The role of theory in developing effective health communications. *Journal of Communication* 56: 1–17. DOI:10.1111/j.1460-2466.2006.00280.x.
- Fraj, E., & Martinez, E. (2006). Influence of personality on ecological consumer behaviour. *Journal of Consumer Behaviour*, 5(3), 167–181. <https://doi.org/10.1002/cb.169>
- Fukukawa, K. (2003), ‘A Theoretical Review of Business and Consumer Ethics Research: Normative and Descriptive Approaches’, *The Marketing Review* 3,381–401
- Futerra Sustainability Communications Ltd (2005). The rules of the game: The principals of climate change communication. London, UK: Department for Environment, Food and Rural Affairs.
- General Statistics Office Vietnam. (2012) Viet Nam Household Living Standards Survey 2012. Ha Noi. http://www.gso.gov.vn/default_en.aspx?tabid5515&idmid55&ItemID514995 (accessed on 21/03/2019)
- Gilg. A., Barr. S., Ford. N., (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures* 37 (2005) 481–504. doi:10.1016/j.futures.2004.10.016
- Gleim, M.R., Smith, J.S., Andrews, D., Cronin, J.J., (2013). Against the Green: A Multi-method Examination of the Barriers to Green Consumption, *Journal of Retailing*, Volume 89, Issue 1, Pages 44-61, ISSN 0022-4359, <https://doi.org/10.1016/j.jretai.2012.10.001>.
- Gollwitzer, P. M. and P. Sheeran (2006) ‘Implementation Intentions and Goal Achievement: A Meta-Analysis of Effects and Processes’, *Advances in Experimental Social Psychology* 38, 69–119.
- Gollwitzer, P. M. (1999), ‘Implementation Intentions: Strong Effects of Simple Plans’, *American Psychologist* 54(7), 493–503.
- Grunert SC, (1991). Everybody seems concerned about the environment: but is this concern reflected in (Danish) consumers’ food choice? Aarhus School of Business Working Paper Series, Aarhus.
- Grunert SC, Kristensen K. (1992). The green consumer: some Danish evidence. *In: Annual conference of the European marketing academy, marketing for Europe — marketing for the future, vol. 1. ;525 – 40.*

- Grunert, S. C. (1993). Everybody seems concerned about the environment but is this concern reflected in (Danish) consumers' food choice? *European Advances in Consumer Research*, 1, 428–433.
- Guagnano, G. A. (1995). Locus of control, altruism and agentic disposition. *Population & Environment*, 17(1), 63–77.
- Guagnano, G. A., Dietz, T., & Stern, P. C. (1994). Willingness to pay for public goods: A test of the contribution model. *Psychological Science*, 5(6), 411–415.
- Gupta, S., & Ogden, D. T. (2009). To buy or not to buy? A social dilemma perspective on green buying. *Journal of Consumer Marketing*, 26(6), 376–391.
<https://doi.org/10.1108/07363760910988201>
- Ha, H.Y., Janda, S., (2012). Predicting consumer intentions to purchase energy-efficient products. *Journal of Consumer Marketing* 29 (7), 461–469.
- Han, H., Yoon, H., (2015). Hotel customers' environmentally responsible behavioral intention: impact of key constructs on decision in green consumerism. *International Journal of Hospitality Management*. 45, 22–33.
- Hanss D, Böhm G. (2010). Can I make a difference? The role of general and domain-specific self-efficacy in sustainable consumption decisions. *Umweltpsychologie* 14: 46–74.
- Hanss, D., Böhm, G., Doran, R., & Homburg, A. (2016). Sustainable consumption of groceries: The importance of believing that one can contribute to sustainable development. *Sustainable Development*, 24(6), 357–370. <https://doi.org/10.1002/sd.1615>
- Hardin, J. and Hilbe, J. (2001). *Generalized Linear Models and Extensions*. College Station, TX: Stata Press.
- Hassan, L.M., Edward, S., Deirdre, S. (2016). Who Says There is an Intention–Behaviour Gap? Assessing the Empirical Evidence of an Intention–Behaviour Gap in Ethical Consumption. *J Bus Ethics* (2016) 136:219–236. DOI 10.1007/s10551-014-2440-0
- Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through green-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, 24(3), 336–354. <https://doi.org/10.1016/j.jcps.2013.11.002>
- Hayes, AF. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis*. Guilford: New York

- Hennison, K. and Kinnear, T. (1976) *Ecological Marketing*, Prentice-Hall, Englewood Cliffs, NJ
- Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour*, 6(2–3), 94–110. <https://doi.org/10.1002/cb.210>
- Jager, W. (2003). Breaking Bad Habits: a dynamical perspective on habit formation and change, in L Hendrick, Wander Jager, L Steg (eds), *Human Decision Making and Environmental Perception – Understanding and Assisting Human Decision-Making in Real Life Settings*. Libor Amicorum for Charles Vlek, Groningen: University of Groningen
- James A. Roberts. J.A, (1996). Green consumers in the 1990s: Profile and implications for advertising, *Journal of Business Research*, Volume 36, Issue 3, Pages 217-231, ISSN 0148-2963, [https://doi.org/10.1016/0148-2963\(95\)00150-6](https://doi.org/10.1016/0148-2963(95)00150-6).
- Johnson, M and L Hasher (1987). Human learning and memory. *Annual Review of Psychology* 38, 631-668
- Joshi. Y., Rahman. Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions, *International Strategic Management Review*, Vol.3, Issues 1–2, Pp. 128-143. ISSN 2306-7748. <https://doi.org/10.1016/j.ism.2015.04.001>.
- Kilbourne, W. E. and Beckmann, S. C. (1998). Review and Critical Assessment of Research on Marketing and the Environment, *Journal of Marketing Management*, 14(6), 513–532
- Kim, S.Y., Yeo, J., Sohn, S. H., Rha, J.Y., Choi, S., Choi, A. Y., & Shin, S. (2012). Toward a composite measure of green consumption: An exploratory study using a Korean sample. *Journal of Family and Economic Issues*, 33(2), 199–214. <https://doi.org/10.1007/s10834-012-9318-z>
- Kinnear, T., Taylor, J., Ahmed, S., (1974). Ecologically concerned consumers: who are they? *Journal of Marketing* 38 20–24.
- Kotchen, M., Reiling, S., (2000). Environmental attitudes, motivations, and contingent valuation of nonuse values: a case study involving endangered species. *Ecological Economics*. 32, 93–107.
- Kuhl, J. (1985). Volitional aspect of achievement motivation and learned helplessness: Toward a comprehensive theory of action control. In B. A. Maher (Ed.), *Progress in experimental personality research* (Vol. 13, pp. 99-171). New York: Academic Press.

- Lanzini, P. (2018). Responsible Citizens and Sustainable Consumer Behavior, *New Interpretative Frameworks*. London: Routledge. SBN: 978-0-203-73170-3 (ebk)
- Larsen, K.J., Hermans, R.C.J., Sleddens, E. F.C., Vink, J. M., Kremers, S.P.J., Ruiter, E.L.M., Fisher, J.O. (2018). How to bridge the intention-behavior gap in food parenting: Automatic constructs and underlying techniques. *Appetite* 123, 191-200
- Lee, K. (2008). Opportunities for green marketing: Young consumers. *Marketing Intelligence and Planning*, 26(6), 573–586. [https://doi.org/ 10.1108/02634500810902839](https://doi.org/10.1108/02634500810902839)
- Lee, K. (2010). The green purchase behavior of Hong Kong young consumers: the role of peer influence, local environmental involvement, and concrete environmental knowledge. *Journal of international consumer marketing*, 23 (1), 21-44.
- Leonard, M., Graham, S., Bonacum, D., (2004). The human factor: the critical importance of effective teamwork and communication in providing safe care. *Quality and Safety in Health Care* 13, 85–90.
- Leonidou, C. N., Katsikeas, C. S., & Morgan, N. A. (2013). “Greening” the marketing mix: Do firms do it and does it pay off? *Journal of the Academy of Marketing Science*, 41(2), 151–170. <https://doi.org/10.1007/s11747-012-0317-2>
- Liu, Y., Qu, Y., Lei, Z., & Jia, H. (2017). Understanding the evolution of sustainable consumption research. *Sustainable Development*, 25(5), 414 – 430. <https://doi.org/10.1002/sd.1671>
- Lyons E, Breakwell GM. (1994) Factors predicting environmental concern and indifference in 13- to 16-year-olds. *Environment Behavior*;26(2):223 – 38.
- Magnusson MK, Arvola A, Hursti U, Aberg L, Sjoden P. (2001). Attitudes towards organic foods among Swedish consumers. *British Food Journal* 103(3): 209–227.
- Makatouni, A. (2002). What motivates consumers to buy organic food in the UK ?: Results from a qualitative study. *British Food Journal*, 104(3/4/5), 345-352.
- Maruyama, M., & Trung, L.-V. (2007) Supermarkets in Vietnam: Opportunities and obstacles. *Asian Economic Journal*, 21, 19–46
- McGougall, G. H. G. (1993). The green movement in Canada: Implications for marketing strategy. *Journal of International Consumer Marketing*, 5, 69–87.

- Meessen, J., Croizer, C., Verle, P. (2015). The Viet Nam Green Growth Strategy: A review of specificities, indicators and research perspectives. *Conference: 2ieme Congrès Interdisciplinaire Du Développement Durable*.
- Meffert H, Bruhn M, (1996). Das Umweltbewußtsein von Konsumenten. *Die Betriebswirtschaft*; 56(5):621 – 48.
- Meredith Ginsberg, Jill & Bloom, Paul. (2004). Choosing the Right Green Marketing Strategy. *MIT Sloan Management Review*. 46.
- Morwitz, V. G., Johnson, E., & Schmittlein, D. (1993). Does measuring intent change behavior. *Journal of Consumer Research*, 20, 46–61.
- Moser, A.K., (2015). Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *Journal of Consumer Marketing* 32 (3), 167–175.
- Mostafa, M. M. (2007), A hierarchical analysis of the green consciousness of the Egyptian consumer. *Psychology & Marketing*, 24: 445-473. doi:10.1002/mar.20168
- Neilsen Vietnam (2017). *News Release: Sustainability influences purchase intent of Vietnamese consumers*.[https://www.nielsen.com/content/dam/niensenglobal/vn/docs/PR_EN/Vietnam_CS R%20release_EN.pdf](https://www.nielsen.com/content/dam/niensenglobal/vn/docs/PR_EN/Vietnam_CS_R%20release_EN.pdf) . Last access [21/03/2019]
- Nguyen HV, Nguyen CH, Hoang TTB (2018). Green consumption: Closing the intention-behavior gap. *Sustainable Development*; 1– 12. <https://doi.org/10.1002/sd.1875>
- Nguyen, H.V., Nguyen. N., Nguyen. B. K., Lobo., A., Vu. P.A., (2019). Organic Food Purchases in an Emerging Market: The Influence of Consumers’ Personal Factors and Green Marketing Practices of Food Stores. *International Journal of Environmental Research an Public Health*, 16, 1037; doi:10.3390/ijerph16061037
- Nguyen, T. V., Le, C. Q., Tran, B. T., & Bryant, S. E. (2015). Citizen participation in city governance: Experiences from Vietnam. *Public Administration and Development*, 35(1), 34–45. <https://doi.org/10.1002/pad.1702>
- Nguyen, T.T.M. (2003) An Investigation into Conspicuous Consumption in a Transitional Economy: A Study of Emerging Urban Vietnamese Consumers. National University of Singapore. [WWW document]. URL <http://scholarbank.nus.edu.sg/handle/10635/13538>
- Nguyen, V. H., & Nguyen, T. T. L. (2017). Green production and green consumption: International policy framework and lessons learned for Vietnam. *Economic Management Review*, 83, 33–41.

- Nguyen, V. H., Nguyen, H. C., & Hoang, L. V. (2015). Lifestyle and green consumption under the theory of planned behavior. *Journal of Economic Development*, 216, 57–65.
- Nguyen. T.H.G., Ho. N.T., (2014). Understanding Vietnamese Consumers' Purchase Intentions toward Green Electronic Products in Hochiminh City. *Proceedings of the First Asia-Pacific Conference on Global Business, Economics, Finance and Social Sciences (API4Singapore Conference)* ISBN: 978-1-941505-15-1
- Nguyen. T.T.M., Nguyen. V.H., Nguyen. H.L., Nguyen. H.M., (2017). Materialism and Green Purchase Intention: A Study of Urban Vietnamese Consumers. *Journal of Economics and Development*, Vol.19, No.2, August 2017, pp. 89-106. ISSN 1859 002
- Nielsen Vietnam (2015). “NTD Việt tiếp tục quan tâm đến các nhãn hàng có cam kết về phát triển bền vững. <https://www.nielsen.com/vn/vi/insights/2015/csr-vietnam-2015.html>. [19/03/2019]
- Nunnally, J.C. and Bernstein, I.H. (1994) The Assessment of Reliability. *Psychometric Theory*, 3, 248-292.
- Olander, F. & J. Thøgersen. (1995) Understanding of consumer behavior as a prerequisite for environmental protection, *Journal of Consumer. Policy*, 18, 345–385.
- Oreg, S. (2003). Resistance to change: Developing an individual differences measure. *Journal of Applied Psychology*, 88(4), 680.
- Ottman, J. A. (1993). Green marketing: Challenges and opportunities for the new marketing age. Lincolnwood, IL: NTC Publishing Group.
- Padel, S., & Foster, C. (2005). Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *British food journal*, 107(8), 606-625.
- Park, J., & Ha, S. (2014). Understanding consumer recycling behavior: Combining the theory of planned behavior and the norm activation model. *Family and Consumer Sciences Research Journal*, 42(3), 278–291
- Peattie K. (1999). Trappings versus substance in the greening of marketing planning. *Journal of Strategic Marketing* 7(2): 131–148
- Peattie, K. (2001). Golden goose or wild goose? The hunt for the green consumer. *Business Strategy and the Environment*, 10(4), 187 – 199. [https:// doi.org/10.1002/b se.292](https://doi.org/10.1002/b se.292)

- Peattie, K. (2010). Green consumption: Behavior and norms. *Annual Review of Environment and Resources*, 35(1), 195 – 228. <https://doi.org/10.1146/annurevenviron-032609-094328>
- Peattie, K. and Charter, M. (2003). Chap 28: Green Marketing. In *The Marketing book* (Barker, M.J.) Great Britain: Butterworth-Heinemann.
- Peloza, J., White, K., & Shang, J. (2013). Good and guilt-free: The role of self-accountability in influencing preferences for products with ethical attributes. *Journal of Marketing*, 77(1), 104–119. <https://doi.org/10.1509/jm.11.0454>
- Phillips, H. (1993), ‘How Customers Actually Shop: Customer Interaction with the Point of Sale’, *Journal of the Market Research Society* 35(1), 51–59.
- Phùng Hữu Phú (2009), “Đô thị hóa ở Việt Nam - Từ góc nhìn nông nghiệp, nông thôn, nông dân”, *Tạp chí Tuyên giáo*, số 3.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.87>
- Quertamp, F., & de Miras, C. (2012). Periurbanization and governance of large metropolises in Vietnam. In N. Q. Tran, F. Quertamp, C. de Miras, Q. V. Nguyen, V. N. Le, & H. T. Truong (Eds.), *Trends of Urbanization and Suburbanization in southeast asia* (pp. 75–92). Ho Chi Minh City, Vietnam: General Publishing House.
- Rhodes, R. E., & Dickau, L. (2012). Experimental evidence for the intention–behavior relationship in the physical activity domain: A meta-analysis. *Health Psychology*, 31(6), 724–727. doi:10.1037/a0027290
- Sarver, V. T., Jr. (1983). Ajzen and Fishbein’s “theory of reasoned action”: A critical assessment. *Journal for the Theory of Social Behavior*, 13, 155-163
- Schahn J, Holzer E, (1990). Studies of individual environmental concern: the role of knowledge, gender, and background variables. *Environment Behavior*;22(6):767 – 86.
- Schmidt, V.H., (2009). In: Lange, H., Meier, L. (Eds.), Convergence and Divergence in Societal Modernization: Global Trends, Regional Variations, and Some Implications for Sustainability. *The New Middle Classes*. Springer, pp. 29 - 47.
- Schwartz, S. H. (1977). Normative influences on altruism. *Advances in Experimental Social Psychology*, 10, 221–279.

- Schwartz, S. H., & Howard, J. A. (1981). A normative decision-making model of altruism. In J. P. Rushton, R. M. Sorrentino (eds), *Altruism and Helping Behavior*. Hillsdale, NJ: Lawrence Erlbaum.
- Schweper, C., Cornwell, T. (1991). An examination of ecologically concerned consumers and their intention to purchase ecologically packaged products, *Journal of Public Policy and Marketing* 10 77–101.
- Scott D, Willits FK. (1994) Environmental attitudes and behavior: a Pennsylvania survey. *Environment Behavior*;26(2):239 – 60.
- Sheeran, P. (2002). Intention-behavior relations: A conceptual and empirical review. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 12, pp. 1–36). Chichester: Wiley
- Sheeran, P., D. Trafimow and C. J. Armitage (2003), ‘Predicting Behaviour from Perceived Behavioural Control: Tests of the Accuracy Assumption of the Theory of Planned Behaviour’, *British Journal of Social Psychology* 42, 393–410.
- Shrum LJ, McCarty JA, Lowrey TM., (1995). Buyer characteristics of the green consumer and their implications for advertising strategy. *J Adver*;24(2):71 – 82.
- Soonthonsmai, V. (2007). Environmental or green marketing as global competitive edge: Concept, synthesis, and implication. *EABR (Business) and ETLC (Teaching) Conference Proceeding, Venice, Italy*
- Spaargaren, G and B van Vliet (2000). Lifestyle, Consumption and the Environment: the ecological modernisation of domestic consumption. *Society and Natural Resources* 9, 50-76.
- Sparks, P., Shepherd, R.,(1992). Self-identity and the theory of planned behavior: the role of identification with ‘green consumerism’, *Social Psychology Quarterly* 55 : 388–399.
- Speece, M., (2002). Consumer Value Orientation in Vietnam's urban middle class. *Der Markt* 41, 157 – 168.
- Speece, M.W., Nair, G., (2000). Value oriented shopping behavior amongst urban middle class Vietnamese consumers. *Asian Academic Management. J.* 5, 45 - 54.
- Stern, P. C. (2000). New Environmental Theories: Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407–424. <https://doi.org/10.1111/0022-4537.00175>

- Stern, P. C., Dietz, T., & Black, J. S. (1985). Support for environmental protection: The role of moral norms. *Population and Environment*, 8(3–4), 204–222
- Stern, P. C., Dietz, T., & Kalof, L. (1993). Value orientations, gender, and environmental concern. *Environment and Behavior*, 25(5), 322–348.
- Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., & Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human Ecology Review*, 6(2), 81–97.
- Szmigin, I., Carrigan, M., & McEachern, M. G. (2009). The conscious consumer: Taking a flexible approach to ethical behavior. *International Journal of Consumer Studies*, 33, 224–231.
- Tarkiainen, A., & Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British food journal*, 107(11), 808-822
- The World Bank, (2018). The World Bank in Vietnam: Overview.
<<https://www.worldbank.org/en/country/vietnam/overview#1>>. [Access Date: March 6th, 2019]
- Thien T. Truong, Matthew H.T. Yap, Elizabeth M. Ineson, (2012) "Potential Vietnamese consumers' perceptions of organic foods", *British Food Journal*, Vol. 114. Issue: 4, pp.529-543, <https://doi.org/10.1108/00070701211219540>
- Thøgersen, J. (1994). A model of recycling behaviour, with evidence from Danish source separation programmes. *International Journal of Research in Marketing*, 11(2), 145–163.
- Thong, N. T., Nguyen, D.H., Bich, P.T.N., and Huong, L.T.M., (2017). Sustainable Consumption and Production in Vietnam. *Sustainable Asia*, pp. 327-356
- Trading Economics (2019). Vietnam GDP Growth Rate: Summary.
<https://tradingeconomics.com/vietnam/gdp-growth>. [Access Date: March 7th, 2019]
- Traandis, H. (1980): Values, attitudes, and interpersonal behaviour; in: H. Howe&M. Page, *Nebraska Symposium on Motivation*, Vol. 27, pp. 195-259
- Triandis, H. C. (1977). Interpersonal behavior. Monterey, CA: Brooks/Cole.
- Triandis, H. C. (1980). Values, attitudes, and interpersonal behavior. In H. Howe, & M. Page (eds), *Nebraska Symposium on Motivation 1979*, Lincoln, NE: University of Nebraska Press.

- Tsakiridou, E., Boutsouki, C., Zotos, Y., & Mattas, K. (2008). Attitudes and behaviour towards organic products: an exploratory study. *International Journal of Retail & Distribution Management*, 36(2), 158-175
- Tsarenko, Y., Ferraro, C., Sands, S., Mcleod, C., (2013). Environmentally conscious consumption: the role of retailers and peers as external influences. *Journal of Retailing and Consumer Services*, 20(3), 302 – 310.
- Tucker, L., (1980) Identifying the environmentally responsible consumer: the role of internal–external control of reinforcements, *Journal of Consumer Affairs* 14, 326–340.
- Tung, S. J., Shih, C. C., Wei, S., & Chen, Y. H. (2012). Attitudinal inconsistency toward organic food in relation to purchasing intention and behavior: An illustration of Taiwan consumers. *British Food Journal*, 114(7), 997-1015.
- United Nations (2015), Sustainable Development Goals, Goal 12: Ensure sustainable consumption and production patterns, <https://www.un.org/sustainabledevelopment/sustainable-consumption-production/> . Last Access [21/03/2019].
- United Nations Environment Programme (UNEP) (2005), *Talk the Walk: Advancing Sustainable Lifestyles through Marketing and Communications*, UN Global Compact and Utopies.
- van Birgelen, M., Semeijn, J. and Keicher, M. (2009) ‘Packaging and Proenvironmental Consumption Behavior: Investigating Purchase and Disposal Decisions for Beverages’, *Environment and Behavior*, 41(1), pp. 125–146.
- Van Liere KD, Dunlap RE (1981). Environmental concern: does it make a difference? How it is measured? *Environment Behavior*;13(6):651 – 76.
- Vergragt, P., Akenji, L., & Dewick, P. (2014) Sustainable production, consumption, and livelihoods: Global and regional research perspectives. *Journal of Cleaner Production*, 63, 1–12
- Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer “attitude–behavioral intention” gap. *Journal of Agricultural and Environmental Ethics*, 19(2), 169-194
- Vermeir, I., & Verbeke, W. (2008). Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidence and values. *Ecological Economics*, 64(3), 542–553. <https://doi.org/10.1016/j.ecolecon.2007.03.007>

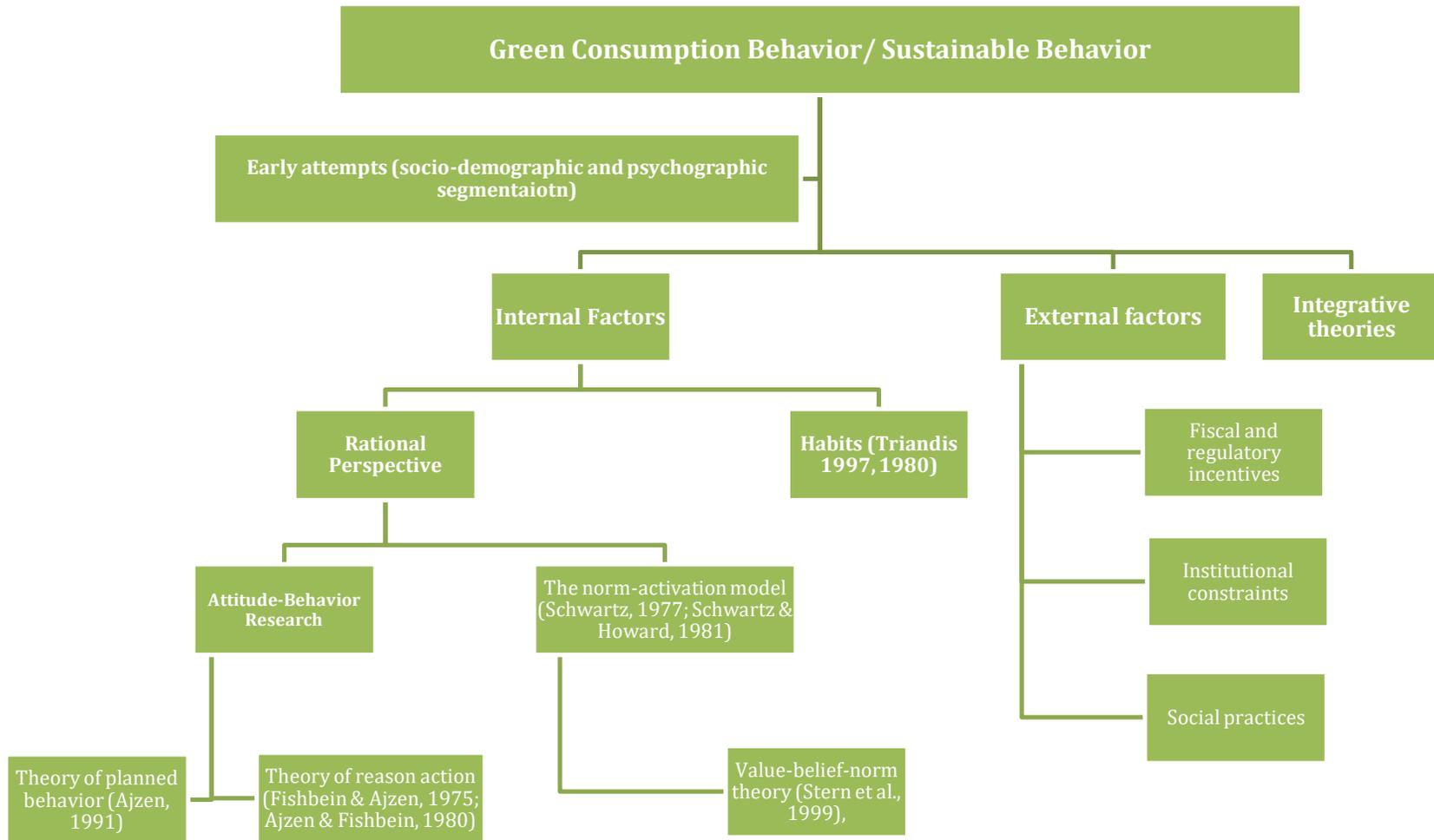
- Verplanken, B., & Aarts, H. (1999). Habit, attitude, and planned behaviour: Is habit an empty construct or an interesting case of goal-directed automaticity? *European Review of Social Psychology, 10*(1), 101–134.
- Verplanken, B., & Orbell, S. (2003). Reflections on past behavior: A self-report index of habit strength. *Journal of Applied Social Psychology, 33*(6), 1313–1330
- Vietnam environment administration magazine (VEM), Green consumption and sustainable development, <http://tapchimoitruong.vn/pages/article.aspx?item=Ti%C3%AAu-d%C3%B9ng-xanh-h%C6%B0%E1%BB%9Bng-%C4%91%E1%BA%BFn-ph%C3%A1t-tri%E1%BB%83n-b%E1%BB%81n-v%E1%BB%AFng-40643>, last access [19/03/2019].
- Vietnamnet (2019) Sau lá chuối, siêu thị dùng hộp làm từ bã mía, túi ngô đựng thực phẩm. <https://vnexpress.net/kinh-doanh/sau-la-chuoi-sieu-thi-dung-hop-lam-tu-ba-mia-tui-ngo-dung-thuc-pham-3903493.html> [last access: 31/05/2019]/
- Vietnamnet, (2018). Vietnam plastic waste problem: one of the worst in the world <https://english.vietnamnet.vn/fms/environment/213523/vietnam-plastic-waste-problem--one-of-the-worst-in-the-world.html>. Last access [21/03/2019]
- Vietnamnet,(2017). How serious is air pollution in Vietnam. <https://english.vietnamnet.vn/fms/environment/176546/how-serious-is-air-pollution-in-vietnam-.html> . Last access [21/03/2019]
- Vining J, Ebreo A, (1990). What makes a recycler? A comparison of recyclers and non-recyclers. *Environment Behavior;22*(1):55 – 73.
- VNGGS (2012), Decision No. 1393/QĐ-TTg dated Sep. 25, 2012 on the approval of the National Green Growth Strategy of Vietnam
- VNGovernment (2012). Thực hiện phát triển bền vững ở Việt Nam: Báo cáo quốc gia tại hội nghị cấp cao của liên hợp quốc và phát triển bền vững (Rio+20). In *Vietnam Government*. http://va21.gov.vn/Portals/0/va21/30342_Rio_NationalReportVNM_VN.pdf
- Wagner, S. A. (1997) *Understanding Green Consumer Behaviour*, Routledge, London
- Wang, P., Liu, Q., & Qi, Y. (2014). Factors influencing sustainable consumption behaviors: a survey of the rural residents in China. *Journal of Cleaner Production, 63*, 152-165.
- Webb, T. L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin, 132*, 249–268. doi:10.1037/0033-2909.132.2.249

- Webb, T. L., & Sheeran, P. (2016). The Intention–Behavior Gap. *Social and Personality Psychology Compass* 10/9, 503–518, 10.1111/spc3.12265
- Webster Jr, F. E. (1975). Determining the characteristics of the socially conscious consumer. *Journal of consumer research*, 188-196.
- Wedel. M., Kamakura. W. A., (2000). Market segmentation — *conceptual and methodological foundations (2nd ed)*, Kluwer, Boston (2000)
- Welsch, H., & Kühling, J. (2009). Determinants of pro-environmental consumption: The role of reference groups and routine behavior. *Ecological Economics*, 69(1), 166–176.
<https://doi.org/10.1016/j.ecolecon.2009.08.009>
- Widegren O, (1998). The new environmental paradigm and personal norms. *Environmental Behavior* ;30(1):75 – 100.
- Witherspoon S, Martin J., (1992). What do we mean by green? British Social Attitudes Report 9. Social and Community Planning Research, Hants.
- Wood, W., & Neal, D. T. (2007). A new look at habits and the habit-goal interface. *Psychological Review*, 114(4), 843–863. doi:10.1037/0033-295X.114.4.843
- Wu, S.I., & Chen, J.Y. (2014). A model of green consumption behavior constructed by the theory of planned behavior. *International Journal of Marketing Studies*, 6(5), 119–132.
<https://doi.org/10.5539/ijms.v6n5p119>
- Wu. C., Zhou. X., and Song.M., (2016). Sustainable consumer behavior in China: an empirical analysis from the Midwest regions, *Journal of Cleaner Production*, Volume 134, Part A, Pages 147-165, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2015.06.057>.
- Young, M. R., DeSarbo, W. S., & Morwitz, V. G. (1998). The stochastic modeling of purchase intentions and behavior. *Management Science*, 44(2), 188–202.
- Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: green consumer behavior when purchasing products. *Sustainable Development*, 18 (1), 20-31.
- Zhou. Y., Thøgersen. J., Ruan. Y., Huang. G., (2013) "The moderating role of human values in planned behavior: the case of Chinese consumers ' intention to buy organic food", *Journal of Consumer Marketing*, Vol. 30 Issue: 4, pp.335-344, <https://doi.org/10.1108/JCM-02-2013-0482>

Appendix

Part 1: Figure

Figure A. Green consumption behavior – a big picture (Jackson, 2005; Lanzini, 2018)



Part 2: Tables

**Table A. List of Studies affecting green consumption behavior
(Joshi and Rahman, 2015)**

| No | Year | Authors | Dependent variables | |
|----|------|--------------------------|-----------------------------|----------------------------|
| | | | Green consumption intention | Green consumption behavior |
| 1 | 2000 | Bang et al. | X | |
| 2 | 2000 | Chan and Lau | X | |
| 3 | 2000 | Follows and Jobber | X | |
| 4 | 2001 | Chan | X | X |
| 5 | 2001 | Magnusson et al. | X | X |
| 6 | 2002 | Fotoboulos et al. | | X |
| 7 | 2002 | Makatouni | | X |
| 8 | 2003 | Magnussona et al. | X | |
| 9 | 2003 | Tanner and Kast | | X |
| 10 | 2005 | Ek | X | |
| 11 | 2005 | Gosslinga et al. | | X |
| 12 | 2005 | Kim and Choi | | X |
| 13 | 2005 | Padel and Foster | | X |
| 14 | 2005 | Tarkiainen and Sundqvist | X | X |
| 15 | 2006 | Mostafa | X | |
| 17 | 2006 | Vermeir and Verbeke | X | |
| 18 | 2007 | Wolsink | X | |
| 19 | 2008 | Arvola et al. | X | |
| 20 | 2008 | Krystallis and Vassallo | | X |
| 21 | 2008 | Lea and Worsley | | X |
| 22 | 2008 | Tsakiridou et al. | | X |
| 23 | 2008 | Vermeir and Verbeke | X | |
| 24 | 2009 | Mondelaers et al. | X | |

| | | | | |
|----|------|-----------------------|---|---|
| 25 | 2009 | Welsch and Kuhling | | X |
| 26 | 2010 | Cerjak et al. | | X |
| 27 | 2010 | Connell | | X |
| 28 | 2010 | Niinimäki | | X |
| 29 | 2010 | Smith and Paladino | X | X |
| 30 | 2010 | Young et al. | | X |
| 31 | 2011 | Aertsens et al. | | X |
| 32 | 2011 | Lee | | X |
| 33 | 2011 | Rahbar and Wahid | | X |
| 34 | 2012 | Akehurst et al. | X | X |
| 35 | 2012 | Chen and Lobo | X | |
| 36 | 2012 | Chan and Wong | | X |
| 37 | 2012 | Chen et al. | X | |
| 38 | 2012 | Liu et al. | X | |
| 39 | 2012 | Tung et al. | X | |
| 40 | 2013 | Eze and Ndubisi | | X |
| 41 | 2013 | Gleim et al. | X | |
| 42 | 2013 | Kang et al. | X | |
| 43 | 2013 | Kozar and Connell | | X |
| 44 | 2013 | Ma et al. | | X |
| 45 | 2013 | Paco et al. | | X |
| 46 | 2013 | Ramayah and Rahbar | X | X |
| 47 | 2013 | Salazar et al. | | X |
| 48 | 2013 | Tsarenko et al | | X |
| 49 | 2013 | Vicente-Molina et al. | | X |
| 50 | 2013 | Zhu et al. | X | X |
| 51 | 2014 | Kanchanapibul et al | X | X |
| 52 | 2014 | Nittala | X | |
| 53 | 2014 | Zhao et al. | | X |

**Table B. Factors affecting green consumption intention and behavior
(Joshi and Rahman, 2015)**

| | Variable | Direction | Studies (intention) | Studies (behavior) |
|----|--|------------------|----------------------------|-------------------------------|
| 1 | Subjective norm/Social Group | + | 14, 17, 23, 29, 42 | 25, 29, 30, 40, 47, 48 |
| 2 | Environmental values | + | 50 | 30 |
| 3 | Environmental concern | + | 1, 8, 15, 29 | 12, 13, 26, 48, 53 |
| 4 | Environmental attitude | + | 19, 23, 38, 42 | 9, 43, 53 |
| 5 | Perceived behavioral control | +/ Unrelated | 14, 42/ 19 | |
| 6 | Limited/ Availability of organic food | +/- | 14, 23, 4 | 21, 31/ 6, 13, 22, 27, 32 |
| 7 | Perceived consumer effectiveness (PCE) | + | 15, 17, 23, 42 | 12, 44, 49 |
| 8 | Price | - | 11, 24, 36 | 5, 6, 11, 13, 22, 36, 44 |
| 9 | Habit | -/+ | | 5, 13/ 25 |
| 10 | Green purchase intention | + | | 4, 14, 34, 51, 46 |
| 11 | Knowledge | + | 1, 15, 38, 41, 42, 51, 52 | 9, 13, 30, 40, 43, 44, 45, 49 |

Part 3: Questionnaire

English version

QUESTIONNAIRE

My name is Huynh Hong Phuoc Thu, I am taking the course Master in Marketing and Innovation at Ca'Foscari University and writing my thesis on sustainable behaviors. Therefore, I would like to ask for your help by completing the survey about your attitude, intention and actual behavior of green consumer. Your answers will contribute greatly to the result of my thesis. All the information is confidential and used only for the academic purposes. Thank you for your answer.

1. **Attitude**

*1.1. Please state your agreement with each statement of your **attitude** toward the environment*

(on a scale 1 to 7: 1 = strongly disagree, 7 = strongly agree)

- Humans are destroying the environment.
- I am concerned about environmental pollution.
- Vietnamese people are using too much plastic bags.

1.2. Please state your attitude toward each sustainable behavior

- I... (on a scale 1 to 7: 1 = dislike 7 = like) the idea of purchasing green products.
- Purchasing green products for me would be... (on a scale 1 to 7: 1 = very unpleasant, 7 = very pleasant)
- Using green products for me would be...(on a scale 1 to 7: 1 = very unpleasant, 7 = very pleasant)
- I have a/an (on a scale 1 to 7: 1 = unfavorable, 7 = favorable) attitude toward purchasing a green version of a product.
-

*2. Please state your agreement with each statement of **Social Norm** (on a scale 1 to 7: 1 = strongly disagree, 7 = strongly agree)*

- People who are important to me think I should buy green products.
- People who are important to me would approve of my purchasing.
- People who are important to me want me to buy green products.

3. Please state your agreement with each statement of **Perceived behavioral control**

(on a scale 1 to 7: 1 = strongly disagree, 7 = strongly agree)

- I am willing to spend more money to buy green products.
- I know how to recycle plastic, paper or glass.
- I know the differences between green products and normal products.

4. Please state your agreement with each statement of **Product availability**

(on a scale 1 to 7: 1 = strongly disagree, 7 = strongly agree)

- I do not know where green products are sold
- Green products are not sold at stores close to where I live
- I cannot easily find green products unless I look for them carefully

5. **Habits**

Please state, for the following two behaviors, your agreement with each statement

(on a scale 1 to 7: 1 = strongly disagree, 7 = strongly agree)

Buying organic food is something . . .

1. I do frequently.
2. I do automatically.
3. I do without having to consciously remember.
4. that makes me feel weird if I do not do it.
5. I do without thinking.
6. that would require effort not to do it.
7. that belongs to my (daily, weekly, monthly) routine.
8. I start doing before I realize I'm doing it.
9. I would find hard not to do.
10. I have no need to think about doing.
11. that's typically "me."
12. I have been doing for a long time.

Using plastic bag to carry food is something . . .

1. I do frequently.
2. I do automatically.
3. I do without having to consciously remember.
4. that makes me feel weird if I do not do it.
5. I do without thinking.
6. that would require effort not to do it.
7. that belongs to my (daily, weekly, monthly) routine.
8. I start doing before I realize I'm doing it.

- 9. I would find hard not to do.
- 10. I have no need to think about doing.
- 11. that's typically "me."
- 12. I have been doing for a long time.

6. Green consumption intention. *For each of the following behaviors, please answer using a 1 to 7 scale (1= very unlikely, 7 = very likely) to the question "How likely do you think you will do [X] in the next occasion, if you have the chance to do so?" (where [X] stands for each behavior):*

- Buying green label products (organic foods or energy-saving products)
- Switching to other brands for ecological reasons
- Using fewer plastic bags when I go shopping
- Recycling paper, glass and plastic

7. Green consumption behavior

(Please answer the following Statement, according to a 1 to 7 scale (1 = never; 7 = always)

- I buy green label product (organic foods)
- I Switch to other brands for ecological reasons
- I use less plastic bag to carry foods (I use fabric bag, reusable bag)
- I recycle paper, glass, plastic.

8. Personal Information

8.1. What is your gender?

- A. Male B. Female C. Others

8.2. How old are you? A. Under 18 years old

B. 19-40 years old

C. 41-60 years old

D. Over 60 years old

8.3. Educational level:

- A. High School
- B. Under graduated
- C. Graduated/Post graduated
- D. Other

8.4. Are you living in a city?

A. Yes.

B. No

8.4.1. If yes. Which city are you living?

A. Hanoi

B. Hochiminh

C. Danang

D. Nha Trang

E. Dalat

F. Others

Vietnamese version

CÂU HỎI KHẢO SÁT VỀ VẤN ĐỀ TIÊU DÙNG BỀN VỮNG

Tôi tên là Huỳnh Hồng Phước Thư, hiện tại tôi đang theo học khóa học thạc sĩ kinh doanh chuyên ngành Marketing tại trường Đại học Ca'Foscari và đang trong giai đoạn hoàn thành luận án tốt nghiệp về hành vi tiêu dùng bền vững. Vì vậy tôi thiết kế bản khảo sát này để tìm hiểu về thái độ, ý định và hành vi tiêu dùng xanh của người tiêu dùng Việt Nam. Câu trả lời của anh chị sẽ đóng góp rất nhiều về kết quả khảo sát và luận án tốt nghiệp tôi đang thực hiện.

Tất cả thông tin anh chị cung cấp sẽ được bảo mật tuyệt đối và chỉ được sử dụng cho quá trình nghiên cứu khoa học.

Tôi xin chân thành cảm ơn sự hợp tác của anh/chị.

Các thuật ngữ:

-Sản phẩm xanh/Sản phẩm bền vững: là các sản phẩm được tạo ra từ các vật liệu thân thiện với môi trường. Sản phẩm chứa các vật liệu tái chế thay vì sử dụng vật liệu thô, nó có thể được xem là một sản phẩm xanh. (Ví dụ: ống hút làm từ tre). Sản phẩm đem đến những giải pháp an toàn đến môi trường và sức khỏe thay cho các sản phẩm phẩm độc hại truyền thống. Ví dụ các vật liệu thay thế chất bảo quản gỗ như creosote, được biết là một hợp chất gây ung thư. Sản phẩm giảm tác động đến môi trường trong quá trình sử dụng (ít chất thải, sử dụng năng lượng tái sinh, ít chi phí bảo trì). Sản phẩm tạo ra một môi trường thân thiện và an toàn đối với sức khỏe.

-Phiên bản xanh: Ngoài phiên bản thông thường, sản phẩm có phiên bản xanh là sản phẩm cung cấp giải pháp thân thiện với môi trường như tiết kiệm nhiên liệu, sử dụng vật liệu tái chế, hoặc tái sử dụng, bảo vệ sức khỏe cho người sử dụng. (Ví dụ: Người tiêu dùng châu Âu nhiều năm qua đã quay lại sử dụng chai sữa thủy tinh và giảm tỉ lệ sử dụng loại sữa đựng trong chai nhựa sử dụng 1 lần rồi bỏ. Chai thủy tinh có thể sử dụng nhiều lần, dễ dàng tái chế.)

| 1.1 Xin nêu ý kiến của anh/chị cho mỗi phát biểu dưới đây về sự đồng ý của anh/chị đối với môi trường hiện tại (mức độ đồng ý từ 1 đến 7, 1=hoàn toàn không đồng ý, 7= hoàn toàn đồng ý) | Đánh dấu X vào ô tương ứng | | | | | | |
|--|----------------------------|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| -Con người đang hủy hoại môi trường | | | | | | | |
| -Tôi quan tâm đến vấn đề ô nhiễm môi trường | | | | | | | |
| -Người Việt Nam dùng quá nhiều bịch/túi ni-lông | | | | | | | |
| | | | | | | | |
| 1.2. Xin nêu ý kiến của anh/chị cho mỗi phát biểu dưới đây về các hành vi tiêu dùng bền vững | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| -Tôi ... (Mức độ từ 1 đến 7, 1 = không thích, 7= thích) ... về ý tưởng mua sắm các sản phẩm xanh | | | | | | | |
| -Mua sắm các sản phẩm xanh đối với tôi ... (Mức độ từ 1 đến 7, 1= rất không sẵn lòng, 7= rất sẵn lòng) | | | | | | | |
| -Sử dụng các sản phẩm xanh, thân thiện với môi trường đối với tôi ... (Mức độ từ 1 đến 7, 1= rất không thoải mái, 7= rất thoải mái) | | | | | | | |
| -Tôi ... (Mức độ từ 1 đến 7, 1= không ưa thích, 7= rất ưa thích) mua sắm các sản phẩm có phiên bản xanh, thân thiện với môi trường | | | | | | | |
| | | | | | | | |
| 2. Xin nêu ý kiến của anh/chị cho mỗi phát biểu dưới đây (mức độ đồng ý từ 1 đến 7, 1=hoàn toàn không đồng ý, 7= hoàn toàn đồng ý) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| -Những người quan trọng đối với tôi... (Gia đình, họ hàng, người thân, bạn bè, đồng nghiệp, đối tác làm ăn...) | | | | | | | |
| ... cho rằng tôi nên mua sắm các sản phẩm xanh | | | | | | | |
| ... thường đồng ý quyết định tiêu dùng của tôi | | | | | | | |
| ... muốn tôi mua sắm các sản phẩm xanh | | | | | | | |
| | | | | | | | |
| 3. Xin nêu ý kiến của anh/chị cho mỗi phát biểu dưới đây về kiểm soát hành vi đối với hành vi tiêu dùng (mức độ đồng ý từ 1 đến 7, 1=hoàn toàn không đồng ý, 7= hoàn toàn đồng ý) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| -Tôi sẵn lòng chi trả nhiều tiền hơn để mua sắm các sản phẩm xanh | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| -Tôi biết cách tái chế nhựa, giấy hoặc thủy tinh | | | | | | | |
| -Tôi biết sự khác biệt của sản phẩm xanh và các sản phẩm thông thường | | | | | | | |
| | | | | | | | |
| 4. Xin nêu ý kiến của anh/chị cho mỗi phát biểu dưới đây về sự đồng ý của anh/chị đối với sự phổ biến của sản phẩm xanh (mức độ đồng ý từ 1 đến 7, 1=hoàn toàn không đồng ý, 7= hoàn toàn đồng ý) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| -Tôi không biết sản phẩm xanh được bày bán ở đâu | | | | | | | |
| -Sản phẩm xanh không được bày bán ở cửa hàng/siêu thị gần nơi tôi ở | | | | | | | |
| -Tôi không dễ dàng tìm được các sản phẩm xanh nếu tôi không tìm kiếm thông tin một cách kỹ lưỡng hơn. | | | | | | | |
| | | | | | | | |
| 5. Xin nêu ý kiến của anh/chị cho mỗi phát biểu dưới đây (mức độ đồng ý từ 1 đến 7, 1=hoàn toàn không đồng ý, 7= hoàn toàn đồng ý) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Mua sắm thực phẩm hữu cơ là việc làm..... 1.Tôi làm thường xuyên 2.Tôi tự động làm 3.Tôi làm mà không cần phải cố gắng ghi nhớ 4. Tôi sẽ cảm thấy không thoải mái nếu tôi không làm 5. Tôi làm mà không suy nghĩ 6. Tôi cố gắng để không làm 7. Nó đã trở thành thói quen hàng ngày/ hàng tuần/ hàng tháng của tôi. 8. Tôi bắt đầu việc này trước khi tôi nhận ra là mình đang làm nó 9. Tôi cảm thấy không thoải mái nếu tôi không làm 10. Tôi không cần phải suy nghĩ khi làm việc này. 11. “tôi” là mẫu người như vậy. 12. Tôi đã làm việc này trong một thời gian dài | | | | | | | |
| Sử dụng túi nhựa để đựng thức ăn/ uống là việc làm..... 1.Tôi làm thường xuyên 2.Tôi tự động làm 3.Tôi làm mà không cần phải cố gắng ghi nhớ 4. Tôi sẽ cảm thấy không thoải mái nếu tôi không làm | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|--|---|---|---|---|---|---|---|
| 5. Tôi làm mà không suy nghĩ 6. Tôi cố gắng để không làm 7. Nó đã trở thành thói quen hàng ngày/ hàng tuần/ hàng tháng của tôi. 8. Tôi bắt đầu việc này trước khi tôi nhận ra là mình đang làm nó 9. Tôi cảm thấy khó nếu tôi không làm 10. Tôi không cần phải suy nghĩ khi làm việc này. 11. “tôi” là mẫu người như vậy. 12. Tôi đã làm việc này trong một thời gian dài | | | | | | | |
| | | | | | | | |
| 6. Với mỗi hành vi được liệt kê dưới đây, vui lòng định mức từ 1 đến 7 (1=hoàn toàn không thể xảy ra, 7 = hoàn toàn có thể xảy ra) cho câu hỏi “Anh/chị có cho rằng mình sẽ làm việc (X) trong dịp tới đây nếu anh/chị có cơ hội thực hiện hành vi đó?” | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| -Mua sản phẩm có gắn nhãn hiệu xanh (VD: thực phẩm hữu cơ, sản phẩm tiết kiệm năng lượng) | | | | | | | |
| -Đổi sang các thương hiệu xanh vì mục đích thân thiện với môi trường | | | | | | | |
| -Hạn chế sử dụng túi ni-lông khi mua sắm | | | | | | | |
| -Tái chế giấy, nhựa, thủy tinh. | | | | | | | |
| | | | | | | | |
| 7. Với mỗi hành vi được liệt kê dưới đây, vui lòng định mức từ 1 đến 7 cho các khẳng định sau: (1=không bao giờ, 7 = luôn luôn) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| -Tôi mua sản phẩm có gắn nhãn hiệu xanh (VD: thực phẩm hữu cơ, sản phẩm tiết kiệm năng lượng) | | | | | | | |
| -Tôi đổi sang các thương hiệu xanh vì mục đích thân thiện với môi trường | | | | | | | |
| -Tôi hạn chế sử dụng túi ni-lông khi mua sắm | | | | | | | |
| -Tôi tái chế giấy, nhựa, thủy tinh. | | | | | | | |
| | | | | | | | |

