Employing the means-end chain theory and the laddering technique to identify obstacles to practice green consumption from consumers' perspectives

Le Hoai Kieu Giang[*], **Le Thi Thanh Xuan**

ABSTRACT
Green consumption and Environmental protection have been receiving increasing attention from scholars and practitioners, and they are also considered as expectations to reduce over-exploitation of natural resources, and negative impacts on the natural environment. Nevertheless, there is a big gap between increasing concerns of the environment as well as practices to protect the environment. After years of promotion , green consumptions are still below the expectations to make consumers have better green consumption behaviors. The purpose of the present study is to explore obstacles preventing consumers from practicing green consumption by employing the means-end chain theory with laddering interview to collect data. These obstacles then link to the personal values of consumers that they aim for through different consequences. There were 26 respondents interviewed by soft-laddering interview; and 93 participants in hard-laddering interviews. The research findings show that green consumption has 13 attributes (obstacles) which prevent consumers from practicing, and these 13 attributes (Ex: A1: Requirement of much knowledge and skills, A2: Inconsistent operation systems and policies, A3: a lot of space/suitable infrastructure required, etc.) lead to 6 values (Ex: V1: Insecurity, V2: Unbelief, V3: Negative emotions and spirits, etc) through 13 consequences (Ex: C1: Waste of time to learning/ remembering/ implementing, C2: Practicing improperly, C3: Useless effort, etc.). The strongest A-C-V link displayed on HVM is A5 (High initial purchase/ investment cost) – C7 (Waste of money) – V4 (Cost inefficiencies), which figures out the concern of cost issues when customers decide to involve themselves in green consumption. The study results contribute to the green consumption literature by providing knowledge of why consumers have not practiced green consumption frequently. Based on the findings, discussions and managerial implications are also presented.
Key words: Means-end chain theory, laddering interview, green consumption, obstacle

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INTRODUCTION

Environmental issues are receiving more and more attention in many countries around the world. In particular, green consumption is gradually becoming an essential part of this trend, especially in the fast-developing Asian countries , where many consumers are willing to spend more than previous generations[1]. Because of the increasing environmental concerns and the demands of customers, many businesses have started researching and developing environmentally friendly products[2]. Therefore, promoting the purchase and consumption of these products may bring great impacts on the environment. In fact, businesses can only reduce the negative environmental impacts through their manufacturing and development process of environmental-friendly goods and services. And, they cannot make purchasing decisions on behalf of the customers nor decide the behaviors to consume the products[3].

Recognising the vital role of green consumption, many policies have been applied by the governments of the European Union (EU), the United States, Japan, Korea, and China and brought significant benefits[2]. For Vietnam, green consumption is a long-term solution to minimize negative impacts on the environment, especially in Ho Chi Minh City, the economic locomotive of our country. Green consumption is an important topic mentioned in Vietnam's National Strategy for Green Growth in the 2021-2030 period and vision to 2050[4]. Additionally, international environmental experts said that in the next 10 years, Vietnam's GDP may double. However, if it does not pay proper attention to environmental protection, every 1% increase in GDP, the damage to the environment may lead to a loss of about 3% of GDP on average[5]. Vietnam in general and Ho Chi Minh City in particular have developed a number of environmental protection programs and policies related to green con-

sumption such as collection, classification, and recycling of waste. However, the amount of solid waste generated in Vietnam still has a growth rate of about 10% per year. Every day, the country generates more than 60,000 tons, but only about 15% of the collected waste is recycled or reused[6]. In addition, the promotion of public transport use has not yet attracted many people to participate in[7]. In general, green consumption is still not widely known or only at awareness level, not shown through specific behaviors. Although consumers understand the importance of environmental protection, there are still many obstacles in moving from awareness, intention to actual action. Some previous studies in Vietnam have investigated the factors affecting green consumption behavior[8–10]. However, there are no studies in Vietnam, nor Ho Chi Minh City, that explores the obstacles of green consumption by exploring its attributes from the consumer's point of view and linking them to individual consumer factors. Kaciak and Kushner[11] showed that dismantling inconvenience is important to promote consumer participation in environmentally friendly behavior (e.g. recycling behavior). Therefore, research to understand and remove obstacles in the implementation of green consumption is necessary.

In order to do this, the Means-end chain theory (MEC) and the laddering interview method are employed to discover the attributes of green consumption, and then link them to personal values that people aim for through different consequences. The research findings can be beneficial to businesses and policymakers in communicating that personal values are met by practicing proper protective environmental behaviors in consumption[12]. Therefore, the topic *"Obstacles of participating in green consumption of customers in Ho Chi Minh City - a study employing Means-End Chain Theory"* is carried out to give an overview of the difficulties that consumers face when practicing green consumption and connecting with their personal values. Thereby, the results of the study can help the government and businesses have appropriate approaches to remove these obstacles and promote the green consumption behaviors of consumers.

THEORETICAL BASIS

Green consumption

Green consumption is defined as the purchase, use and promotion of environmentally friendly products that do not pose a risk to human health and do not threaten the natural ecosystem[2]. This concept is concerned with the responsibility of consumers to address environmental problems through the adoption of environmentally friendly behaviors, such as using organic products, clean and renewable energy, and looking for products manufactured by companies that are almost harmless, or even non-harmful to the environment[13]. Therefore, it can help significantly with environmental protection for the present and for the next generations[14]. An individual who has green consumption behavior considers environmental or social issues while making purchasing decisions[15]. A lot of scientific research in the past showed that there are many drivers to green consumption, such as responsibility for the environment, environmental awareness, other green behaviors, personal values, etc.[14]. This once again emphasizes that linking the attributes of green consumption to personal values can be one of the approaches to help increase green consumption behavior among customers.

To sum up, the concept of green consumption in this study is a series of behaviors from purchase to use and ends with emissions into the environment, including:

- Purchase of green products and services (e.g.: compostable/recyclable packaging, etc.);
- The saving, reusing, recycling; reducing emissions to the environment, especially solid waste, and properly disposing of waste (e.g.: segregation of waste at source);
- Propaganda and influence on the community to respond to green consumption.

Means-end chain theory

Mean-End chain (MEC) theory was first developed in order to explain the links between personal values that are important to an individual and specific attributes of products. This model is applied to collecting consumer data in qualitative research as well as evaluating consumer values and behaviors. More specifically, Mean-End chain was defined as follows[16]:

- Means are objects (products) or activities in which people engage (running, reading).
- Ends are valued states of being such as happiness, security, and accomplishment.

MEC model was built based on two assumptions about consumer behavior: (i) values, which are desirable end-states of existence, have a dominant impact on choice patterns, and (ii) various products that are able to satisfy customers' values are grouped into sets in order to reduce the diversity of choice. Moreover, this model mentions that all consumer actions have consequences[16]. These consequences (or at a higher level - personal values) are important factors

that make a person decide to buy a good, a service, or engage in an activity, rather than the attributes[17].

The most general MEC model represents the links between a product's attributes and the desired states of the consumer, which consist of three levels (Attributes – Consequences – Values) shown in Figure 1 with the increasing of abstraction[18]:
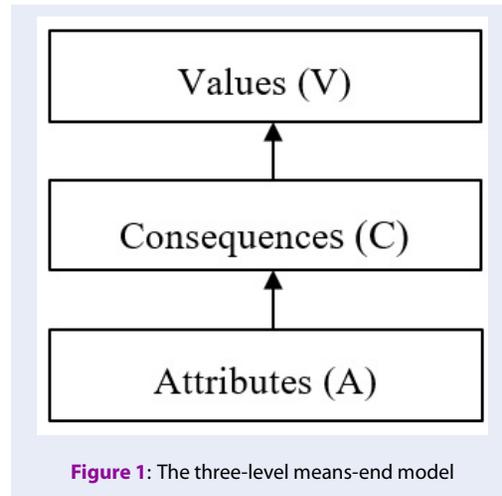

Figure 1: The three-level means-end model

This set of associations is called a means-end chain because people using a product or service see the product and its attributes as a means to an end[19]. The chain begins with product, service, or behavioral attributes (components) and then establishes some linkages with the perceived consequences or benefits generated by those certain attributes, ultimately leading to personal values (desired end-states of customers) to which a person aspires[20].

Based on the review of MEC, the present study employs the MEC model as a framework to explore customers' obstacles of green consumption, including its attributes, which bring some negative consequences preventing them from achieving their individual values.

The laddering interview technique

The laddering interview technique is a type of one-on-one in-depth interview that allows researchers to explore more deeply the consumer's perspective on product attributes related to satisfying some personal aspects, following MEC theory[16]. The goal of this method employed in the present study is to determine the relationships between attributes (A), consequences (C) and values (V)[21]. There are two methods of laddering interview: soft laddering interview and hard laddering interview. While soft laddering allows respondents to freely talk about their point of

view with a natural flow of speech, hard laddering requires the respondents to answer a structured questionnaire[22]. Therefore, the soft laddering method helps to exploit the customer's point of view more thoroughly, but the disadvantage of this method is that it is not suitable for collecting data with large sample size[23,24]. In contrast, hard laddering restricts respondents' answers to the questionnaire, but it can help collect data with a larger sample size and easier to computerize as well as process the collected data[25,26]. From both the advantages and disadvantages of the two methods above, this study applies both methods in each specific research period in order to take advantage of their strong points and overcome their disadvantages.

Previous studies

Environmental issues and, especially, green consumption have been becoming the focus of many researchers and practitioners. A lot of studies in different countries aimed to find drivers of green consumption or green purchase behavior, such as peer influence, environmental affect and environmental knowledge[27]; perceived consumer effectiveness[28]; social media usage factors[29]. In Vietnam, several studies in this area were carried out by Hung, Quyen and Nhi[8], Hung, Cuong and Thoa[9], Khai and Anh[10]. These studies were mainly based on the Theory of Reasoned Action and the Theory of Planned Behavior to build research models. These research models consisted of independent variables related to attitude towards the environment or green consumption, subjective norm, green products availability, etc. influencing the green consumption intention and the green consumption behavior. These studies all reached the common conclusion that in order to promote green consumption, it is necessary to improve consumers' attitudes and awareness towards the environment[8–11]. However, not much literature about the obstacles of green consumption from the perspective of consumers is found. This lack in the literature drives the present study to bridge this gap by employing the means-end chain theory with ladder interview technique to collect data to determine consumers' obstacles in practicing green consumption. The removal of obstacles and difficulties for consumers should be considered seriously to promote their participations in environmentally friendly behaviors[11].

METHODOLOGY

The present study is to explore the reasons why customers in Ho Chi Minh City are reluctant to participate in green consumption. In order to accomplish

this goal, the study is carried out based on MEC theory in two stages using (i) soft-laddering interview technique in the first stage and (ii) hard-laddering interview technique in the second stage to collect the data by convenience sampling method:

1. **First stage – preliminary research:** Soft-laddering interviews are carried out in one-on-one in-depth interviews using open questions. The participants are people who have known about green consumption but have not (or rarely) done it, or used to practice but stop doing in the present. The flow of an interview begins with: *"What characteristics of green consumption prevent you from wanting (or rarely) doing these behaviors on a daily basis?"*. Then, the next questions of this process depend on the answer of the first question in order to explore the consequences of every mentioned attribute. For example, *"Why does attribute A make you not want to engage in green consumption?"* or *"What consequences does attribute A bring that keep you from taking part in green consumption?"*. Finally, questions to exploit the values (V) that derive from the specified consequences (C) are asked to continue the series. This interview completes when the interviewees come to all their individual values from attributes and consequences mentioned before, which reach the end of the chains. This interview method requires a small sample size that is at least 20[30]. The outcome of this stage is the list of A, C and V.

2. **Second stage – main research**: an official questionnaire for hard-laddering interview is created including the list of A, C and V from the previous stage. This questionnaire is designed based on the Association Pattern Technique (APT) as a quantitative approach to collect the data from people having similar characteristics to participants in the 1st stage. The minimum sample size for the hard laddering interview is at least 50 people[25]. In the questionnaire, there are two implication matrixes, A-C matrix and C-V matrix, analyzed separately (Figure 2)[24].

To answer the survey, respondents tick "x" the corresponding box at the intersection of the row and column if they agree that there exists a certain link between A and C (or between C and V). The total selections of A-C (or C-V) links of all respondents are considered as the frequencies of the respective relationships. Eventually, a Hierarchical Value Map (HVM) is developed by connecting the linkages created among elements, A, C and V[21].

An important step in HVM construction is determining the cut-off point. The cut-off point indicates the number of links of an A-C (or C-V) to exist on the HVM. Typically, the cut-off point is from 3 to 5 links for sample sizes from 50 to 60[21]. In this study, the cut-off point was determined in order to construct a simple and clear HVM, and thereby highlight the most significant A-C-V links. Hence, the cutoff point for the A-C matrix is defined as the top 5% of the links with the highest frequency. Next, the cutoff point of the C-V matrix is determined so that only 3-5 common C(s) elements between the two matrices are retained in the HVM[23].

RESEARCH FINDINGS

Overview

In the first stage, 26 people who have knowledge about green consumption but have never or rarely practiced green consumption behavior were interviewed using soft-laddering technique to reveal the difficulties that prevent them from participating in this practice. In which, more than 90% interviewees are from 20 to 29 years old, including students and working people. The results of these 26 interviews give a list of 13 attributes, 13 consequences and 6 values presented in Table 1.

In the second stage, the questionnaires including the list of A, C and V above were distributed to 100 participants, of which 93 valid questionnaires after screening were allowed to continue in the next analysis. Descriptive statistics of the main characteristics of the collected samples are summarized in Table 2.

According to the survey, the participants all have an understanding of green consumption behaviors no matter whether or not they used to practice these behaviors in the past. Some of the activities that used to be carried out include garbage sorting, recycling bottles/jars/boxes into decorative items or other useful items, reusing plastic bottles/jars/plastic bags, using electric cars, etc.

Implication matrix construction

Implication matrixes are used as the basis for building HVM. The numbers in these matrixes indicate the frequency of a certain (A, C) or (C, V) relation. Therefore, the higher the number, the stronger the relationship. Tables 3 and 4 present the A-C and C-V implication matrixes of this study.

In Table 3, the strongest link is A5 – C7 with 46 times mentioned by respondents, and other strong links such as A6 – C8, A7 – C9, A3 – C3, etc. with high

Table 1: List of Attributes, Consequences and Value (Source: Research findings)

Code	Attribute
A1	Requirement of much knowledge and skills
A2	Inconsistent operation systems and policies
A3	A lot of space/suitable infrastructure required
A4	Using an item more than once
A5	High initial purchase/investment cost
A6	Low usability
A7	Inconsistent actions in the community
A8	Ineffective communication
A9	Less diverse/ eye-catching packaging of green product
A10	Unwilling to changing mindset
A11	Low quality product
A12	Limited supplier
A13	Perishable recycled/reusable product
Code	Consequence
C1	Waste of time to learning/ remembering/ implementing
C2	Practicing improperly
C3	Useless effort
C4	Narrowing living space/loss of aesthetic
C5	Creating a source of disease
C6	Not interesting
C7	Waste of money
C8	More complicated and troublesome in daily life
C9	Time-consuming to convince people around
C10	Lacking of information
C11	Negative effects on mental and physical health
C12	Property loss
C13	Inconvenience to people around
Code	Value
V1	Insecurity
V2	Unbelief
V3	Negative emotions and spirits
V4	Cost inefficiencies/ low economic value
V5	Personal devaluation
V6	Inefficiency at work/study

Table 3: **The A-C matrix**

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
A1	23	16	3	0	0	5	1	4	4	11	0	0	1
A2	8	16	**25**	0	0	9	2	10	3	5	0	0	3
A3	1	1	3	**26**	12	4	6	21	1	1	4	0	12
A4	5	3	0	4	**24**	10	1	5	1	0	5	0	1
A5	4	1	5	0	1	5	**46**	7	5	3	1	3	0
A6	3	3	11	0	1	13	10	**27**	7	1	5	2	7
A7	4	9	25	0	2	9	4	12	**27**	8	3	0	12
A8	10	8	1	0	0	6	2	3	16	**24**	1	0	0
A9	3	0	0	2	0	14	2	1	0	1	3	1	0
A10	5	1	3	0	1	9	1	9	17	7	4	0	4
A11	0	0	5	0	6	2	8	2	0	1	6	3	4
A12	7	0	3	0	0	3	8	6	2	15	2	1	5
A13	7	3	14	5	10	7	16	15	7	1	12	5	**24**

(Source: Research findings)

Table 4: **The C-V matrix**

Matrix	V1	V2	V3	V4	V5	V6
C1	2	14	24	4	8	33
C2	28	12	10	9	5	12
C3	1	**36**	20	8	4	21
C4	5	3	21	3	5	4
C5	**40**	5	7	1	4	5
C6	5	34	26	2	6	3
C7	0	5	11	**65**	3	1
C8	8	6	**35**	4	9	**32**
C9	1	26	**28**	2	11	19
C10	14	19	10	5	5	18
C11	13	6	16	2	6	10
C12	0	0	6	8	0	1
C13	10	4	19	4	15	15

Note: *The emboldened* **Cs** *are common C between the two matrices.*
(Source: Research findings)

Figure 2: Example of A-C and C-V matrixes in the questionnaire [24]
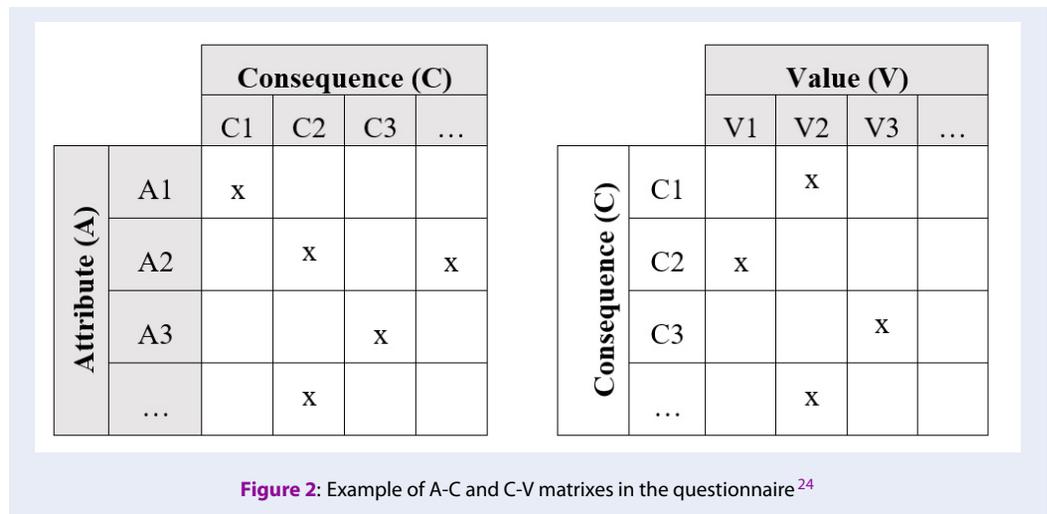
Table 2: Descriptive statistics of the research sample (Source: Research findings)

Gender	Percentage
Male	53%
Female	47%
Age	Percentage
18-22	69%
23-25	14%
26-30	11%
31-40	1%
Above 40	5%
Accommodation	Percentage
Dormitory	15%
Private house	27%
Apartment	5%
Rent house	46%

frequency. Besides, there are some cells having zeros representing links that are not chosen by participants, such as A1-C4, A9-C2, or A11-C9, etc. Similarly, in Table 4, most of the C-V relations are mentioned, except for the four C7-V1, C12-V1, C12-V2, and C12-V5. The strongest link, which is chosen by 65 people, is C7-V4.

Hierarchical Value Map construction

As mentioned above, it is necessary to specify the cut-off point to build the HVM, which is determined according to the principle of taking 5% of the links with

the highest frequency in the A-C matrix [23]. Thus, the cut-off point is determined to be the first 9 links with the highest frequency (13*13*5% ~ 9), including A2-C3, A3-C4, A4-C5, A5-C7, A6-C8, A7-C3, A7-C9, A8-C10, A13-C13 (Table 3).

Thus, there are 8 consequences to be selected including C3, C4, C5, C7, C8, C9, C10 and C13. However, only a maximum of 5 common consequences (C) are retained on the HVM [23]. Therefore, it is necessary to base on the frequency of C-V links in the C–V matrix to select top 5 appropriate consequences. As a result, there are 5 consequences creating 6 relationships as follows : C3 - V2, C5 - V1, C7 - V4, C8 - V3, C8 - V6, C9 - V2 (Table 4).

Combining the above 2 results, a total of 7 A-C-V chains are included in the HVM (Figure 3) as follow:

- A2-C3-V2
- A4-C5-V1
- A5-C7-V4
- A6-C8-V3
- A6-C8-V6
- A7-C3-V2
- A7-C9-V2

As can be seen in the HVM, the strongest link is A5-C7-V4. This means that economic issues including costs to buy green products, or installation costs of energy-saving equipment, etc. are the main concerns leading to people unwilling to do green consumption behavior.

Next, the value (V2: Unbelief) is the one having the most consequences linked to, including (C3: Useless effort) and (C9: Take time to convince people around). Thus, it can be inferred that "belief" is the
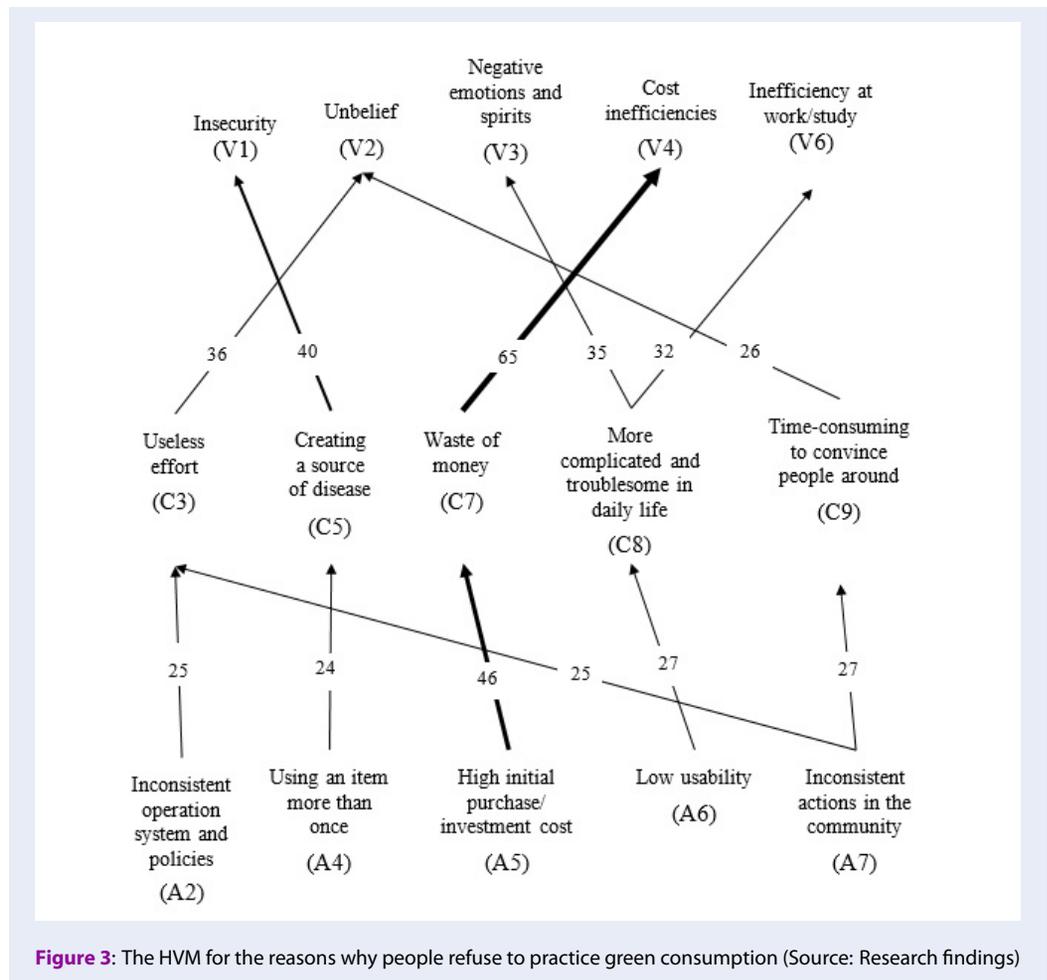
Figure 3: The HVM for the reasons why people refuse to practice green consumption (Source: Research findings)

core value of customers when deciding to do green consumption behaviors. In addition, other concerns make people reluctant to practice green consumption, including: Inconsistent operation systems and policies (A2); Using an item more than once (A4); Low usability (A6); Inconsistent actions in the community (A7).

DISCUSSION

The research findings show that there are 5 attributes. They are 5 main obstacles preventing consumers from participating in green consumption: Inconsistent operation systems and policies (A2), using an item more than once (A4), high initial purchase/ investment cost (A5), low usability (A6), inconsistent actions in the community (A7). At the same time, through the consequences, these obstacles affect the personal values of consumers. T he 5 most concerned values in green consumption, ranked by frequency, include: Insecurity (V1), Unbelief (V2), Negative emotions and spirits (V3), Cost inefficiencies (V4), Inefficiency at work/

study (V6).

Considering the attribute **A5** (High initial purchase/ investment cost), this is the attribute with the highest frequency on the HVM referring to the higher payment for green products than the other products with the same function. In the study of Thoa[2], there was also a similar result mentioning that participating in green consumption requires people to increase spending on green products. Therefore, family or individual income can affect the intention to practice green consumption. If their income decreases , the intention to implement green consumption may be lower. This attribute is also a component of the most important A-C-V chain of the study, A5-C7-V4: (High initial purchase/ investment cost ⯈ Waste of money ⯈ Cost inefficiencies). An interviewee in this study stated that:

"People, in general, do not have the habit of using environmentally friendly bags because they are now much more expensive than regular plastic bags. Therefore, many shops and supermarkets do not provide buyers

with free environmentally friendly bags but still use plastic bags. Moreover, buyers tend to use those which are cheap and convenient. Plastic bags are, therefore, still popular and cannot be replaced."

In fact, green products have higher production costs, leading to high prices, thereby losing competitive advantage. This leads to a waste of money but is not very useful compared to plastic products (for example, plastic straws are still considered more convenient than paper straws, but its price is much cheaper). Hence, it does not bring economic value to the user.

Next, attribute **A6** (Low usability) is interpreted that if using a green product or performing a certain green consumption behavior brings inconvenience to work and daily life, it will be an obstacle for consumers. This attribute affects two values of people in their life, V3 (Negative emotions and spirits) and V6 (Inefficiency at work/study). People are often concerned with negative emotion regulation, especially in trying to get out of bad moods and emotions and thus limit efforts to engage in other behaviors, for example, green consumption[31].

In general, green consumption has not really brought convenience to consumers. For example, buses are only highly convenient when the passenger's destination and departure point are on the bus route. Otherwise, passengers would have to travel by other means or walk to the station, in addition, they also lose time waiting for the bus to arrive. Another example is related to bags, wherein cloth bags can only hold dry and clean items while bio-food bags can only be used for food, and paper bags cannot hold items that are too heavy or wet... Meanwhile, a plastic bag can meet most of the needs of consumers. In addition, it is compact and easy to carry. A survey of the World Wide Fund for Nature in Viet Nam on consumer behavior, some interviewees said: *"in terms of convenience, they will never give up plastic bags"*, or *"plastic bags are often free and very convenient,…"*[32]. Similarly, an interviewee in the in-depth interview of this study said that: *"Cloth bags are not always usable, for example, when buying vegetables, meat and fish or any fresh food, you still have to take a plastic bag to store it. If you put it in a cloth bag, it will get wet and smelly immediately, and then you have to wash them. To be honest, the fishy smell is extremely unpleasant, so it must be washed separately, and can not be washed with other clothes. Thus, it brings so much inconvenience."*

Thereby, it can be seen that the convenience and the reduction of unpleasant emotions are what consumers aim for, which makes the A6 attribute one of the main obstacles preventing users from green consumption.

Thirdly, the attribute **A7** (Inconsistent actions in the community) is similar to the results of a research relating to consumer perception in green consumption of[33] as follows:

- People think that they can not alone make a difference to the environment, unless everyone commits to doing the same;
- The behavior of a minority group does not constitute a norm.

According to HVM, attribute A7 leads to the feeling that people's efforts are in vain and convincing those around them to get involved in green consumption is not easy. Thus, it affects the value V2, which mentions that people do not believe that their single act of green consumption can have a positive impact on the environment. This creates an obstacle which discourages people from participating in green consumption.

Regarding the attribute **A2** (Inconsistent operation systems and policies), which refers to the inconsistency of stakeholders when implementing green consumption, including governments, businesses, and private and local organizations . The lack of effective cooperation between stakeholders makes consumers feel that they are vain attempts (C3), thereby affecting the value of beliefs on the feasibility of green consumption in the community (V2). The results of the in-depth interview at the first stage of this study showed that 23 out of 26 respondents said that the current systems do not have the means to sort garbage when collecting them. Therefore, it is not necessary for individuals and households to conduct waste classification at home. Specifically, one interviewee said: *"I don't see any effect in sorting garbage. The collection trucks are still gathering them together, there is no separation, so what should we do? It's just a call for garbage classification, but it's hard for everyone to do it together!".*

In addition, the survey respondents also said that the managers of the accommodation facilities are not interested in having the garbage separated: *"I live in an apartment, each floor will have a separate room to store garbage. However, the management board only left a large trash can for all without sorting out any garbage. That's why I don't categorize them".* The participants also said that currently, supermarkets and stores have not taken drastic and unified actions. They still give out free plastic bags, making consumers less motivated to use friendly environmental bags.

Finally, the **A4** (Using an item more than once) attribute refers to consumers' fear that reusing certain items many times without proper handling will

have a negative effect on their health (C5) because it is a source of accumulation of pathogenic bacteria, thereby affecting the value of security in their life (V1). The risk of disease mentioned by the survey respondents is related mainly to the use of personal items (such as stainless steel straws) and buses with the following comments:

"Everyday buses carry too many passengers and they are not cleaned properly. Therefore, they have too many potential pathogens. Especially, in situations like the recent Covid-19 epidemic, traveling by bus is not a safe option".

"These stainless steel straws must be cleaned thoroughly with a specialized brush, otherwise plaque, bacteria, and mold will form inside, which is very harmful to health".

In summary, safety in general and safety in health in particular, are among the basic human needs [34]. Hence, it may explain why the chain A4-C5-V1 is one of the most important points of this study.

MANAGERIAL IMPLICATIONS

Based on MEC theory, this study employs soft-laddering and hard-laddering interview techniques to collect the data. The purpose is to find the reasons why customers refuse to participate in green consumption, which are explained by different A-C-V ladders in an HVM. There are, in total, 13 attributes, 13 consequences and 6 values explored after the soft-laddering interview stage. After that, a questionnaire was created for hard-laddering interview in the second stage. Finally, the research findings show seven chains, A2-C3-V2; A4-C5-V1; A5-C7-V4; A6-C8-V3; A6-C8-V6; A7-C3-V2 and A7-C9-V2, which are considered the most important by consumers. Thereby, five obstacles of green consumption are pointed out including *inconsistent operation systems and policies (A2), using an item more than once (A4), high initial purchase/investment cost (A5), low usability (A6), and inconsistent actions in the community (A7)*. Based on these attributes, policy makers as well as organizations can take appropriate approaches to encourage people to involve in green consumption.

With the biggest obstacle related to the cost of buying green products (**A5**), the government needs to promote supportive policies for businesses to produce green products/ green packaging, such as supporting price, capital , exemption and reduction of taxes. In addition, it is necessary to support costs for product research and development activities, thereby expanding production scale to take advantage of the economy of scale. As a result, product prices can easily compete with plastic products, making it easier to reach customers. Enhancing R&D activities for green products not only helps to reduce cost, but also increases their usability, which is an obstacle mentioned in **A6**. For businesses, it is very necessary to communicate and to promote full information to buyers. Businesses must help customers understand the good impact on the environment when buying a certain product so that they can easily accept a slightly higher price to protect the environment.

Consistency of green consumption actions in the community (**A7**) is also a point that many people care about. To improve this, it is essential to educate the community and disseminate more information about green consumption and its environmental benefits to help increase people's awareness and consumption habits. The government should have the policy to include simple environmental protection actions and basic environmental knowledge in educational program for children. It is recommended to build volunteer environmental groups and organizations to regularly carry out practical activities, calling for more and more people to participate in green consumption. In addition, not only the behavior in the community needs to be consistent, but also the relevant organizations in the green consumption operating system need to be consistent, which is the issue stated in attribute **A2**. To achieve that, businesses need to be more drastic in eliminating single-use plastic bags in the sales process, while promoting the use of environmentally friendly paper bags/cups. The government needs to have clear policies and regulations to control the waste sorting process so that all actions are unified. When people have sorted their garbage at home, the waste treatment process is also classified accordingly to prevent the people's assumption that their garbage classification is useless and thereby no longer motivated to continue. Finally, the repeated use of an item (**A4**) that easily forms a breeding ground for pathogens is a concern of many people. Therefore, when distributing these products, manufacturers need to provide information on how to properly store and clean the items so that they can be safe for future use. In addition, manufacturers also need to provide proper cleaning items, suitable for the product to make it more convenient for users to reuse. Moreover, product information such as the number of times that the product can be reused, or the specifications of technical standards and product functions should also be clearly stated so that customers can understand and feel secure when using green products.

CONCLUSION

The study has addressed properly proposed research objectives. However, there are some limitations. First, both stages of laddering interview approached respondents aging under 30 (over 90%); and the percentage of respondents over 30 is less than 10. This unbalanced sample might result in the perceptions of people over 30 not shown; and the research findings does not cover perceptions of consumers, in general. Therefore, future studies should employ sampling in different ranges of age for better research results. Moreover, some demographic characteristics (e.g. gender, age, etc.) can also influence consumer behaviors. Hence, the obstacles to green consumption in groups of different ages or genders, etc. should be considered in future studies.

Another concern is that this study limits the sample in Ho Chi Minh city. In fact, environmental issues are happening in the whole country , especially in provinces where promotion activities for green consumption are not frequently organized. Therefore, the research findings cannot represent Vietnamese perceptions. Future studies should collect data from many provinces/ cities in the whole country.

ABBREVIATIONS

A – C – V: Attribute – Consequence - Value
APT: Association Pattern Technique
EU: European Union
GDP: Gross domestic product
HVM: Hierarchical Value Map
MEC: the Means-End Chain theory
R&D: Research & Development

Conflict of Interest Statement

The author declares that there is no conflict of interest.

Author Contributions

The 2 authors all contributed equally to this scientific research paper.

Author 1: Le Hoai Kieu Giang is mainly responsible for writing the content of the entire research paper, including: Introduction, theoretical basis, methodology, research findings, discussion and managerial implications.

Author 2: Le Thi Thanh Xuan is responsible for writing abstract sections and conclusion, as well as reviewing, and correcting to complete the whole content of the article.

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Sử dụng lý thuyết chuỗi phương tiện và kỹ thuật phỏng vấn bậc thang để xác định các trở ngại trong việc thực hiện tiêu dùng xanh từ quan điểm người tiêu dùng

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TÓM TẮT

Tiêu dùng xanh và Bảo vệ môi trường nhận được sự quan tâm ngày càng nhiều từ các nhà nghiên cứu và quản lý; và được xem là kỳ vọng để giảm việc khai thác quá mức các nguồn tài nguyên thiên nhiên, và giảm các ảnh hưởng tiêu cực đến môi trường thiên nhiên. Mặc dù vậy, khoảng cách giữa sự quan tâm về môi trường và việc thực hành bảo vệ môi trường thực sự lớn. Sau nhiều năm phát động, các phong trào tiêu dùng xanh vẫn chưa đạt được kỳ vọng trong việc tác động tốt hơn đến hành vi tiêu dùng xanh của khách hàng. Mục tiêu chính của nghiên cứu này là khám phá các trở ngại dẫn đến người tiêu dùng không thực hiện tiêu dùng xanh dựa trên việc sử dụng lý thuyết chuỗi phương tiện và phương pháp phỏng vấn bậc thang để thu thập số liệu. Các trở ngại này, sau đó, dẫn đến các giá trị cá nhân của người tiêu dùng thông qua các hệ quả khác nhau. Tổng cộng có 26 đáp viên tham gia vào quá trình phỏng vấn bậc thang mềm, và 93 đáp viên tham gia vào quá trình phỏng vấn bậc thang cứng. Kết quả nghiên cứu xác định được 13 trở ngại (ví dụ: A1: Yêu cầu nhiều kỹ năng/ kiến thức, A2: Hệ thống vận hành, quy trình thực hiện chính sách chưa thống nhất, A3: Cần không gian, cơ sở hạ tầng phù hợp, v.v) dẫn đến 6 giá trị (ví dụ: V1: Không an toàn, V2: Không có niềm tin, V3: Cảm xúc và tinh thần tiêu cực, v.v.) thông qua 13 hệ quả (ví dụ: C1: Tốn thời gian tìm hiểu thông tin/ghi nhớ/thực hiện, C2: Thực hiện không đúng cách, C3: Tốn công sức vô ích, v.v.). Chuỗi A-C-V mạnh nhất được thể hiện trên bản đồ HVM là A5 (Chi phí mua sắm/ đầu tư ban đầu cao) – C7 (Tốn kém chi phí, tiền bạc) – V4 (Không có tính kinh tế), chuỗi này liên quan đến mối lo ngại về mặt chi phí người người tiêu dùng quyết định tham gia tiêu dùng xanh. Kết quả từ nghiên cứu này đóng góp vào lý thuyết về tiêu dùng xanh khi đóng góp kiến thức về lý do người tiêu dùng không thực hiện tiêu dùng xanh. Dựa trên kết quả này, các thảo luận và hàm ý quản trị được đề xuất.

Từ khoá: Lý thuyết chuỗi phương tiện, phỏng vấn bậc thang, tiêu dùng xanh, trở ngại

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