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FACTORS IMPACTING ON CONSUMER BEHAVIOR TOWARDS FUNCTIONAL FOODS

Degree Programme in Innovative Business Services

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Abstract

Vietnam has been one of the countries that consume Functional foods the most in the whole Asia. However, Vietnamese consumers have become more and more prudent when it comes to making purchasing decision of functional foods because there are so many functional foods companies out there in the market with tons of different products which cause market saturation. Therefore, the purpose of this thesis is to draw a bright path for functional foods companies in Vietnam by analyzing the factors impacting consumer behavior via survey so that the companies would know how to create a more successful marketing strategy to stand out in the market.

CONTENTS

1 INTRODUCTION.............................................................................................................. 5
1 INTRODUCTION

1.1 Motivation of the study

It is notable to emphasize that the food and beverage industry has achieved the total consumption of US$42.8 billion in 2013 that consumed for more than 40% of total national consumption (VPBS, 2014). This industry is also witnessing the incredible growth rate that was stood at 11% in the period 2010-2013. Another report from Nielsen (2012) showed that Vietnam was ranked as the most rapidly growing fast-moving consumer goods (FMCG) consumption country in Asia with a rate of 24.3%, followed by India (18.3%) and China (14.6%). In 2013, Vietnam’s food and beverage industry experienced a stagnant growth due to consumers becoming more and more prudent in the context of an unstable economy.

In the context of the current situation of food and beverage market in Vietnam, the author identified several rationales for conducting this study, as follow:

First, a recent business performance of functional foods companies illustrated that revenues absorbed from selling functional foods have been increasing rapidly with three times, from 184VND in 2011 to 319VND in 2013.

Second, the revenues from selling water and related products continue to grow in coming years, but Functional Foods companies have not had any official study to capture whether there are any shifts or changes in the consumer behavior towards water product in Vietnam. Without understandings on current consumer behavior, the functional foods companies shall not have the evidence or baselines that help them to
clear define and confidence to make right decision to further increase the market share of Functional Food companies in food and beverage industry.

Third, consumer behavior is highly influenced by many factors, but the impacts of these factors on consumer behavior are different compared with each other. Recognizing factors that have major and largest effects to consumer behavior will be considered as a basis for Functional Foods companies to derive appropriate marketing programs, including product, price, place, and promotion. Thus, the marketing activities of the company will be more efficient.

1.2 Significance of the study

The study, firstly, is significant to Functional foods companies as it will have the evidence of current consumer buying behavior towards functional foods products. Furthermore, the study is set to be important to the managers of Functional foods companies as they will have the basis for making appropriate decisions to improve the market share and the customer base of the company in the long run. Finally, the study is also useful to other researchers who want to develop their studies in consumer behavior in Vietnam’s food and beverage industry accordingly.

1.3 Purpose of the study

This study aims to obtain following objectives:

- To critically identify factors impacting to consumer behaviour in functional foods in Vietnam
To analyse the impact of each factor on consumer behaviour on functional foods in the case study of Vietnam.

1.4 Question of the study

Based on research objectives above, several research questions are prepared:

- What are the factors impacting to consumer behaviour in functional foods in Vietnam?
- What is the impact of each factor on consumer behaviour in functional foods in Vietnam?
2 LITERATURE REVIEW

2.1 Exploratory tendencies in Consumer behavior scale

The consumer behavior was defined by different scholars. For instance, Enis (1974) defines consumer behavior as a process that consists of the inputs, the utilization, and other actions lead to the satisfaction of the consumers. According to Kotler (2000), consumer behavior is a marketing concept and it is defined as the process of which the consumers try to purchase or dispose a particular product or service based on their needs or demands. Kotler (2000) also emphasizes that the consumer behavior can happen in any level of consumer, ranging from individual to group or organization. Kumar (2010) also provides a definition for consumer behavior whether it is originated from the consumers’ characteristics and also the effects from their family towards final product or service. In summary, the consumer behavior is defined as a process that is conducted by the consumer and the effect from reference groups to choose, to utilize, and to dispose of particular product or service.

To measure the consumer behavior, the study takes into account the exploratory tendencies in consumer behavior scale that was developed by Raju (1980). In more detail, Raju (1980) provided a set of 39 scales to measure the level of tendencies in consumer behavior and they are grouped into several groups that reflect the facets of consumers’ behavior, including repetitive behavior proneness, innovativeness, risk taking, exploration through shopping, interpersonal communication, brand switching, and information seeking (Bearden and Netemeyer, 1999).
2.2 Material Values Scale

In recent years, there are many studies that have been conducted to measure or to evaluate the materialism as antecedents of the consumers and they have followed the material values scale developed by Ritchins and Dawson (1992). According to Ritchins and Dawson (1992), materialism is defined as the process of which the consumers try to interpret their surrounding environment as well as the structure of their lives. On the other hand, the materialism can be understood as how the consumers take their ownership of specific material assets or goods and they suppose that these goods will directly support the major goals or life satisfaction (Ritchins, 2004). In more detail, materialism addresses three aspects, including the success, centrality, and happiness domains, respectively. Thus, the material values scale by Ritchins and Dawson (1992) cover these aspects accordingly.

Material values impact to the consumer behavior and it has been shown in academic studies. For instance, Eren et al. (2012) examine the relationship between material values and the compulsive buying behavior of the consumer. This study highlights the compulsive buying behavior as the consumers’ symptom whether they repeat their purchases on particular products or services even they have negative feelings or suffer negative events (Palan et al., 2011). The relationship between material values and compulsive buying behavior in Eren et al. (2012) study is explored by survey with college students and the sample size is about 861 people under convenience sampling method. The result shows that material values impact positively to compulsive buying behavior of the students with a unstandardized coefficient of 0.471 and the coefficient
is statistical significance at 5% of confidence interval. Furthermore, Eren et al. (2012) compare the impact of material values to the compulsive buying behavior with other factor, named hedonic values that is represented by the group of consumers who concern for brand or promotion of products or services before making their buying decisions (Wang et al., 2000; Odabasi and Baris, 2002). Eren et al. (2012) identify that hedonic values impact positively to compulsive buying behavior of the student with unstandardized coefficient of 0.226 and it is also statistical significant at 5% of confidence interval. Thus, Eren et al. (2012) conclude that the compulsive buying behavior is more influenced by the material values rather than hedonic values accordingly.

In another study, Nye and Hillyard (2013) examine the relationship between material values and consumer buying behavior. The consumer buying behavior in this study is defined as impulsive consumption of 267 consumers in Teaching and Scholarship Enhancement Project. Furthermore, Nye and Hillyard (2013) try to compare the impact of material values with subjective numeracy which is known as the consumers who prefer using numbers for their decisions. The better understanding of subjective numeracy is the consumer who have a quantitative assessment in mind (Koran et al., 2006). The result shows that both of material values and subjective numeracy impact positively to the impulsive consumer buying behavior with unstandardized coefficients of 0.343 and -0.224. Both of them are statistically significant at 1% of confidence interval.
2.3 Brand Experiences Scale

Reviewing on the previous studies on the brand definition reveals that there were not specific or widely-used definitions of a brand. Different studies have proposed quite distinctive definitions to each other. Hankinson and Cowking (1993) defined brand as the way of which a firm makes distinguishes for its product or service to other competitors relatively to its position towards the focused market. American Marketing Association Dictionary, however, addressed the brand as a combination of sign, symbol, design or statements for a product or service in order to create the competitive advantage to firm’s competitors in the market. Rouse (2010) defined a brand as a secured concept set for a product or service in order to make distinctive to other competitors’ products or services, and therefore creating the easy for a firm to conduct its communication and marketing plans.

The relationship between brand experiences and consumer buying behavior is attracted both of academic researchers and marketers. The study of Brakus et al. (2009) put the relationship into conceptual framework whether the brand experiences are considered impacting directly on the consumer buying behavior. Also, the consumer buying behavior is measured through two antecedents, including the consumer loyalty and the consumer satisfaction. Using quantitative research method with data is collected from a survey with 209 people, the study identifies that brand experiences impact positively to both of consumer satisfaction and consumer loyalty with unstandardized coefficients of 0.15 and 0.24 and they are statistically significant at 1% of confidence interval.

In addition, Ozer and Kose (2013) take a study to explore the relationship between brand experiences and the consumer buying behavior in the fast-food industry. These
researchers divide the brand experiences into three dimensions, namely sensory-affective, behavioral, and intellectual. Further, Ozer and Kose (2013) put the brand name into their conceptual research model as an independent variable that goes along with three dimensions of brand experiences. Survey is conducted with 300 students registered at Trakya University, Faculty of Economics and Administrative Sciences. The result shows that four factors in conceptual research model (sensory-affective, behavioral, intellectual, brand name) influence to the consumer buying behavior with bivariate correlation values of 0.448, 0.353, 0.430, and 0.574 and they are statistically significant at 1% of confidence interval.

2.4 Personal involvement inventory for advertising

The understanding of personal involvement inventory is originated from the involvement concept in marketing. Involvement is originated from social psychology where the consumer behavior is influenced by the social judgment in a broad level (Sherif and Sargent, 1947). To explain this influences, Sherif et al. (1965) assert that each individual will assess a message through three attitude scales, including (1) the customer attitude for acceptance, (2) the customer attitude for rejection, and (3) the customer attitude for non-commitment. The customer will accept a message when there is a difference between their attitude towards the message and their current position (Nina and Sally, 2008). Furthermore, the customers will have high involvement when they have a wider attitude of rejection and lower attitude of acceptance and non-commitment and vice versa (Nina and Sally, 2008). Such conceptualization about the involvement is considered as the basis for personal and advertising involvement in marketing theory. Personal involvement inventory
(PII) is defined as a single aspect of the motivation in customer’s state towards particular products, advertising context, and buying decisions (Zaickhowsky, 1985). This means that the customers will consider products based on their needs and interests that are being influenced by advertising or marketing programs of particular companies (Celuch and Taylor, 1999). Operationally, the PII is measured through a set of 20 scale item by Zaickhowsky (1985) but this scale is limited in term of robustness and validity of data. Moreover, the Zaickhowsky’s (1985) scale is developed upon on the student data so the application of this scale is determined as limited in marketing studies. Thus, Zaickhowsky (1994) revises and updates the scale through reducing the number of scale item into nine instead of twenty item scale as old model and the new scale item is revised with data focusing on product and advertising context accordingly. However, Stafford and Day (1995) argue that the new scale of Zaickhowsky (1994) is still facing some issues as it does not distinguish between products and services. This argument is becoming more critical with the growing of some important servicing industries in the U.S. (Heskett et al., 1990; Quinn, 1992; Zeithaml and Bitner, 2000). On the other hand, Zeithaml et al. (1985) affirm the difference between products and services as the services is inseparable, standardization, perishable.

Sridhar (2006) takes a study of the relationship between consumer buying behavior and the consumer involvement. Zaichkowsky's Personal Involvement Inventory has been used to measure consumer involvement. 332 respondents from Hyderabad and Warangal towns were interviewed using structured questionnaire. Results indicate that demographics significantly influence high involved products of the consumers. In the case of low involved products, the influence of demographics on consumer involvement has been found to be moderate.
Mamat et al. (2014) conduct the study about “Personal Interaction Encounter, Customer Involvement, Familiarity and Customer Service Experience in Malaysian Public Universities.” The study comes up with a key finding of which the consumer buying behavior reflects through how they customer services experiences. Further, there is positive relationship between personal interaction encounter, familiarity and customer involvement on customer service experience.

Te’eni-Harari et al. (2009) also identify the usefulness of personal involvement in facilitating the consumer buying behavior through advertising effectiveness of young people. This study takes a survey with young people in Israel and comes with the key finding of which product involvement has positive impacts on attitude towards advertising, attitude towards the brand, and purchase intention of the consumers.

2.5 Socially responsible consumption behavior

Although ethical consumption has been delivered for many years ago, the importance of socially responsible consumption behavior has just been studied and highlighted for the last decade (Carrigan et al., 2004). The foundation idea for socially responsible consumption comes from the effect of globalization where the consumers consume goods or services not only for themselves but also social goals accordingly (Uusitalo and Oksanen, 2004). Further, the need for socially responsible consumption or ethical consumption has become the debate topic in the marketing activities as well as strategic management (Auger et al., 2003). According to Mohr and Webb (2005), the level of socially responsible consumer behavior highly influences on the companies’ value. It is showing through the fact that the consumers do not react positively to the
companies’ social responsibilities, the values that are generated from products or services will be diminished (Antil, 1984; Leigh et al, 1988; Mohr et al., 2004).

The foundation of socially responsible consumption behavior, therefore, refers the consumers who will change their buying behavior or shift to use the products or services that are not harmful to the environment (Mohr and Webb, 2005). Schrum et al. (1995) strongly indicate that the consumers update their knowledge and their responsibility on a daily basis and they would avoid buying products that might harm society or the environment and actively seek out products and services from companies that practice social responsibility. Schrum et al. (1995) also identify that the socially responsible consumption is only high in case of the consumers are actively finding the relevant information.

Stancu (2011) takes a study about the socially responsible consumption behavior in Romani for food products. This study tries to compare the impact of socially responsible choice, healthy choice, local product choice, price choice, and sensory appeal choice to the consumer buying behavior towards food products. The result shows that socially responsible choice has the highest impact on the consumer buying behavior. The unstandardized coefficient values of these independent variables above are 0.56, 0.37, 0.37, 0.008, and -0.15. Further, only socially responsible choice and health product choice are statistically significant at 5% of confidence interval.

The study of Lau (2010) about the socially responsible consumption of 350 students in Malaysia takes into account three dimensions of the socially responsible consumption, including the corporate social responsibility performance of the companies, consumer recycling behavior, and environmental impact of utilizing products. Further, this study attempts to compare the different between two groups of people, namely religiosity and money ethics. The result shows that the consumers who
follow money ethic do not take into consideration their social responsibility during the time of using the product and they try to stay away from corporate social responsibility performance of the companies, consumer recycling behavior, and environmental impact of utilizing products. On the other hand, the religiosity consumers concern for the impact of product utilization to the environment and they also concern about the current CSR performance of the company accordingly.

3 RESEARCH METHODOLOGY

3.1 Research Model

Based on the discussion above, the conceptual research model will be:

![Conceptual research model](image)

**Figure 1: Conceptual research model**
Dependent variable: Exploratory tendencies in consumer behavior

Independent variables:
- Material values
- Brand experiences
- PII for advertising
- Socially responsible consumption behavior

3.2 Research hypothesis

Upon on the conceptual research model, there are four hypotheses which will be proposed:
- H1: Material value impacts positively to exploratory tendencies in consumer behavior
- H2: Brand experiences impacts positively to exploratory tendencies in consumer behavior
- H3: PII for advertising value impacts positively to exploratory tendencies in consumer behavior
- H4: Socially responsible consumption behavior impacts positively to exploratory tendencies in consumer behavior

3.3 Research Design

According to Levin (1988), research philosophy is a belief in the way data relating to a phenomenon should be collected and analyzed. There are many research philosophies listed including positivism, realism, interpretivism, objectivism,
subjectivism, pragmatism, and functionalism (Collins, 2010). In practice, positivism and interpretivism are the two most common philosophies. In this study, positivism research philosophy is chosen by following reasons:

First, the study aims to test the causal relationship between exploratory tendencies in consumer behavior and 4 factors, namely material value, brand experience, PII for advertising, and socially responsible consumption behavior. According to Fisher et al. (2004) and Neville (2005), the causal relationship can be solved by using positivism research philosophy as “all phenomena should be understood through the employment of a scientific method and aims to creates a theoretically neutrals language of observation by stripping hypotheses and theories of subjective content.”

Second, the study relies on the objective argument rather than subjective as the objective argument will make the study more comprehensive, better understanding and reality (Schutt, 2006).

Finally, Altinay and Paraskevas (2008) affirm that the positivism research philosophy is practical in the case study of which the researcher attempts to collect enlarge data. The study of consumer buying behavior in Functional foods company will require the involvement of many customers as it will help to explore the customers’ aspects in detail. Therefore, the positivism research philosophy will help them to specify the characteristics of the customers regarding their buying behavior accordingly.

According to Saunders et al (2009), there are two major research approaches, namely deduction and induction. In this study, deduction research approach will be chosen by following reasons:

First, the study follows positivism research philosophy so that it is appropriate to use deduction as research approach (Schiffman and Kanuk, 1997). Furthermore, the study is conducted upon on specific conceptual research model and the study aims to collect
data in order to verify the causal relationships between variables where some propositions are generated for testing, with empirical verification then sought. As the result of the selection of positivism philosophy, this research will deductively conduct. Second, due to the limited of time, the researcher chose a deductive approach, which posited to less time – consuming in comparison with an inductive approach (Saunders et al, 2009).

3.4 Instruments

In this study, the questionnaire is designed in 2 parts:

Part I is set to capture demographic information and Part II is set to collect the assessment of the customers towards questionnaires’ statements. Furthermore, the questionnaire is designed for self-administration. This means that the questionnaires are distributed to the respondents and allow them to answer based on given statements. For each statement, the respondents will choose in between 1 and 7.

Tendencies in consumer behavior have 12 variables and the Likert scale of 7 points will be used:

- I have little interest in foods and fashion.
- I like to browse through mail order catalogs even when I don’t plan to buy anything.
- When I see a new or different brand on the shelf, I often pick it up just to see what it is like.
- I am the kind of person who would try any new product once.
- I shop around a lot for my clothes just to find out more about the latest styles.
• I like introducing new brands and products to my friends.

• I hate window shopping.

• I get bored with buying the same brands even if they are good.

• When I see a new brand somewhat different from the usual, I investigate it.

• I never buy something I don’t know about at the risk of making a mistake.

• Investigating new brands of grocery and other similar products is a waste of time.

• My friends and neighbors often come to me for advice.

Socially responsible consumption behavior has 12 variables and the Likert scale of 5 points will be used:

• Pollution is presently one of the most critical problems facing this nation.

• I don’t think we’re doing enough to encourage manufacturers to use recyclable packages.

• Natural resources must be preserved even if people must do without some products.

• I would be willing to sign a petition or demonstrate for an environmental cause.

• The Government should subsidize research on technology for recycling waste products.

• The whole pollution issue has never upset me too much since I feel it’s somewhat overrated.

• I would be willing to have my laundry less white or bright in order to be sure that I was using a nonpolluting laundry product.
• Manufacturers should be forced to use recycled materials in their manufacturing and processing operations.

• Commercial advertising should be forced to mention the ecological disadvantage of products

• The government should provide each citizen with a list of agencies and organizations to which citizens could report grievances concerning pollution.

• Products which during their manufacturing or use pollute the environment should be heavily taxed by the government.

• I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.

Brand experiences have twelve variables and the Likert scale of seven points will be used:

• This brand makes a strong impression on my visual senses or other senses.

• I find this brand interesting in a sensory way.

• This brand does not appeal to my senses.

• This brand induces feelings and sentiments.

• I do not have strong emotions for this brand.

• This brand is an emotional brand.

• I engage in physical actions and behaviors when I use this brand.

• This brand results in bodily experiences.

• This brand is not action oriented

• I engage in a lot of thinking when I encounter this brand.

• This brand does not make me think.

• This brand stimulates my curiosity and problem solving.
Material values have seven variables and the Likert scale of five points will be used:

- I usually buy only the things I need.
- I try to keep my life simple, as far as possessions are concerned.
- The things I own aren’t all that important to me.
- I enjoy spending money on things that aren't practical.
- Buying things gives me a lot of pleasure.
- I like a lot of luxury in my life.
- I put less emphasis on material things than most people I know.

PII for advertising has ten variables and the Likert scale of seven points will be used:

- Important
- Boring
- Relevant
- Exciting
- Means nothing
- Appealing
- Fascinating
- Worthless
- Involving
- Not needed
3.5 Research Participants

The study is conducted with primary data collected from a survey of a questionnaire with customers of Functional foods companies. The survey of a questionnaire is sent by email to the customers and friends on Facebook and this is considered as one of the best data collection instrument, according to Saunders et al. (2009).

3.6 Procedure of data collection and analysis

There are two major research methods, including qualitative and quantitative. The quantitative research method is chosen in this study by following reasons:
First, the quantitative research method helps to explore the causal relationship between exploratory tendencies in consumer behavior and four factors, namely material value, brand experience, PII for advertising, and socially responsible consumer behavior. Some quantitative data analysis will be applied such as reliability test, exploratory factor analysis, and linear regression will play a critical role to explore this causal relationship.

Second, the quantitative research method is accuracy in findings compared to qualitative research method. According to Mack et al. (2005), qualitative research method requires the data collected from in-depth interviews or direct observation and the researchers in qualitative point of view take into account the opinion and belief of the respondents to generate their key findings. However, the in-depth interview and direct observation only focus on a small group of people and they cannot be conducted in a large sample so that they key findings might not be comprehensive (Boxill et al., 2009).
According to Saunders et al. (2009), there are two types of data that have been used in the academic studies, including primary data and secondary data. Stevens et al. (2006) define primary data as the information that is collected by the researchers through effective data collection techniques such as interviews, observation, survey, etc. The major advantage of primary data is to directly support the studies and it helps the researchers obtaining in-depth knowledge and understandings about the social phenomenon (Stevens et al., 2002).

In this study, the primary data is collected from the survey of a questionnaire with the customers who are using the products from Functional foods companies. The survey of questionnaire, furthermore, is sent to the customers’ email or directly by hand.

In another spectrum, the study is set to use secondary data that is defined as the information that can be collected from various sources such as books, journals, or online reading contents. Wrenn et al. (2006) assert about the advantage of secondary data that is mostly free for using and it is used to support the arguments of the researchers accordingly. Another advantage of secondary data is that is less time consuming to save and to collect the information (Srivastava and Rego, 2011). However, the researchers must aware that relying only on secondary data might not support the study’s objectives as each secondary data is used for other studies and it might be true within the previous studies (Guffey et al., 2010).

According to Saunders et al. (2009), secondary data can be divided into two subsets, including internal secondary data and external secondary data. Internal secondary data is the information that is collected within the organization while external data is often collected from outside or external agencies. In practice, there are several trustful external agencies that help to collect external secondary data such as EBSCO and Emerald.
In this study, secondary data is collected from books and journals from the university and they are all related to consumer buying behavior topic. Some particular documents of Raju (1980), Richins (2004), Brakus et al. (2009), Zaichkowsky (1994), Antil (1984), Antil and Bennett (1979) will be used in order to construct the survey scale. The study is conducted with primary data collected from a survey of a questionnaire with customers of Functional foods companies. The survey of questionnaire is sent by email to the customers and friends on Facebook or distributed directly by hand and this is considered as one of the best data collection instrument, according to Saunders et al. (2009). The survey is more practical compared to interview method as this is often saving time and less effort to the collector (Pedhazur and Schemelkin, 1991). The study of consumer buying behavior in Functional foods companies is carried in limited time so it is suitable to use the survey to collect the data. Furthermore, Ticehurst and Veal (1999) indicate that questionnaires ensure anonymity for the participants who have increased confidentiality to give honest answers rather than tendentiously bias answers in a direct interview.

According to Saunders et al. (2009), there are two sampling techniques, namely probability sampling and non-probability sampling. In this study, the probability sampling is chosen as it has advantages compared to non-probability sampling. First, the probability sampling will reduce the bias or skewness than non-probability sampling (Cohen et al., 2007). Second, the probability sampling is more present to the population of the customers of Functional foods companies while the non-probability sampling is more focused on a particular group.

The sample size is generated upon on Yamane’s (1967) equation:

\[
\text{Sample size} = \text{Population size} \times (1 + \text{Population size} \times 0.05^2)
\]
Where 0.05 is the error of sampling or 95% of the selection is well-represented for the population.

Currently, total customers of Functional Food companies is more than 1 million so the population size will be 250. This sample size is adequate due to the minimum sample size in academic studies must be at least 300 (Norusis, 2005).

The study is conducted with the application of quantitative research method. Some data analysis techniques, therefore, will be applied, including (1) descriptive statistics, (2) reliability test analysis, (3) explanatory factor analysis, and (4) linear regression. These data analysis techniques are conducted by using statistical software analytic programs such as SPSS, SPLUS, and Excel. Among these softwares, SPSS is chosen as it is easy to use and widely applied in academic studies (Muijs, 2011).

4 RESULTS AND FINDINGS

4.1 Reliability test

Reliability test analysis reflects the level of inter-correlation between variables in the dataset. According to Hinton (2004), the level of inter-correlation is detected through the Cronbach’s alpha value and the minimum requirement for the Cronbach’s alpha value is higher than 0.6. Nunnally (1978) further emphasizes that the Cronbach’s alpha value should be higher than 0.7. Vaus (2004) also provides other indicators that must be satisfied during reliability test, including (1) the corrected item-total correlation
value is higher than 0.3, and (2) Cronbach’s alpha if item deleted value is less than the Cronbach’s alpha overall.

The reliability test then is conducted to determine the reliable aspect of the scale used in each factor. The result is presented in the table below:

**Table 1: Results of reliability test of the scale**

<table>
<thead>
<tr>
<th>No</th>
<th>Factor</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tendencies in consumers behavior</td>
<td>0.901</td>
</tr>
<tr>
<td>2</td>
<td>Socially responsible consumption behavior</td>
<td>0.876</td>
</tr>
<tr>
<td>3</td>
<td>Brand experiences</td>
<td>0.873</td>
</tr>
<tr>
<td>4</td>
<td>Material values</td>
<td>0.875</td>
</tr>
<tr>
<td>5</td>
<td>PII for advertising</td>
<td>0.858</td>
</tr>
</tbody>
</table>

Tendencies in consumer behavior match the requirements of reliability test with Cronbach’s alpha of 0.901, higher than 0.7. Further, 8 variables are consistent with each other with ‘Corrected Item-Total Correlation’ values are higher than 0.3. In addition, all variables have ‘Cronbach’s alpha if Item Deleted’ lower than 0.901. Therefore, all variables of tendencies in consumer behavior will be kept after running reliability test. All variables are not eliminated due to the pilot test that removes all variables that are not relevant to the consumer behavior towards Functional food companies’ products. This also means that the consumers have high understandings on the questionnaire. They have high accessibility to the internet so that they recognize the tendencies in local consumer behavior as well.

Socially responsible consumption behavior shows strong reliability with Cronbach’s alpha of 0.876 that is higher than the requirement. All variables represent strong correlation with this factor as they have ‘Corrected Item-Total Correlation’ values are
higher than 0.3. The final checking shows that all variables have ‘Cronbach’s alpha if Item Deleted’ lower than 0.876. It concludes that this factor is ensured by high reliability. This is true since the consumers in Vietnam is more and more concerning on the negative impacts of using products to the environments. They will stop using products that pollute the environments accordingly.

Brand experience matches all requirements of the reliability test. First, it has Cronbach’s alpha value of 0.873. Second, all variables have ‘Corrected Item-Total Correlation’ higher than 0.3, showing that all variables are consistent with each other. Last, all variables have ‘Cronbach’s alpha if Item Deleted’ lower than 0.873 so it is not required removing all of them. In term of the reliability test, this factor is determined to have high reliability of scale accordingly. This achieved results indicate the fact that the consumers of Functional food companies have strong brand experiences. During the time at the company, the author identifies that the customers do not consume the company’s products but also other competitors as well. Therefore, they can recognize and consider the brand name of beverage products accordingly.

Material values have the Cronbach’s alpha is equal to 0.875, higher than 0.7. On the other hand, all variables have ‘Corrected Item-Total Correlation’ higher than 0.3 and they also have ‘Cronbach’s alpha if Item Deleted’ is lower than 0.875. Thus, it concludes that all variables have strong correlation with the material values factor. This indicates the trend of Vietnamese consumers whether they are more concerned about the values of products and they would like to purchase products that have high material values to them.

Finally, PII for advertising also matches all requirements of the reliability test. It has Cronbach’s alpha of 0.858, higher than 0.7. Also, 7 variables of this factor have
‘Corrected Item-Total Correlation’ values which are higher than 0.3 and ‘Cronbach’s alpha if Item Deleted’ lower than 0.858. Thus, all variables of PII for advertising will not be removed as none of them violates the requirements of the reliability test.

4.2 Descriptive Statistics

Descriptive statistics analysis generate the pattern of collected data such as the distribution of the respondents’ answers. Some basic statistical indicators are applied, such as number and percentage of each answering group.

The descriptive statistics for all components are as below:

**Table 2: Descriptive statistics results**

<table>
<thead>
<tr>
<th>Component</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tendencies in consumer behavior</td>
<td>250</td>
<td>1.25</td>
<td>5.00</td>
<td>3.7080</td>
<td>.65033</td>
</tr>
<tr>
<td>Socially responsible consumption behavior</td>
<td>250</td>
<td>1.29</td>
<td>5.00</td>
<td>3.5440</td>
<td>.59371</td>
</tr>
<tr>
<td>Brand experiences</td>
<td>250</td>
<td>1.33</td>
<td>5.00</td>
<td>3.6447</td>
<td>.58547</td>
</tr>
<tr>
<td>Material values</td>
<td>250</td>
<td>1.40</td>
<td>5.00</td>
<td>3.5856</td>
<td>.52911</td>
</tr>
<tr>
<td>PII for advertising</td>
<td>250</td>
<td>2.43</td>
<td>5.00</td>
<td>4.0480</td>
<td>.42750</td>
</tr>
</tbody>
</table>

4.3 Correlation analysis

After the amendment, correlation analysis will be conducted with obtained results as below:
Table 3: Correlation analysis results
<table>
<thead>
<tr>
<th></th>
<th>Tendencies in consumer behavior</th>
<th>Socially responsible consumption behavior</th>
<th>Brand experiences</th>
<th>Material values</th>
<th>PII for advertising</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tendencies in consumer behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.671**</td>
<td>.638**</td>
<td>.521**</td>
<td>.276**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Socially responsible consumption behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.671**</td>
<td>1</td>
<td>.608**</td>
<td>.442**</td>
<td>.286**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Brand experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.638**</td>
<td>.608**</td>
<td>1</td>
<td>.567**</td>
<td>.318**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Material values</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.521**</td>
<td>.442**</td>
<td>.567**</td>
<td>1</td>
<td>.225**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>PII for Pearson advertising Correlation</td>
<td>.276**</td>
<td>.286**</td>
<td>.318**</td>
<td>.225**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
</tbody>
</table>
**. Correlation is significant at the 0.01 level (2-tailed).

To achieve the objective correlation and regression analysis on SPSS was done, in order to determine whether there are significant relationships between the variables. The scale model suggested by Davies (1971) used to describe the relationship between the variables, are as shown below:

- 0.7 and above – high correlation
- 0.4 to 0.69 – moderate correlation
- to 0.49 – low relationship

From the table above, it is concluded that:

- H1: Socially responsible consumption behavior and exploratory tendencies in consumer behavior associated with moderate relationship with correlation 0.671.
- H2: Brand experiences and exploratory tendencies in consumer behavior associated with moderate relationship with correlation 0.638;
- H3: Material values and exploratory tendencies in consumer behavior associated with moderate relationship with correlation 0.521;
- H4: PII for advertising and exploratory tendencies in consumer behavior associated with low relationship with correlation 0.276.
4.4 Linear regression and hypothesis testing

After running explanatory factor analysis, 6 components will be put into linear regression and hypothesis testing. Linear regression analysis plays a critical role in this study as it helps to analyze the causal relationship between dependent variable (exploratory tendencies in consumer behavior) and 4 independent variables (material value, brand experience, PII for advertising, and socially responsible consumption behavior). According to Hinton (2004), the strength of the relationship is reflected through unstandardized coefficient or beta. The higher value of beta, the higher impact of the independent variables to the dependent variable. Further, Dewberry (2004) asserts that the beta must be statistically significant at 5% of the confidence interval and it can be checked through p-value. On the other hand, p-value must be lower than 0.05.

4.4.1 Hypothesis 1 Testing Result

Table 4: Linear regression results between socially responsible consumption behavior and exploratory tendencies in consumer behavior
Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.671a</td>
<td>.451</td>
<td>.448</td>
<td>.48302</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Socially responsible consumption behavior

Coefficients*a

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.102</td>
<td>.185</td>
<td>5.950</td>
</tr>
<tr>
<td></td>
<td>Socially responsible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>consumption behavior</td>
<td>.735</td>
<td>.052</td>
<td>.671</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Tendencies in consumer behavior

Tables above helps to test the Hypothesis 1: Socially responsible consumption behavior impacts positively to exploratory tendencies in consumer behavior

- R² = 0.451 > 0
- Coefficient β = 0.671 and it shows the same direction with the model.
- Since the correlation is significant at 0.01 and p-value is 0.00, the result obtained is significant due to the fact that 0.00 < 0.01.

Thus, the hypothesis H1 was supported.
4.4.2 Hypothesis 2 Testing Result

Table 5: Linear regression results between socially responsible consumption behavior and exploratory tendencies in consumer behavior

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.638a</td>
<td>.407</td>
<td>.404</td>
<td>.50196</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Brand experiences

Coefficientsa

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.126</td>
<td>.201</td>
<td>5.616</td>
</tr>
<tr>
<td></td>
<td>Brand experiences</td>
<td>.708</td>
<td>.054</td>
<td>.638</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Tendencies in consumer behavior

Tables above help to test the Hypothesis 2: Brand experiences impacts positively to exploratory tendencies in consumer behavior

- $R^2 = 0.407 > 0$
• Coefficient $\beta = 0.708$ and it shows the same direction with the model.

• Since the correlation is significant at 0.01 and p-value is 0.00, the result obtained is significant due to the fact that $0.00 < 0.01$.

Thus, the hypothesis H2 was supported.

4.4.3 Hypothesis 3 Testing result

Table 6: Linear regression results between material values and exploratory tendencies in consumer behavior

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.521$^a$</td>
<td>.272</td>
<td>.269</td>
<td>.55611</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Material values
Tables above helps to test the Hypothesis 3: Material values impacts positively to exploratory tendencies in consumer behavior

- \( R^2 = 0.272 > 0 \)
- Coefficient \( \beta = 0.641 \) and it shows the same direction with the model.
- Since the correlation is significant at 0.01 and p value is 0.00, the result obtained is significant due to the fact that 0.00 < 0.01.

Thus, the hypothesis H3 was supported.

4.4.4 Hypothesis 4 Testing Result

Table 7: Linear regression results between PII for advertising and exploratory tendencies in consumer behavior
Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.276(^a)</td>
<td>.076</td>
<td>.072</td>
<td>.62641</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), PII for advertising

Coefficients\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.011</td>
<td>.378</td>
<td>5.321</td>
</tr>
<tr>
<td></td>
<td>PII for advertising</td>
<td>.419</td>
<td>.093</td>
<td>.276</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Tendencies in consumer behavior

Tables above helps to test the Hypothesis 4: PII for advertising impacts positively to exploratory tendencies in consumer behavior

- \( R^2 = 0.076 > 0 \)
- Coefficient \( \beta = 0.419 \) and it shows the same direction with model.
- Since the correlation is significant at 0.01 and p value is 0.00, the result obtained is significant due to the fact that 0.00 < 0.01.

Thus, the hypothesis H4 was supported.
5 DISCUSSION

5.1 Main Findings and Implications for Research

The purpose of the study is to explore the relationships between consumer behavior and its antecedents, including material values, brand experiences, personally identifiable information advertising, and socially responsible consumption behavior. These relationships are identified from the customers who are using products of Functional food companies.

Reliability test is conducted and its requirements are maintained, showing that all factors have high reliability in their survey scale. The study shows that all 4 factors impact positively to the tendencies in consumer behavior. These relationships are also statistically significant at 5% of the confidence interval.

Functional foods companies need to provide training and workshops intensively to managerial and employee level in term of corporate social media. Secondly, top managers have to issue internal regulation and policies of which they require marketing and related departments should publish annual reports in more frequently. Thirdly, the operation department of Functional food companies should establish or carry out a Safety-Quality-Environment System. Next, they should engage in corporate social media efforts aiming at addressing social and environmental issues, enhance lines of communication with local communities, offer strengthened communication channel. Then, top managers of the firm need to take into account of pay level of their employees. Last but not least, functional foods companies should improve corporate social media implementation by adjusting reporting system.

Firstly, the functional foods companies ought to provide training and workshops intensively to managerial and employee level since there was a large portion of
managers and employees at Functional food companies that do not have good knowledge and understanding of the term of corporate social media. To accomplish that, HRM department should develop an internal survey to further recognize the current level of knowledge of corporate social media among managers and employees and this survey should be carried out at an individual level and all labors of the firm should have to involve in this survey. Afterwards, HRM department will evaluate each individual and design a training roadmap for the group of knowledge. On the other hand, HRM department should cooperate with the external consultant in order to carry out projects that help to improve corporate social media awareness. Top managers, in that way, should participate deeply in these projects and they have to provide their recommendations and ideas in order to improve the effectiveness of corporate social media in their company. In other words, the propaganda and education for corporations need to execute in order to make them know and understand that corporate social media is not only compact bundle in charity work. This issue is crucial because human behavior is not only through their consciousness but also by their sense of control.

Secondly, top managers have to issue internal regulation and policies of which they require marketing and related departments should publish annual reports in more frequently. In more detail, the marketing department will be considered as a contact point to design a format of corporate social media report and then this department will send this format to other departments such as finance, operation, sale, technical and ask them to fill up the information related to how other departments come up with sustainable developments.

Thirdly, the operation department of Functional food companies should establish or carry out a Safety-Quality-Environment System in order to reduce the harmfulness and risk occurrence in the company. In this context, the firms need to invite several
consultants to train the employees about SQE Management System and the necessity of applying it into company’s operations, especially in operating of equipment and preventing risks in all areas. Additionally, the firms can make reference to international standards such as ISO 26000 (International Organization for Standardization Guidelines for Social Responsibility), BSCI (Business Social Compliance Initiative), OHSAS 18001 (Occupation Health and Safety Assessment Series), WRAP (Worldwide Responsible Apparel Production), ACERT (Advanced Combustion Emissions Reduction Technology) for applying in their business.

Fourthly, CSR is necessary and important for every enterprise. However, it is not just paper certification, it contains the whole implementation process. In Vietnam, most of the implementation of CSR is passive when the purchaser is demanding. Hence, manufacturers are forced to execute CSR, not fully understand its nature or its commitment. The previous studies indicate that successful corporations in the implementation of CSR are the firms that are committed to performing CSR into operation in accordance with sustainable development, turn it into a company culture. For instance, firm should engage in CSR efforts aiming at addressing social and environmental issues (providing vocation training for workers, building social house for poor people), enhance lines of communication with local communities (CSR programs or issues are planned and discussed with local staffs and regional government to gain their knowledge, opinions that help companies solve these problems faster), offer strengthened communication channel in order to publish information on the results of their effort to public.

Fifthly, top managers of the firms need to take into account of pay level of their employees since the salary of employees working in functional foods companies has been lower than average in the market. To achieve that target, they should assign this
task to HRM department and this department will take responsibilities of evaluating the salary in both of unit level and individual level and compare to the market. Then, Key Performance Index should be applied with the essence of employees who have surpassed their working target will be nominated for increasing salary and job positions. In the contrast, employees who do not meet their working standards will not be put into salary revision as well as a promotion at working place.

At last, it can be said that CSR is a tool to help Functional food companies improve competitiveness in a developing country like Vietnam. These are important issues nowadays due to the competition in a growing area. Functional food companies can only be competitive if they have all three factors: quality, price and compliance with CSR standards. Nevertheless, the global arena put high pressure towards Vietnam enterprises to rapid change their point of view on CSR and the ways to execute CSR to meet with many international standards and requirements. Therefore, improving CSR implementation and its reporting are solutions for Functional food companies in specific and Vietnam economy in general in the integration strategy.

5.2 Limitation

The study consists of several limitations.

First, the quantitative research method is conducted upon on the data collected from the survey with customers of Functional food companies. The survey, however, has a disadvantage as obtained information might not be reliable or the researcher could not identify the level of trustfulness in the answers of the respondents in comparison with interview method.
Second, the study is conducted within the case study of Functional food companies in particularly and there is no comparative analysis with other companies in Vietnam food and beverage industry.

Third, the study comes up with a conceptual research model that have 4 independent variables, including brand experiences, PII for advertising, socially responsible consumption behavior, and material values. However, this conceptual research model is not applied successfully in this study and the author has to amend this model with the new ones. However, the new conceptual research model only explains for 56.1% of changes in consumer tendencies, leading to the needs of exploring new factors in future researches accordingly.

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