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**FACTORS AFFECTING CONSUMERS'  
ACTUAL BUYING BEHAVIORS  
TOWARDS IMPORTED  
ORGANIC FOOD IN VIETNAM**

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## **ABSTRACT**

**Introduction:** There have been a huge demand for organic food in Vietnam and it is predicted to become even bigger after COVID-19 pandemic. However, the market is facing uncertainty regarding products quality, certification and so on. Many studies have shown that Vietnamese consumers have high intention to purchase organic food but the actual purchase afterwards is still a controversy topic. The current research was carried out to investigate the factors affecting consumers' intention to buy imported organic food in Vietnam and concurrently, examine whether their intention will lead to the actual buying or not.

**Objectives:** The thesis was based on my previous project about consumer's buying intention of imported organic food in Vietnam in 2019 (Nguyen, 2019). In this thesis, based on consumers behavior related theories and through a systematic literature review, I used a different set of determinants affecting consumers' purchasing **intention** in my research model to examine whether it provides a better prediction compared to the previous set in my prior project or not, and additionally, this thesis went further to the final step of consumers journey, which was from the **intention** to the **actual purchase** to see if there is any correlation between them. It also examined the differences among demographic groups on consumers actual purchase.

**Methods:** I used the same structure as my previous work to develop this thesis because they bo. Under positivism paradigm, 237 valid responses were collected via questionnaire and using convenience sampling method. Acquired data was then analyzed by SPSS software.

**Results:** Results showed that Perceived health had the biggest positive influence on consumers buying intention, followed by trust on imported organic products. Consumers buying intention also had positive affect on their actual buying behaviors afterwards. As to demographic profiles, people with high educational level and monthly income from 10 million VND are more likely to purchase imported organic food in Vietnam.

**Conclusion:** The findings indicated that perception about health and trust on the products should be improved. A number of recommendations were proposed based on the research results to help international companies as well as all sellers and distributor selling imported organic food successfully win the market.

**Keywords:** Imported organic food, consumer behavior, Vietnam.

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## CHAPTER 1. INTRODUCTION

In this chapter, I went through the basic parts of the thesis including problem formulation and why this particular topic is necessary, following by research objectives where I indicated who can benefit from the research outcomes, and finally are the research object, scope and methodology and overall structure.

### 1.1. Research context and problem formulation

In this project, I would like to investigate consumers buying behaviors journey and proposed a research about **“Factors affecting consumers’ actual buying behaviors towards imported organic food in Vietnam”** due to the following reasons:

- With the emerging seriously environmental phenomenon recently, such as pollution, global warming, greenhouse effect, seawater encroachment... consumers are becoming more concerned about the negative effects on the environment (The United Nations Environment Programme, 2020). It is obvious that these global serious problems affect every country, and “Vietnam is one of the world’s most vulnerable countries to the effects of climate change” (USAID, 2020). In the most recent report of Our World in Data, food production together with consuming activities are supposed to caused many environmental aspects, such as 26% of global greenhouse gas emissions. Therefore, food consuming patterns have enormous influences on the mission of easing climate changes, reducing pollution as well as protect our natural biology (Ritchie and Roser, 2020). Compared to traditionally conventional food consumption, organic food products have become one of the most sustainable and efficient alternative (Rizzo et al., 2020).
- It has been appeared constantly these days on newspaper or other media, that unknown organic products with “self-made” labels are widely available in Vietnamese market, which draws consumers’ concerns and skepticism (Tuoitre, 2018). According to recent report from Vietnam Ministry of Health, food poisoning cases have increased 30% nationally compared to 2019 (VTV, 2020). It was mentioned by Ministry of Industry and Trade of The Socialist Republic of Vietnam, Vietnamese people are increasingly interested in organic food and willing to pay extra money for them, but they are facing the disturbance from the REAL organic food and the FAKE one in both traditional and conventionally modern supermarkets (MOIT, 2019).

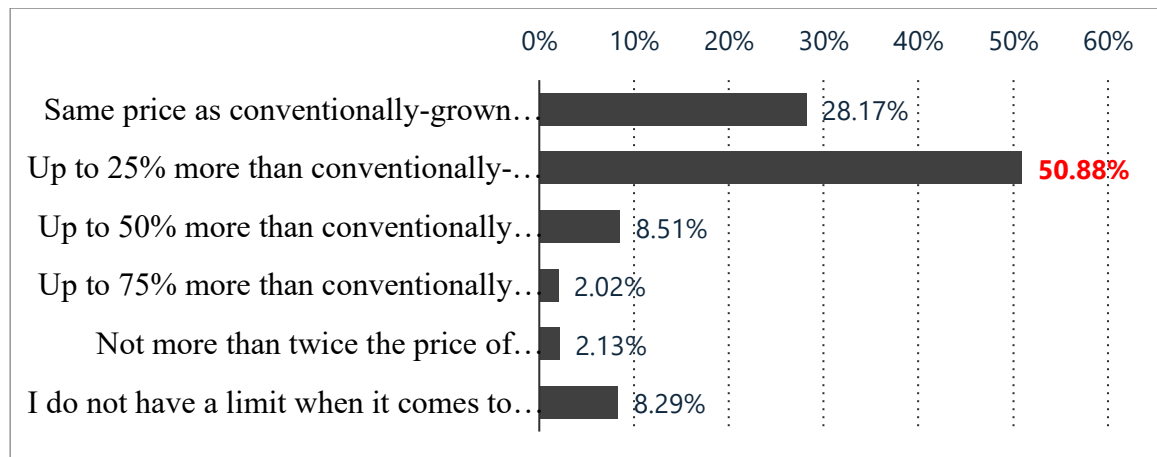


Table 1. Consumers' willingness to spend on organic food compared to conventionally-grown food in Vietnam in 2019 (Rakuten Insight, 2019)

- Until 2018, the first Vietnamese Standards in Organic Agriculture was successfully issued by the Ministry of Science and Technology as an national official label for organic products (Vietnam's farmers union, 2018), meanwhile, organic food certificates in the market are mainly depending on international organizations for a very long period of time. As a result, consumers tend to highly evaluate products originated from foreign countries, especially the developed ones. Therefore, by offering high-qualified products under strict organic certification system, international companies can get profit from Vietnamese organic market. And in order to successfully enter, they need to fully understand the current market, consumers preference, obstacles and so on. Among them, determinants affecting consumers' actual purchase towards their products are surely worth investigation and play a key role in developing cost-effective export strategies.

In this thesis, as mention aboved, I developed from my previous project. I, therefore, maintained the same product which was *imported organic food* and research in the same geography context which was *Vietnam*. The project investigated consumers' perceptions towards imported organic food, how they influence consumers' intention, as well as went further in consumer's journey, which was the actual buying behaviors of the products. During the last decade, there have been evidence showing that consumers who have positive attitudes towards organic food will perform their buying behaviors afterwards (Wee et al., 2014); while in other cases, there is a dissonance in their attitudes and actual buying behaviors (Hidalgo-Baz, Martos-Partal and González-Benito, 2017)

By conducting this project, I can additionally clarify whether there is correlation between consumers' intention, and actual buying behaviors or not. At the end of the research, based on the results, I would contribute to the literature about the attitude-behavior incongruity if any, and intimately promote the foreign companies capture the partly served market as well as help Vietnamese consumers get easier access to the real and high-qualified organic food and protect the environment.

## 1.2. Research objectives

The research has some key objectives as followed:

- Based on consumers' behavior related theories and systematic literature review, the research proposed a model to analyze determinants impacting consumers' buying intention and the correlation between intention and actual purchase afterwards. It aimed to evaluate the importance and impact level of such factors to the buying behaviors of consumers when it comes to imported organic food in Vietnam
- Examine the differences in demographic segments on the consumers' actual buying behaviors of imported organic food
- Give a hint for foreign companies, especially European ones to better develop export strategies and prepare for penetration afterwards.

## 1.3. The research object and scope

As mentioned, I kept researching on the same research object which was imported organic food in general and conducted the survey in the same area, my hometown which was Ho Chi Minh City, the largest city in Vietnam (General Statistics Office of Vietnam, 2019).

## 1.4. The research methodology

In this quantitative research, sources of data were collected from questionnaires. In the data analysis process, there were 3 main steps: (1) Encoding the data and describing the survey sample; (2) Testing the model and research hypotheses (using Cronbach's Alpha reliability coefficient analysis, exploratory factor analysis (EFA), Pearson correlation, and regression analysis); (3) Analyzing the effects of demographic factors by ANOVA test and regression

analysis. Data was processed and analyzed using are software SPSS 26 and spreadsheet software Microsoft Excel 2019.

### 1.5. The paper's structure

As mention, this thesis was based on my own previous work so I kept the same structure as I found it clear, concrete and easy to read. It included 6 chapters: *Introduction, Literature review and research model, Research methodology, Research result, Discussion and conclusion and Philosophy of science* (Appendix 1).

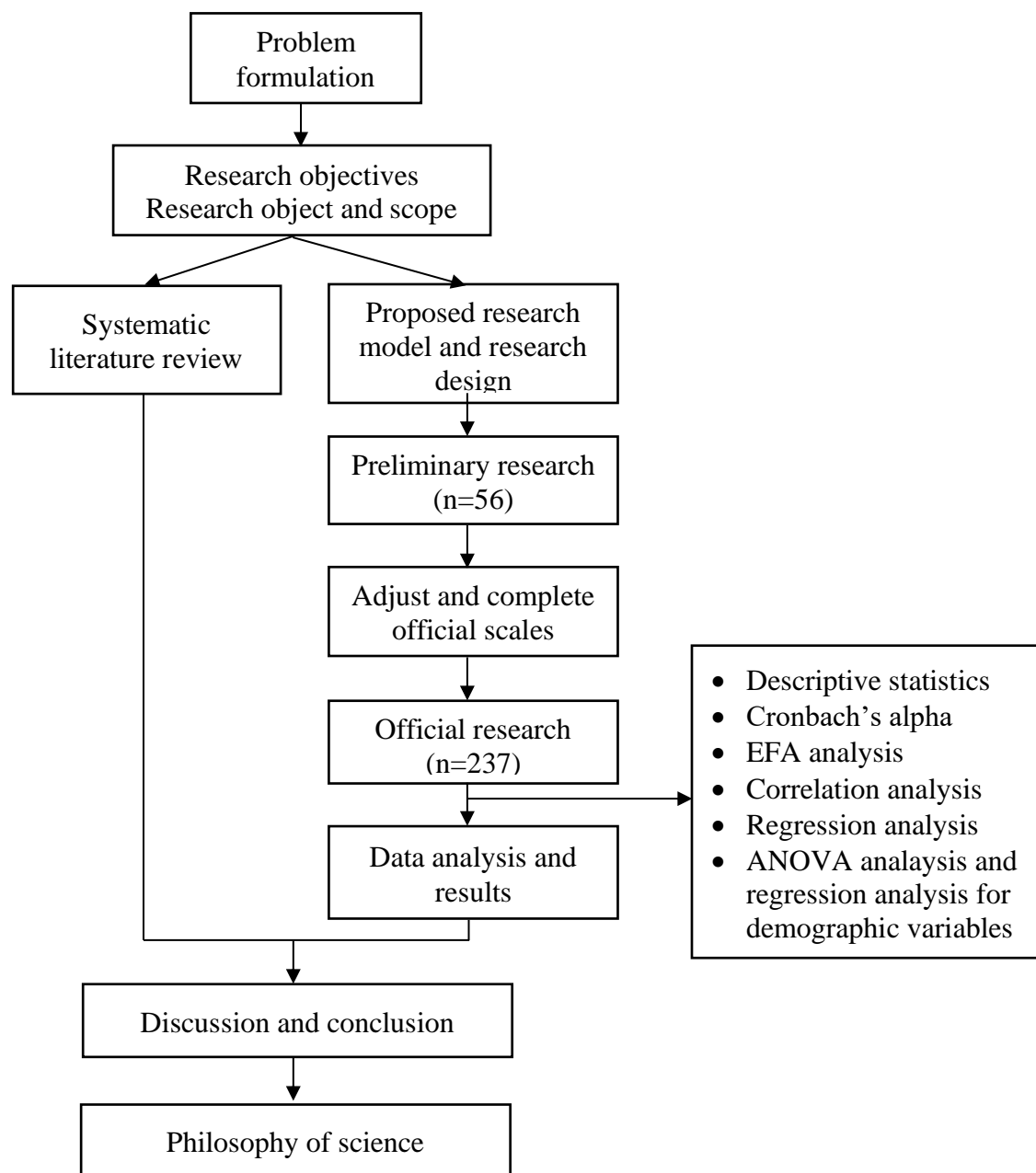


Figure 1: The author's Research Procedures



## CHAPTER 2. LITERATURE REVIEW AND RESEARCH MODEL

This chapter provided necessary concepts, definitions and related consumers behavior theories. As part of a robust systematic literature review, I presented my searching strategy and how I screened the articles for justification. Before ending up with my own research model, I built a matrix to concretely present all the articles, including their theoretical background, determinants the author or group of authors investigated, area for survey and their results.

### 2.1. Introduction of organic food and consumers' purchase behaviors

#### 2.1.1. Definition

As the research objects were the same in my previous project, I put 2 definitions of *organic food, consumer and consumer behavior* in the Appendix 2 to avoid duplicated information. Other necessary definitions were presented below.

#### 2.1.1.2. Consumers' buying behaviors stage

In this project, I developed further research compared to my previous work. I investigated the ACTUAL buying behaviors of consumers because there are researches having indicated that intention does not lead to actual purchase. According to Philip Kotler, consumer behavior journey usually goes through 5 stages. They may skip some or reverse some of these following stages. Such stages may also vary among first time, regular, or irregular buying behavior.

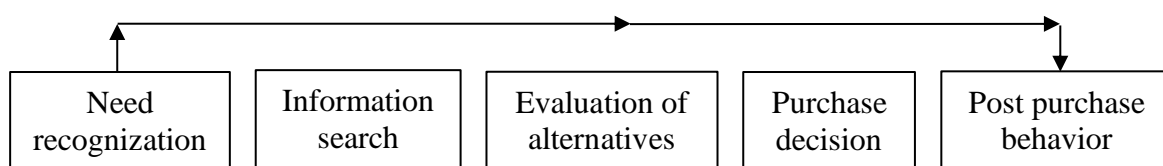


Figure 2. Consumers' buying process of Kotler (2012)

The following section simply explained such stages.

- Stage 1: Need recognition - In daily life, when problems arise, consumers are self-aware of their needs and desire to satisfy themselves. For instance, a person feels hungry and wants to cook a dinner, and she recognizes that she needs food.
- Stage 2: Search for information - When consumers are interested in a product, they will search for information about that product through friends, relatives, the Internet, newspapers, consultants...

- Stage 3: Evaluation of alternatives - After acquiring information about a product to be purchased, consumers begin to pay attention to the brands that supply that product. Depending on the desired characteristics of the product, each consumer will choose to buy products that meet those requirements. For example, for vegetables, if a consumer wants a chemical-free product, they will purchase an organic vegetables product, otherwise, they will go for conventional ones.
- Stage 4: Decide to buy - When deciding which kind of products to buy, the consumer goes to the store to buy or buying them online. However, a purchase is not complete when one of two factors occurs: the attitudes of the other person and the unexpected situation occurs. For example, a male consumer wants to buy an organic yeast pack for making bread, but his wife doesn't like it so he might not want to buy it anymore and switch to another product. Or he suddenly realised that due to COVID-19 pandemic, the stuff was out of stock as everyone wants to stock them...
- Stage 5: Post-purchase behavior - After consumers buy and use products, consumers themselves will feel and evaluate the product. They often evaluate the product through many aspects such as product quality and features, employee service attitude, after-sales service, warranty, delivery ... Therefore, after selling the product, it is necessary to confirm whether customers are satisfied with the company's product or not because it affects consumers' intentions on whether to continue buying the company's product or not.

Through analyzing the consumer behavior process of consumers, the concept of "buying behavior" in this research is understood as consumer behavior in stage 4. At this stage, buying decision is also the premise leads to buying behavior. Here, consumers will decide to go to the store where the product is sold to buy it.

### 2.1.2. Related theories

During several decades, there have been many studies and proposed theories investigating consumers' buying behaviors. In this project, I presented some typical ones which I found the most relevant.

#### 2.1.2.1 Theory of Reasoned Action (TRA)

The Theory of Reasonable Action was formulated by Ajzen and Fishbein in 1967 and developed in 1975 and 1980, and is considered as the premise for the Theory of planned behavioral (TPB) developed by Ajzen in 1991.

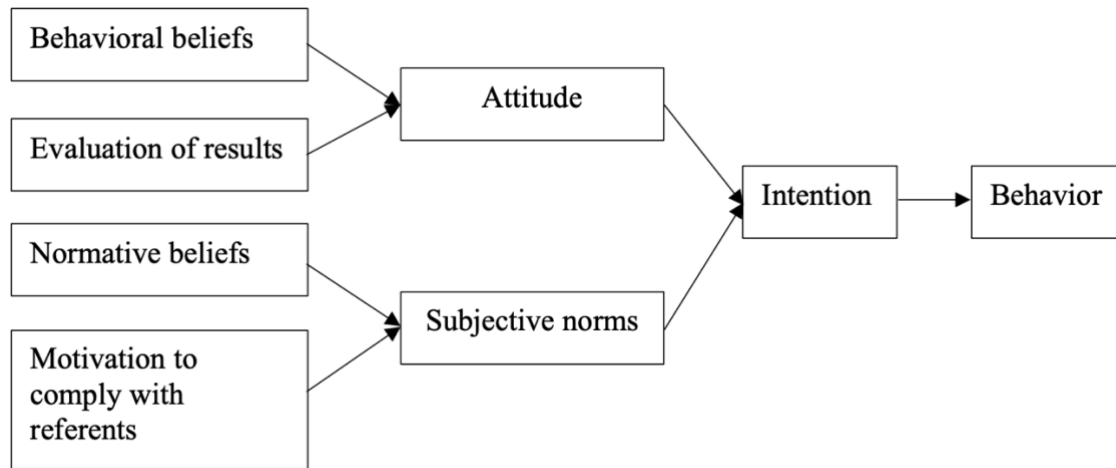


Figure 3. Theory of Reasoned Action – TRA (Fishbein & Ajzen, 1975)

As can be seen in the model, the determinant of buying behavior is not attitude but rather behavioral intention. In which, behavioral intent will be governed by two factors: Attitude towards behavior and subjective norm.

Specifically, attitudes reflect consumer beliefs, which can be positive, neutral or negative and it is impacted by 2 factors: *behavioral beliefs* which reflected how the outcome probably has and *evaluation of results* which is simply the evaluation process towards the outcome.

Subjective norms, however, are what other people having certain impact (such as relatives, family, friends ...) think about what you do. Shoppers or consumers will be influenced by these groups of people, called the reference group. In other words, subjective norms express the degree of influence of social relations on the individual consumers, and the degree of this influence may vary depending on the target group and depending on the individual consumption.

Despite its power of explanatory, the theory also reflected some drawbacks. For example, Hale, Householder and Greene (2002) demonstrated a weak correlation between attitudinal measures and the performance of deliberate behaviors. To be more detailed, it is used to predict the execution of behaviors or actions that are not in the human control. For example in some cases when the individual has a very positive attitude towards the behavior and also receives strong social support to perform the behavior but that individual still has no intention or weak intention

to perform that particular behavior. In this case, the person's behavioral attitudes and subjective norms were not sufficient to account for his or her actions.

#### 2.1.2.2 Theory of Planned behavior (TPB)

Developed by Ajzen in 1991, the TPB model overcomes the disadvantage of TRA by adding one more variable, which is the perceived behavioral control. It represents the resources needed by a person to perform his or her behavior. Perceived behavioral control reflects how easy or difficult it is to a person to perform the behavior. This depends on the availability of resources as well as the opportunities for behavioral implementation. Ajzen suggested that the perceived behavioral control factor directly influences the tendency to perform the behavior, and if a person correctly perceives his or her level of control, the behavioral control is also predictable for the actual behavior. Therefore, the TPB model is considered to be more optimal than the TRA model when it comes to predicting and explaining consumer behavior in the same research context and content.

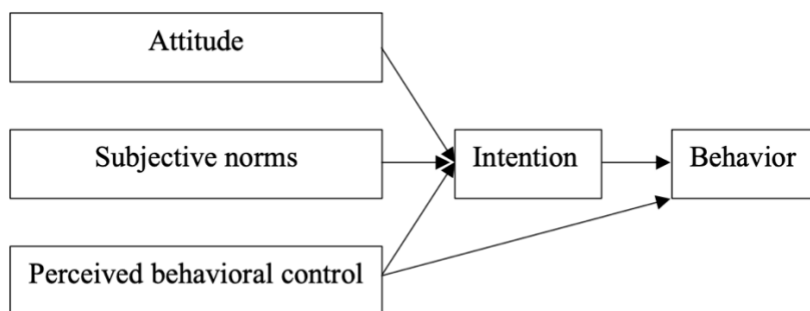


Figure 4. Theory of Planned behavior (TPB, Ajzen, 1991)

According to Ajzen (1989), some studies have found that the Theory of Planned Behavior (TPB) will help predict intentions of health-related behaviors better than the Theory of Reasoned Action (TRA), it improves the ability to predict intent in various health related fields.

Moreover, as mentioned, thanks to its explanatory and predicting power, the Theory of planned behavioral has been widely applied and modified in many researches related to consumer behavior, such as studies about consumers' intention to purchase as well as buying behavior towards organic food (Bai, Wang and Gong, 2019; Bartels and Hoogendam, 2011; Carfora et al., 2019; Lee, 2016; Ogorevc et al., 2020; Urban, Zvěřinová and Ščasný, 2012).

However, despite being advanced, the TPB is not free from weaknesses. Ajzen (1991) did confirm that in many cases, attitudes, subjective norms, and perceived behavioral control are still not enough to properly predict one's behavioral intention as there might be other determinants such as environmental or economic factors, motivation, experience in the past... In addition, some researches also indicated that there might be an incongruity between consumers' buying intention and their actual buying behavior (Hidalgo-Baz, Martos-Partal and González-Benito, 2017; Lian, 2017; Sultan et al., 2020). In the timing gap between these 2 factors, there might be variation in consumers' intention. As a result, Ajzen (1991) did mentioned that researchers are welcomed to add some constructs or other components, or even alter the path of the proposed factors to make it a more integrated.

### 2.1.3 Researches about consumers' buying behaviors towards organic food

#### 2.1.3.1 Search strategy

Following the systematic literature review, I presented my search strategy, in other words, how I ended up with a certain number of articles in the literature review. In this phase, all related articles about consumers' buying behaviors within organic food category meeting the selection criteria were presented. I strongly focused on empirical ones sharing the same objectives with my project and incongruity between the attitudes and actual buying behaviors if any.

#### 2.1.3.2 Selection of articles

##### **Selection criteria**

1. Database: Aalborg Library
2. Material type: peer-reviewed articles
3. Time: 2011-2020
4. The language: English
5. Nature: Empirical
6. Main objective: Investigate determinants influencing consumers' behavior related within organic food category

##### **Selection process**

I built some combinations searching words including in the articles' title and description through AAU Library's harvesting technology called Primo. Details of the Boolean Search was presented in Appendix 3.

This search resulted in 40 articles. After that, all duplicated articles were exculded, and I eliminated all papers which stop at consumers intention or willingness to buy organic food either. Then I cross checked the abstracts in the content of all articles to keep only relevant papers that meet all of my proposed selection criteria. Fianally, 30 peer-reviewed articles were chosen as below. (They are sorted in chronological order)

N o	Journal	Tittle	Author(s)	Geograp hical context	Based theories
1	Food Quality and Preference	“Facilitators and inhibitors of organic food buying behavior”	Tandon et al., 2020	Japan	Innovation Resistance Theory, Dual-Factor Theory
2	Sustainabilit y	“Social Feedback Loop in the Organic Food Purchase Decision-Making Process”	Ogorevc et al., 2020	15 European countries, Russia, Israel	Theory of Planned Behavior (TPB), Schwartz's theory of cultural value orientations
3	Zagreb International Review of Economics & Business	“Factors Influencing Purchases of Organic Food”	Jánská, Kollar and Celer, 2020	Czech Republic	Theory of Planned Behavior

4	World Food Policy	“Can information and trust about organic food improve consumer's attitude toward buying in Thailand?”	Sriyakul, Sutduean and Sirivanh, 2020	Thailand	Theory of reasoned action, Appraisal theory
5	Food Quality and Preference	“Intention-behaviour gap and perceived behavioural control-behaviour gap in theory of planned behaviour: moderating roles of communication, satisfaction and trust in organic food consumption”	Sultan et al., 2020	Australia	Theory of planned behaviour
6	British Food Journal	“Trust factors for organic foods: consumer buying behavior”	Lee, Fu and Chen, 2019	Taiwan	Theory of Planned Behavior
7	Economic Journal of Emerging Markets	“Willingness to pay and actual purchase decision for organic agriculture products in Vietnam”	Luu, 2019	Vietnam	Theory of Planned Behavior
8	Food Quality and Preference	“Explaining consumer purchase behavior for organic milk: Including trust T and green self-	Carfora et al., 2019	Italy	Theory of Planned Behavior

		identity within the theory of planned behavior”			
9	Journal of Food Products Marketing	“Marketing and Socio-psychological Factors Influencing Organic Food Purchase and Post-Purchase Outcomes”	Chauke and Duh, 2019	South Africa	Biophilia Theory
10	Sustainability	“Understanding the Antecedents of Organic Food Purchases: The Important Roles of Beliefs, Subjective Norms, and Identity Expressiveness”	Bai, Wang and Gong, 2019	China	
11	Review of Economic Perspectives	“The determinants of consumer behaviour of students from Brno when purchasing organic food”	Švecová and Odehnalová, 2019	Czech Republic	Theory of Planned Behaviour
12	International Journal of Environmental Research and Public Health	“Organic Food Purchases in an Emerging Market: The Influence of Consumers’ Personal Factors and Green Marketing Practices of Food Stores”	Nguyen et al., 2019	Vietnam	Knowledge-attitude-behavior theory, the Alphabet theory and Theory of Planned Behavior



13	British Food Journal	“Consumers’ anti-consumption behavior toward organic food purchase: an analysis using SEM”	Ashraf, Joarder and Ratan, 2019	Bangladesh	Theory of Planned Behaviour
14	British Food Journal	“The role of environmentally conscious purchase behaviour and green scepticism in organic food consumption”	Golob et al., 2018	Slovenia	Theory of Planned Behavior,  Cognitive dissonance theory
15	British Food Journal	“What drives organic food purchasing? – evidence from Croatia”	Ham, Pap and Stanic, 2018	Croatia	Theory of Planned Behavior
16	Asian Social Science	“What Motivates Consumers to Purchase Organic Food in Malaysia?”	Lian, 2017	Malaysia	Theory of Planned Behaviour
17	Front. Psychol	“Attitudes vs. Purchase Behaviors as Experienced Dissonance: The Roles of Knowledge and Consumer Orientations in Organic Market”	Hidalgo-Baz, Martos-Partal and González-Benito, 2017	Spain	Cognitive dissonance theory

18	Journal of Cleaner Production	“Factors influencing Indian consumers' actual buying behaviour towards organic food products”	Singh and Verma, 2017	India	Theory of Planned Behavior
19	Building Resilient Society	“Perceived Barriers for Buying Organic Food Products”	Marija, Ana and Karla, 2016	Croatia	Theory of Planned Behaviour
20	Food	“The Determinants of Organic Vegetable Purchasing in Jabodetabek Region, Indonesia”	Slamet, Nakayasu and Bai, 2016	Indonesia	Theory of Planned Behaviour
21	International Journal of Business and Economics	“Consumer Attitudes toward the Purchase of Organic Products in China”	Gan et al., 2016	China	Theory of Planned Behaviour
22	Journal of International Food & Agribusiness Marketing	“Individual and Situational Determinants of U.S. Consumers' Buying Behavior of Organic Foods”	Lee, 2016	U.S.	Field theory
23	Journal of Retailing	“Drivers of and Barriers to Organic Purchase Behavior”	Van Doorn and Verhoef, 2015	Netherlands	Standard micro-economic theory

24	International Marketing Review	“Consumer buying motives and attitudes towards organic food in two emerging markets: China and Brazil”	Thøgersen et al., 2015	China and Brazil	Expectancy-value attitude theory, general-to-specific attitudes theory
25	International Journal of Quality and Service Sciences	“Differences of Customer Purchase Behavior toward Organic Rice in Indonesia and Taiwan”	Moslehpour , Van Kien and Danyfisla, 2014	Taiwan	Consumer behavior theory
26	Review of Integrative Business and Economics Research	“Consumers Perception, Purchase Intention and Actual Purchase Behavior of Organic Food Products”	Wee et al., 2014	Malaysia	Theory of Planned Behaviour
27	Czech Sociological Review	“What Motivates Czech Consumers to Buy Organic Food?”	Urban, Zvěřinová and Ščasný, 2012	Czech Republic	Theory of Planned Behaviour
28	International Journal of Wine Business Research	“The impact of environmental protection and hedonistic values on organic wine purchases in the US”	Olsen, Thach and Hemphill, 2012	U.S	Theory of attitude formation, Theory of Planned Behaviour

29	International Journal of Consumer Studies	“Health and Environmental consciousness, Costs of Behaviour and the Purchase of Organic Food”	Kriwy and Mecking, 2011	Germany	Alphabet theory, Theory of Planned Behaviour
30	Journal of Brand Management	“The Role of Social Identity and Attitudes toward Sustainability Brands in Buying Behaviors for Organic Products”	Bartels and Hoogendam , 2011	Germany	Theory of Planned Behaviour, Social Identity Theory

Table 2: Synthesis of selected articles

<b>Independent variable</b>	<b>Articles</b>	<b>Articles in total</b>
Health consciousness	1, 6, 7, 9, 11, 12, 16, 17, 18, 20, 21, 22, 23, 24, 26, 28, 29	17
Environment related	1, 2, 6, 9, 11, 12, 16, 17, 20, 21, 22, 24, 25, 26, 28, 29, 30	17
Quality	1, 3, 6, 7, 9, 16, 23, 26	8
Safety	1, 2, 6, 9, 12, 16, 20, 21, 26	9
Trust	1, 4, 5, 8, 9, 10, 13, 14, 20, 21, 24	11

Availability	1, 6, 8, 9, 14, 18, 23	7
Attitude	2, 6, 8, 10, 11, 12, 13, 15, 16, 17, 19, 20, 22, 25, 27	15
Intention	2, 8, 10, 11, 15, 22	6
Perceived behavioral control	8, 10, 11, 13, 15, 27	6
Subjective norms	2, 8, 9, 10, 11, 13, 14, 15, 18, 27	10
Price	3, 4, 8, 11, 17, 19, 20, 21, 25, 28	10
Self-enhancement	2, 13, 14	3
Green marketing	12	1
Price	1, 3, 4, 5, 9, 12, 18, 19, 21, 23, 28	11
Taste	3, 16, 21, 24	4
Information needed	4, 5, 9, 24	4
Label	6, 7, 30	3
Satisfaction	5	1
Self-identity	8, 10, 23, 30	4
Lifestyle	15	1

Behavioral beliefs	15	1
Past experience	16	1
Time barriers	19	1
Ethics	25	1
Family size	1, 2, 5, 7, 15	5
Income	2, 3, 4, 9, 19, 21, 26	7
Education Level	2, 3, 4, 15, 18, 19, 21, 26	8
Occupation's status	2, 3, 15, 21, 26	5
Marital Status	2, 19, 21	3
Age	2, 3, 4, 15, 18, 19, 20, 21	8
Gender	1, 2, 3, 4, 15, 18, 19, 20, 21	9

Table 3. Synthesis of factors investigated

## 2.2. Literature review

Based on existing research, there have been quite many researches related to consumers' buying behavior within organic food category in Asia, which accounted for 40% in total selected papers. Among them, there are 2 articles conducted in Vietnam. One of them primarily collected data in Hanoi, the capital of Vietnam (Nguyen et al., 2019) and the other data was gathered in Ho Chi Minh City, the biggest city in Vietnam (Luu, 2019). In my project, instead of binary logistic regression technique (Luu, 2019), I used a different one which was linear regression.

The reason why I would like to investigate further to actual buying stage of consumers was that during my literature review, there have been several research indicated the possibility of intention – behavior gap in consumers’ organic food consumption (Sultan et al., 2020; Luu, 2019; Wee et al., 2014; Bartels and Hoogendam, 2011) and therefore, suggested future researchers to investigate the correlation between intention and actual purchase behaviors of consumers. The following parts were several related research models within my research scope.

### 2.2.1. “Understanding the Antecedents of Organic Food Purchases: The Important Roles of Beliefs, Subjective Norms, and Identity Expressiveness” (Bai, Wang and Gong, 2019)

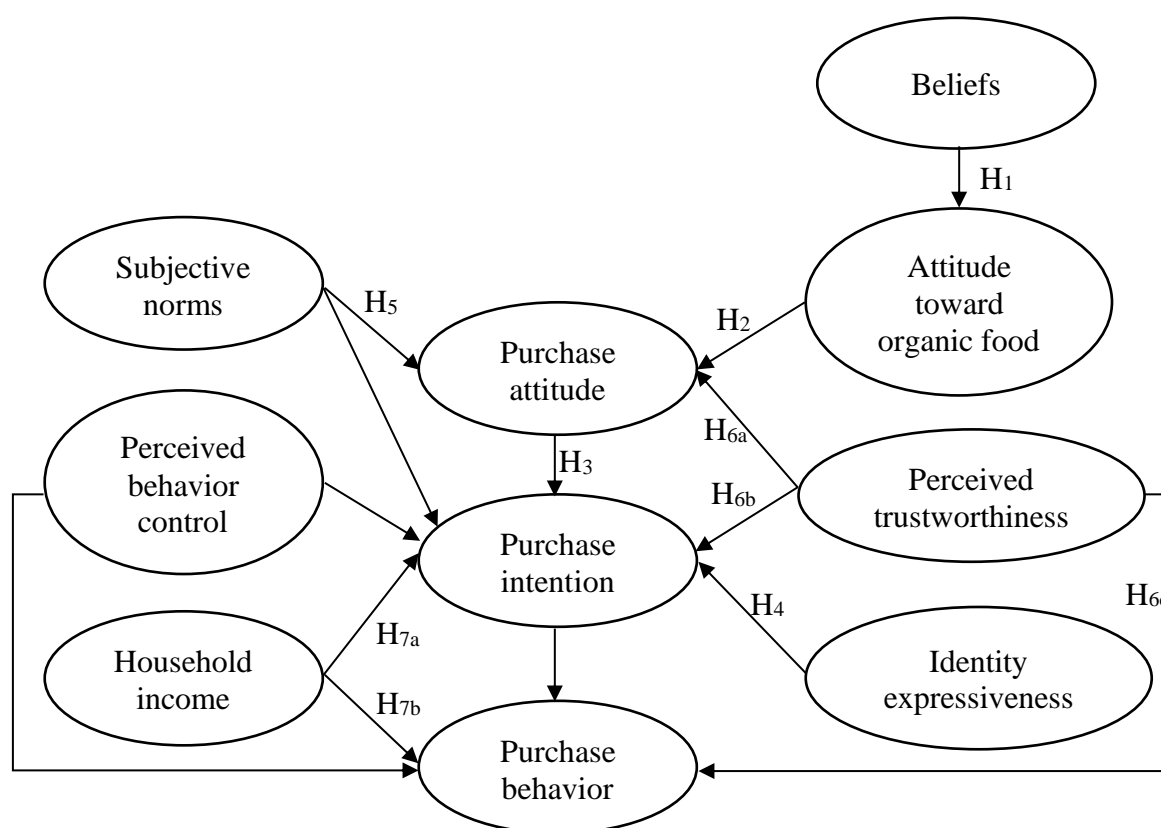


Figure 5. Research model of Bai, Wang and Gong (2019)

This research has been considered as one of the few studies that uses extended TPB as a basic framework, and discusses the entire decision-making process from initial beliefs to purchase behavior. Data was collected in mainland China using a non-probability sampling method. However, due to many number of factors identified, the developed questionnaire was rather complex and took approximately 30-50 minutes to complete. Based on 1750 respondents, the results shown that the belief that organic food is safer than non-organic food was the most important factor in predicting attitudes toward organic food. This was reasonable as among

many Asian countries, China shares the food safety problems as Vietnam. The authors also implicated some export opportunities for foreign companies to capture Chinese organic markets if they can gain consumer trust.

2.2.2. “The determinants of consumer behaviour of students from Brno when purchasing organic food” (Švecová and Odehnalová, 2019)

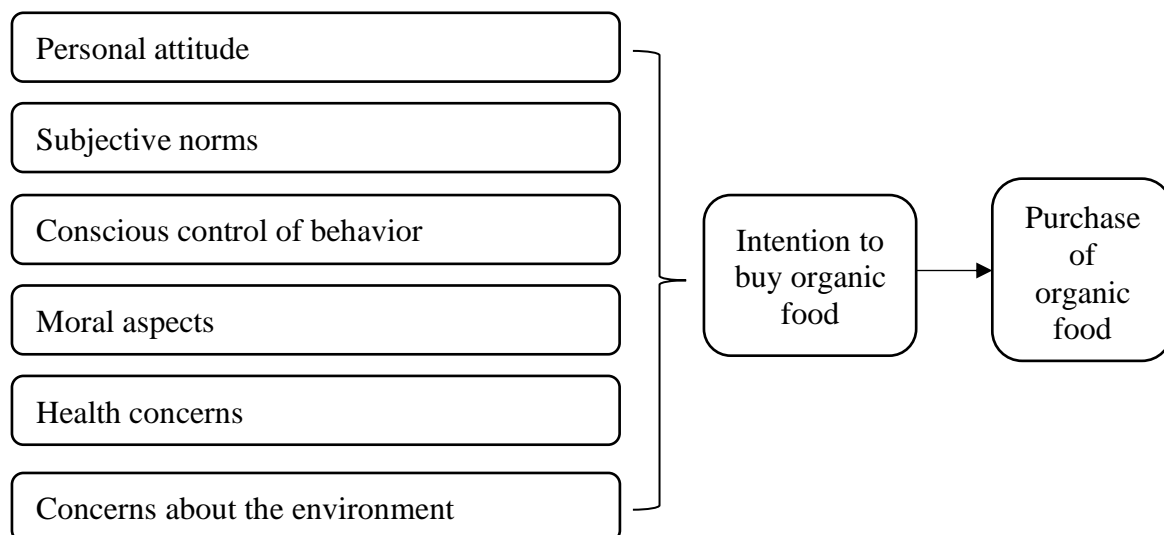


Figure 6. Research model of Švecová and Odehnalová (2019)

Similar to the previous reviewed article, this research also extended the TPB by adding 3 more independent variables which were moral aspects, health and environment concerns. The target group of this research was young consumers in Czech Republic context, and from 403 respondents, the results were very interesting. It transpired that the most important factors were moral aspects and health concerns, which reinforces the results of previous research which pointed to the important influence of other variables. The authors suggested organic producers, distributors, and retailers should focus on such factors to attract young consumers towards organic food.



2.2.3. “Consumers Perception, Purchase Intention and Actual Purchase Behavior of Organic Food Products” (Wee et al., 2014)

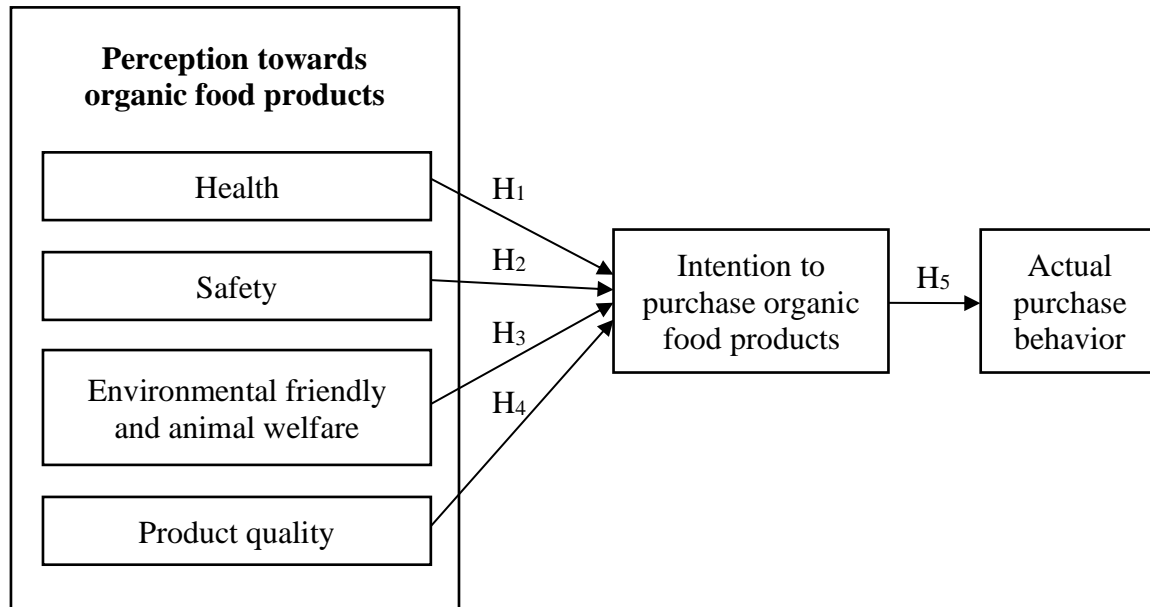


Figure 7. Research model of Wee et al. (2014)

This research focused on actual purchase behavior of organic food products in Malaysia context. Wee et al. (2014) emphasized that intention do not necessarily equate with actual purchasing and there is a hidden gap between them in some situations. And when it came to organic food, there might also be no exception. Results from their research indicated that perception of consumers plays a crucial role in their purchase decision of organic food and the intention does lead to actual purchase behaviors. Therefore, the authors suggested marketer that campaigns helping increase customers' buying intention would push up the actual sales afterwards.

2.2.4. “Organic Food Purchases in an Emerging Market: The Influence of Consumers' Personal Factors and Green Marketing Practices of Food Stores” (Nguyen et al., 2019)

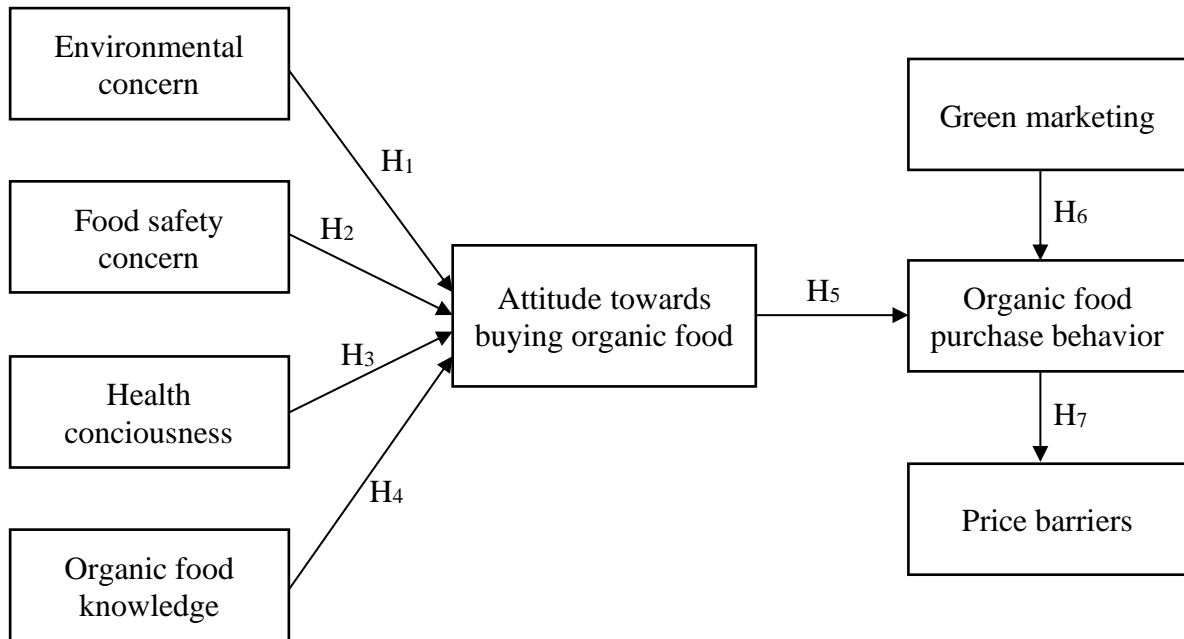


Figure 8. Research model of Nguyen et al. (2019)

The gap between attitude and purchase behavior was also emphasized in this research of Vietnamese organic market context. And in order to investigate such gap effectively, they develop a unique model that “combines the antecedent-attitude-behavior hierarchy with situational context factors including food stores’ green marketing practices and price barriers” (Nguyen et al., 2019) to investigate consumers’ buying behavior of organic meat. Regarding the gap between attitude and behavior, results showed that price partially prevented consumers from their actual purchases. The authors suggested that future researchers should collect data in other cities of Vietnam than Hanoi and if possible, in rural areas for comparison regarding demographic factors.

## 2.3. Recommended research model, hypotheses and measurement scale

### 2.3.1 Recommended research model

In this thesis, I would like to apply the model of the research “Consumers Perception, Purchase Intention and Actual Purchase Behavior of Organic Food Products” (Wee et al., 2014) to investigate the factors that impact consumers purchase behavior in organic market and examine whether consumers’ intention and perceived behavior control have correlation to their actual buying behaviors. The reason why I chose this theoretical framework were that I share the same objectives about examine the gap of consumers intention and actual purchase behaviors and

both researchs are focusing on Asian countries. Additionally, it investigated the factors about health consciuousness, food safety, environmental friendly and products quality, which are among the biggest problems happening in Vietnam (Nguyen et al., 2019).

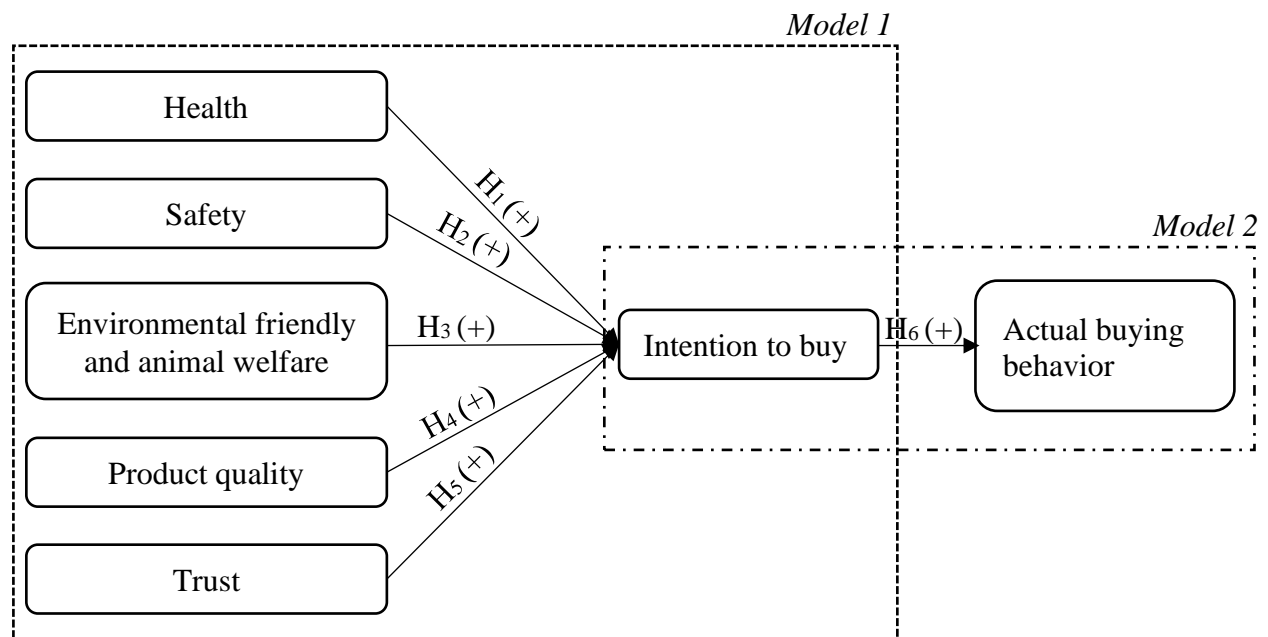


Figure 9. Proposed model of the author

## 2.3.2 Research hypotheses

### 2.3.2.1. Perceived health

According to Nguyen et al. (2019), in Vietnam, health and safety motives positively influence consumers attitude towards purchase organic foods. Health concerns have been the most important reason for purchasing and consuming organic food during the last decade (Lee, Fu and Chen, 2019; Lian, 2017; Luu, 2019; Thøgersen et al., 2015). According to Lian (2017), “health consciousness” is a key factor to remain healthy and head to a well-being state in life. Although in the research of Švecová and Odehnalová (2019), concerns related to health are not significantly affect Czech consumers buying organic food, it was stated in general, this kind of food is still supposed to be healthier and are usually bought by those having beliefs about health benefits as well as those having health-related issues. Health consciousness was also identified as one of the most important motivations for buying organic food among consumers (Thøgersen

et al, 2015) and statistically tested by previous papers regarding the positive effect towards organic food buying behaviors. As a result, I propose the following hypothesis:

***H1: Perceived health of imported organic food will positively affect the consumers' purchase intention.***

#### 2.3.2.2. Perceived safety

Another important parameter in consumers' purchase decision-making process towards imported organic food was perceived safety. This factor had statistically significant impact on consumers buying behaviors (Chauke and Duh, 2019; Lian, 2017). According to Nguyen et al. (2019:5), food safety consciousness implies "the degree to which people are worried about pesticide residues contained in food as well as about food scares". This is because consumers generally believe organic food is free from pesticides, chemical or other artificial fertilizers (Slamet, Nakayasu and Bai, 2016). Consumers in Japan are highly conscious of food safety risks when it comes to organic food purchase (Tandon et al., 2020) and Vietnam also shares many values in common, specifically "food safety concern" was statistically proved to have impact on Vietnamese consumers purchase attitudes, and buying behaviors afterwards (Nguyen et al., 2019). Therefore, the second hypothesis is stated as below:

***H2: Perceived safety of imported organic food products will positively affect the consumers' purchase intention.***

#### 2.3.2.3. Perceived environmental friendly and animal welfare

Along with health consciousness, concerns related to environment and animal well-being play the key role in predicting the consumers buying behaviors towards organic food (Chauke and Duh, 2019; Lee, 2016; Lian, 2017; Nguyen et al., 2019). In general, consumers' behaviors towards environment and animal welfare responsibility will reflect on their perceptions such as they tend to recycle products or consume products whose production is environmental friendly (Lee, 2016). In addition, this factor also contributes to consumers motives when buying organic food (Thøgersen et al., 2015) and it was statistically proved to affect positively on consumers purchase intention on organic food (Lee, 2016; Lian, 2017; Nguyen et al., 2019). As a result, I proposed the following hypothesis:

***H3: Perceived environmental friendly and animal welfare of imported organic food products will positively affect the purchase intention.***

#### 2.3.2.4. Perceived quality

With the constant growth of organic food market, it become very important for consumers to know what such products can provide to them before they decide to buy (Thøgersen et al., 2016). Therefore, product quality is put into one of the highest priorities when it comes to consumers buying intention. Nguyen et al., (2019) also pointed out that quality of organic food products is one of the biggest concerns among Vietnamese consumers; and they tend to purchase organic food as they perceive that such products have superior and better contributions when comparing to other conventional ones (Wee et al., 2014). Therefore, I proposed the fourth hypothesis is stated as below:

***H4: Perceived quality of imported organic food products will positively affect the purchase intention.***

#### 2.3.2.5. Trust

This factor was added to increase the explanatory power of the model. Several researches during the last decade have statiscally proved that trust on organic food production process, quality, certification, labels... has been one of the most significant determinants of consumers' buying intention (Bai, Wang and Gong, 2019; Carfora et al., 2019; Sriyakul, Sutduean and Sirivanh, 2020) and actual purchase towards organic food (Ashraf, Joarder and Ratan, 2019; Chauke and Duh, 2019; Sultan et al., 2020; Slamet, Nakayasu and Bai, 2016). It is considered as “a psychological state derived from transactional, evaluative, affective and/or emotional judgement” (Sultan et al., 2020). And in this project, in line with the results from previous researches, I proposed the more consumers trust the organic food, the more likely they will buy them (Sriyakul, Sutduean and Sirivanh, 2020; Sultan et al., 2020) and came up with the hypotheisis as below:

***H5: Trust on imported organic food products will positively affect the purchase intention.***

#### 2.3.2.6. Consumers' buying intention

In consumers buying journey, having intention to buy a products does not always lead to their actual purchase afterwards (Nguyen et al., 2019; Tandon et al., 2020). There have been several researches statiscally proved that there have been certain dissonance between intention and actual buying behaviors (Hidalgo-Baz, Martos-Partal and González-Benito, 2017; Lian, 2017; Sultan et al., 2020). And Vietnamese consumers, especially consumers in the North of Vietnam,

are not exempt from such situation (Nguyen et al., 2019). On the other hand, according to many researches conducted throughout the last decade, intentions towards buying organic food have positive and significant influence on consumers actual purchase behaviors (Carfora et al., 2019; Ham, Lee, 2026; Ogorevc et al., 2020; Pap and Stanic, 2018; Švecová and Odehnalová, 2019). Therefore, in this research, while delivered questionnaires to consumers in the South of Vietnam, I tried to examine whether there is any incongruity in intention and actual buying behaviors. Based on the Theory of Planned Behavior and after review the literature, in this research, I expect consumers buying intention will have positive and significant impact on their actual purchase after all, so I proposed the following hypothesis:

***H6: Intention to buy imported organic food products is positively affects the consumers' actual buying behavior of the products.***

<b>Hypothesis</b>	<b>Content</b>
H1 (+)	Perceived health of imported organic food will positively affect the consumers' purchase intention
H2 (+)	Perceived safety of imported organic food products will positively affect the consumers' purchase intention
H3 (+)	Perceived environmental friendly and animal welfare of imported organic food products will positively affect the consumers' purchase intention
H4 (+)	Perceived quality of imported organic food products will positively affect the consumers' purchase intention
H5 (+)	Trust on imported organic food products will positively affect the consumers' purchase intention
H6 (+)	Intention to buy imported organic food products is positively affects the consumers' actual buying behavior of the products

Table 4. The author's proposed hypothesis

### 2.3.3 Measurement scale

There are totally 7 definitions in my research: *perceived health, perceived safety, perceived environmental friendly and animal welfare, perceived quality of imported organic food, trust on the products, intention to buy and actual buying behaviors* of consumers towards imported organic food.

- I developed questions and measurement scales in the official survey based on the literature and adapted from previous academic published researches, especially those in Asian context instead of Western developed countries to minimize the potential problems in translations. To be more specific, measurement scales were adapted from the research of Wee et al. (2014) for the first 4 independent variables which were perceived health, perceived safety, perceived environmental friendly and animal welfare, perceived quality. There were some adjustment in wording to suit the survey subject.
- Next, measurement scales for Trust was adapted from Slamet, Nakayasu and Bai (2016) with the adjustment of adding one more word "organic" on TRU3 to make it more understandable.
- For the consumers' buying intention towards imported organic food, the measurement scales was adapted from research of Carfora et al. (2019) about organic milk with some object name's adjustment
- Finally, measurement scales of the consumers' actual buying behavior towards imported organic food, the was adapted from research of Lian (2017) with adding "family" to the final item.

I used the 5-point Likert scale for measurement: 1- point (completely disagree), 2-point (disagree), 3-point (neutral), 4-point (agree) and 5-point (totally agree).

Variable Code	Observed variable	Source
---------------	-------------------	--------

<i>Perceived health (PH)</i>		
PH1	Imported organic food products contain more vitamin and mineral	Wee et al., 2014
PH2	Growing food organically and naturally is better for health	
PH3	Imported organic food products are healthier than conventional food because it produces without preservatives or artificial color	
PH4	Choosing imported organic food products are good for ensure our health	
<i>Perceived safety (PS)</i>		
PS1	Organic farming is the most convincing way of food safety	Wee et al., 2014
PS2	Imported organic food products are safer to eat	
PS3	Imported organic food products are chemical free	
PS4	Imported organic produce can reduce the food poisoning risk	
<i>Perceived environmental friendly and animal welfare (PEA)</i>		
PEA1	Organic farming is friendliness to the environment	Wee et al., 2014



PEA2	Organic farming can prevent the contamination and pollution of soil, air, water and food supply	
PEA3	Organic farming uses less energy	
PEA4	Organic farming can protect the environment because it does not carry any harmful synthetic chemical pesticides and fertilizers	
PEA5	Organic farming treats animals humanely	
PEA6	Organic farming always considers the animal well-being	
<i>Perceived quality (PQ)</i>		
PQ1	Imported organic food products have superior quality	Wee et al., 2014
PQ2	Imported organic food products are more quality than conventional food	
PQ3	Imported organic products are of better quality and less associated with health risks	
<i>Trust (TRU)</i>		
TRU1	I trust the sellers of imported organic vegetables	Slamet, Nakayasu and Bai, 2016
TRU2	If the imported product is organic labeled and/or certified organic, I believe that it is genuinely organic	

TRU3	I believe that the imported organic product is really organic	
<i>Consumers’ purchase intention (CPI)</i>		
CPI1	I intend to purchase imported organic food over the next month	Carfora et al., 2019
CPI2	I plan to purchase imported organic food over the next month	
CPI3	I want to purchase imported organic food over the next month	
<i>Consumers’ actual buying behaviors (CAB)</i>		
CAB1	I am a regular purchaser of organic food	Lian, 2017
CAB2	My purchase proportion of organic food is relatively higher compared to non-organic food	
CAB4	I purchased organic food for my own consumption	
CAB5	I purchased organic food as a gift for my friends	

Table 5. Measurement scales of this research

## CHAPTER 3: RESEARCH METHODOLOGY

In this chapter, the research process and used criteria were discussed in more detail. Generally, there were 2 main phases which were preliminary and official final survey. As discussed with my supervisor, although the questionnaire was validated by an expert once, the preliminary was still necessary in order to make the official survey more adjustable, validated and minimize potential errors if any. After completing 3 translation validation rounds, the official survey was delivered through online channel including email and social networks. I successfully collect 237 qualified responses. Then, I analyzed data using tools such as surveyed sample descriptive statistics, analysis Cronbach's Alpha to evaluate the reliability of the scale, analyze the EFA to group the factors, analyze the regression to determine the influencing factors and ANOVA analysis to determine the effects of demographic variables. Regarding techniques and methods using SPSS, I followed almost the same procedures as in my semester project (Nguyen, 2019) as well as in many other empirical researches within this category. The difference was that in this project, there were 2 models instead of 1, and I analyzed further stage in consumers' buying journey, in other words, the correlation between consumers' intention and their actual purchase afterwards.

### 3.1. Preliminary research

#### 3.1.1. Develop the questionnaire

In this phase, from the proposed research model, I developed a preliminary questionnaire basing on questions built in some previous academic researches.

The main content of the survey includes 32 questions on consumer buying intention and their actual purchase of imported organic food and it is divided into two main parts as follows (Appendix 4):

- The first part consisted of 27 questions using the 5-point Likert scale, with 1 being "totally disagree", 2 being "disagreeing", 3 being "neutral opinion", 4 is "agree" and 5 is "totally agree". These 27 questions include two components: Factors affecting the intention to purchase imported organic food (20 questions) including statements about 5 determinants of perceived health, perceived safety, perceived environmental friendly and animal welfare, perceived quality, and trust; 3 questions for the dependent variable (intention) and 4 questions for actual buying behaviors.

- The second part includes 5 questions about the respondents' personal information, including places they regularly shop, age, educational level, average monthly income, gender. These questions were used for describing target groups of consumers.
- Additionally, I attached the definitions of imported organic food, images of organic label certification help respondents fully understand the object.

This preliminary questionnaire was then translated into Vietnamese by myself and was validated by Dr. Hoang Hung from University of Economics, Ho Chi Minh city, Vietnam who have several publications in the field of consumers buying behaviors towards green products including the organic one.

### 3.1.2. Pilot survey

To enhance the validity of the survey, I delivered the survey to a convenience focus group of 56 respondents from a Facebook group called “Thực Phẩm Hữu Cơ Việt Nam - Vietnamese Organic Foods” then used the data to perform Cronbach's Alpha analysis. Results (Appendix 5.1) indicated that the scale had good reliability with Cronbach's Alpha coefficient: 0.702 (scale of Perceived health), 0.855 (Perceived safety), 0.702 (Perceived environmental friendly and animal welfare), 0.878 (Perceived quality), 0.848 (Trust), 0.779 (Consumers' buying intention) and 0.829 (Consumers actual purchase). The explanation of requirements for Cronbach alpha figures would be discussed later (section 3.2.2.2) which should be greater than or equal to 0.7.

Testing	Cronbach's Alpha	Result
Perceived health (PH)	0.702	Reliable
Perceived safety (PS)	0.855	Reliable
Perceived environmental friendly and animal welfare (PEA)	0.702	Reliable
Perceived quality (PQ)	0.878	Reliable

Trust (TRU)	0.848	Reliable
Consumers' buying intention (CBI)	0.779	Reliable
Consumers' actual buying behavior (CAB)	0.829	Reliable

Table 6. Result of testing the reliability for pilot study

As can be seen, all of the data meet the requirements for reliability and the questionnaire was ready for large-scale official quantitative research in the next stage.

### 3.2. Official research

#### 3.2.1. Data collection, study population and sampling

The official survey was delivered from 3/11/2020 to 24/11/2020. Samples were collected using convenience sampling method, a type of non-probability sampling. This statistical method allows researchers to select participants who are easy to reach and/or based on their volunteering willingness. The biggest advantages of the method are time-saving as the data could be acquired fast due to its availability. However, the researchers might have to face the risks that the sample may not reflect population as a whole (country level in this case), and it might be biased by volunteers.

Due to COVID-19 and inability to visit Ho Chi Minh city, I delivered the survey using online survey method, which were email and Facebook groups channels. Similarly to my previous project, I also sent out my survey via email to my old Club name ACTION. This group contains 303 members (27 more member compared to last year when I deliver my survey of semester project). Apart from that, in order to make the sample more diverse, I also sent out my survey to several active Facebook groups including “Cộng đồng hàng nhập organic minh bạch”, “NHÓM ENZYME, ORGANIC, ECO-HEALTH”, “Thực phẩm sạch - Mua gì Ở đâu?”. The database consisted of approximately 33,7 thousands people. Due to limited time for collecting data, I chose groups that are active and have a huge amount of members to acquire data faster. And additionally, to boost the response rate, all respondents were given a “buy 1 get 1” voucher from Coffee24, my parents' business partner in Vietnam.

According to DeCoster and Claypool (2004), the minimum size for a statistical analysis should be greater than or equal to five times of the total quantity of independent variables, and meantime, it should be at least 100 to be able to release reliable results. In my project, there were 20 independent variables, as a result, the size should be at least 100.

For regression analysis, there was a popular formula for the minimum sample size which is:  $50 + 8 * m$  ( $m$  is the number of independent variables) (Tabachnick and Fidell, 2007). In my project, there were 5 independent variables, so there should be at least 90 survey participants. For me, in the worst scenario where I might receive approximately 5 responses per day, it would take me up to 3 weeks. Therefore, I decided to spend 3 weeks for collecting data.

### 3.2.2. Data analysis

After receiving the responses, I used Microsoft Excel to synthesize the data and then feed into IBM SPSS Statistics software for further analysis. The specific steps were as follows:

- Step 1 – data preparation by cleaning and encoding the responses into Excel and then feeding into SPSS.
- Step 2 – started to descriptively statistics analysis.
- Step 3 – evaluate the reliability using Cronbach's alpha
- Step 4 – perform exploratory factor analysis (EFA)
- Step 5 – perform multiple regressions: tested the hypothesis using multiple linear regressions with the significance level of 5%.

#### 3.2.2.1. Descriptive statistics

First, I conducted descriptive statistical analysis with the data after it was cleaned and encoded. Descriptive statistics allow researchers to present the collected data in structured and summarized form. Descriptive statistics were used in this study to analyze and describe data including frequencies, rates, mean values and standard deviations on survey samples and scales.

#### 3.2.2.2. Cronbach's alpha

Cronbach's alpha assesses the reliability of the measurement scale and it indicates the research is stable (Hair et al., 2010). This indicator is particularly suitable for observed variables having multiple measurement items (Hair et al., 1995).

The following are the standard conditions for the reliability assessment process using Cronbach's alpha:

- According to alpha Hair et al. (2010), the Cronbach's alpha coefficient of the measurement scale should be no less than 0.7
- Reliability is also measured by the item – total correlation. The correlation represents the correlation of the item to the total item and the inter-item correlation outlines the correlations between each items. If the correlation is small (less than 0.3), variables are considered to be garbage items and would be eliminated in order to improve the reliability level of the scale (Hair et al., 2010). After being discarded, the measurement scale is accepted only if the Cronbach alpha is qualified.

#### 3.2.2.3. Exploratory factor analysis (EFA)

After analyzing the reliability of the scale, I applied the exploratory factor analysis method (EFA) to reduce and converge the variables into factors, assess the convergence of the variables according to each components the differentiation value of the factors. In the EFA, I used the Principle Component extract and Varimax rotation and then looked at the indicators to check whether they were all qualified the following requirements:

- Factor loading is an index showing the correlation between the variables and factors, this coefficient shows the close relationship between the variables. This factor must meet the condition which is greater than 0.5 (Hair et al., 2010).
- The coefficient KMO (Kaiser-Mayer-Olkin) satisfies the condition  $0.5 \leq KMO \leq 1$  to ensure the factor analysis is suitable with the research data (Wee et al., 2014)
- The sig coefficient in Barlett's test, also known as the Barlett test, considers the hypothesis H0 is the correlation between zero observed variables in the population. If this test is statistically significant (sig < 0.05), hypothesis H0 is rejected, i.e. the observed variables are correlated with each other. This proves the data is suitable for factor analysis. (Hair et al., 2010).

- The stop point when extracting factors with the eigenvalue coefficient (eigenvalue index represents the variation explained by each factor) must be greater than 1 to demonstrate that the extracted factor has good summary significance (Gerbing and Anderson, 1998).
- The scale is accepted with the total variance extracted equal to or greater than 50% and the difference in a load factor of an observed variable between factors should be  $\geq 0.3$  to create differentiating value between factors (Jabnoun and Al-Tamimi, 2003).

Based on the discussed literature, my proposed model having 20 observed variables used EFA as following steps:

- Step 1: All the independent and dependent scales are unidirectional, so I can use principal components extracting method with Varimax rotation technique and stop at Eigenvalues  $> 1$
- Step 2: Performed the requirement evaluation:
  - Bartlett test: confirm if variables were correlated
  - KMO examination: if KMO index was between 0.5 to 1, EFA would be fit with the data. Otherwise, if KMO was less than 0.5, the risk that EFA was not suitable with the data would be very high
  - Abandon variables (if any) that had loading factor less than 0.5 to make EFA practically significant
  - Checked if eigenvalue index was greater than 1
  - Examined extraction variance to see how many percentage of variation the variables would be able to explain
- Step 3: Perform factor rotation. In this study, I applied an orthogonal rotation technique, i.e. a square rotation of Varimax. According to Hair et al. (2010), factor loading must be  $\geq 0.5$ . And concurrently, in order to avoid making unjustified distinctions between factors, an observed variable's factor loading between the aggregate factor groups must be  $\leq 0.3$  (Jabnoun and Al-Tamimi, 2003). If the observed variable is extracted into two groups of factors and the difference in load factor is  $< 0.3$ , I would discard the



variable. If the difference is  $\geq 0.3$ , the observed variable was kept, and it would be in the group of factors with the highest factor loading.

- However, the purpose of EFA is not only to ensure the Convergence validity (items converge on the same factor), but also to release a “clean” factor analysis. To be more specific, all items belonging to one construct should load strongly on one factor and concurrently, not significantly (blank or under  $0.40$ ) (Weaver and Maxwell, 2014), i.e. being distinguished from other factors. According to Jabnoun and Al-Tamimi (2003), at each item, the largest difference of any  $|\text{Factor Loading}|$  and  $|\text{Factor Loading}|$  must equal to or greater than  $0.3$ .

#### 3.2.2.4. Pearson correlation coefficient

After the EFA step, the variables are combined (converged) into factors, I continued with the step of analyzing the linear correlation on the factors to test the relationship between the independent and dependent factors. This is a necessary verification step before performing regression (Kriwy and Mecking, 2011). In this step, the sig value of the dependent and independent factors will show the correlation of these two factors in the model. The independent variables that do not affect the dependent variable ( $\text{sig} > 0.05$ ) are usually rejected in the next regression analysis step. The independent variables with sig value  $< 0.05$  are likely to occur multicollinearity.

#### 3.2.2.5. Multiple regressions

Regression analysis helps accurately determine the phenomenon of multicollinearity between independent factors (VIF value), and test hypotheses about the suitability of the model through the  $R^2$  value. Through the statistics of the correlation coefficient of each factor independent towards the dependent factors, I was able to determine which factors contribute to the change of consumers' behavior of buying imported organic food, thereby the direction to propose suitable solutions.

#### 3.2.2.6. ANOVA test and regression analysis with demographic variables

In this step, I tested the effect of the demographic variables on the dependent variable, the actual buying behavior of imported organic food products, through one-way ANOVA test and regression analysis. The qualitative variables tested included age, gender, educational level, and

income. This test and analysis step reveals differences in imported organic food product purchase behavior among different demographic groups within the same demographic section.

## CHAPTER 4. RESEARCH RESULTS

### 4.1. Descriptive statistics

#### 4.1.1. Descriptive statistics for study population

After 3 weeks of collecting data, I acquired 237 qualified responses.

As to age, the highest percentage was 26-40 with 42.2%, followed by 41-55, under 26, over 55 which accounted for 32.5%, 15.6%, and 9.7% respectively. Therefore, it could be stated that the sample of consumers are mostly ranging from 26 to 55. These people are in the working age, in other word, could be considered as the major work force of Vietnam, having their monthly income and have controls over their shopping behavior.

In terms of gender, there is not much different with the ratio 43:47. However, there were still more women than men when it comes to purchasing imported organic food. This might indicate that female buyers are more engaged in buying the imported organic products.

Next is the income. People with monthly income of 10-18 millions VND accounted for the biggest part, which was 42.6%, following by over 18 million VND (30.8%) and 5-10 million VND (19%). The segment having under 5 million VND is not significant. As can be seen, most of repondents have monthly income above 5 million which was pretty reasonable for Vietnamese context as it was slightly above Vietnamese minimum wages which is 4.42 million VND (Statista, 2020).

Rrgarding the educational level, the respondents were mainly in university level accounting for 65.4%, following by college and higher education which was 23.6% and 11% respectively. There was no one stopped their study by Secondary school. Hence, this project focused on those with fairly high education level and therefore, might have more serious perception towards health, environment, products' safety, quality as well as skepticism to a certain aspects of the products they are going to buy.

Results from the survey also showed that buyers usually go to the supermarket and convenience store to purchase the imported organic food. The frequencies were lower for places such as traditional market and shopping centers. Synthesis of the demographic information of study population was presented in Appendix 6.1 under SPSS data analysis results for official survey.

#### 4.1.2. Descriptive statistics for measurement scales

Among 237 official research samples, the observed variables were evaluated by consumers on the Likert scale, ranging from 1 (Strongly disagree) to 5 (Strongly agree). This proved that consumers had different attitudes towards each of the factors that affect the purchase of imported organic food.

All of the independent variables had the average value above 3.0, in which TRU2 had the highest mean value of 3.42 and the lowest was PEA3 with 3.13 (Appendix 6.2). Thus, consumers rate the level of consent is quite high for the variables observed in the questionnaire. Each observed variable has a certain influence on the research model, i.e. the consumers' buying intention towards imported organic food.

The observed variables of the dependent variable also had an average value of over 3, ranging from 3.33 to 3.44 (Appendix 6.2). As such, the majority of consumers agree with the buying intention and actual purchase of imported organic food.

#### 4.2. Cronbach's Alpha Reliability Analysis Evaluation (Appendix 6.3)

##### 4.2.1. Perceived health (PH) scale

On the first test, Cronbach's Alpha of the scale was 0.817 (greater than 0.7). The corrected item - total correlation of the observed variables in the scale were also greater than 0.3. Therefore, all observed variables PH1, PH2, PH3, and PH4 were accepted and used in the next factor analysis.

##### 4.2.2. Perceived safety (PS) scale

Cronbach's Alpha of this measurement scale reached 0.845 (greater than 0.7) in the first analysis. The corrected item - total correlation of the observed variables in the scale were greater than 0.3. As a result, all observed variables PS1, PS2, PS3, PS4 proposed were qualified.

##### 4.2.3. Perceived environmental friendly and animal welfare (PEA) scale

Similarly to 2 measurement scales above, Cronbach's Alpha was greater than 0.7 which was 0.786. However, the corrected item - total correlation of the observed variable PEA3 is 0.282, which did not meet the condition of being greater than 0.3, which I set out in methodology chapter. Therefore, PEA3 will be excluded from the model. The remaining variables are

eligible. After that, I conducted the second test of Cronbach's Alpha with 5 observed variables PEA1, PEA2, PEA4, PEA5, PEA6. Results Cronbach's Alpha reached 0,819 and the corrected item - total correlation is satisfactory to ensure reliability of the scale (all above 0.3). Therefore, PEA1, PEA2, PEA4, PEA5, PEA6 were all accepted and used in the next factor analysis.

#### 4.2.4. Perceived quality (PQ)

Both Cronbach's Alpha (0.877) and corrected item - total correlation of the observed variables in this measurement scale were qualified for the requirements set in methodology chapter on the first test run, so I kept all of them.

#### 4.2.5. Trust (TRU)

Cronbach's Alpha of this measurement scale also reached 0.779 (greater than 0.7) in the first analysis. The corrected item - total correlation of the observed variables in the scale were all greater than 0.3. Thus, all observed variables TRU1, TRU2, TRU3 were remained.

#### 4.2.6. Consumers' buying intention (CBI)

In the first analysis test, Cronbach's Alpha of the measurement scale was qualified which was 0.795 (greater than 0.7) and all observed variables CBI1, CBI2, CBI3 were kept as the corrected item - total correlation of the observed variables in the scale were all greater than 0.3.

#### 4.2.7. Consumers' actual buying behavior (CAB)

The final measurement scale also met the requirements which had 0.858 for Cronbach's Alpha and total correlation of the observed variables in the scale were all greater than 0.3.

The following is a summary of the coefficients in the test of the reliability of the measurement scale with Cronbach's Alpha coefficients after eliminating variables that did not satisfy the conditions.

No	Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	<b>Perceived health</b> (Cronbach's Alpha = 0.817)				

	PH1	10.00	1.504	0.680	0.749
	PH2	10.05	1.574	0.664	0.758
	PH3	9.98	1.652	0.572	0.799
	PH4	9.99	1.555	0.636	0.771
2	<b>Perceived safety</b> (Cronbach's Alpha = 0.845)				
	PS1	9.96	1.706	0.744	0.776
	PS2	10.00	1.831	0.660	0.813
	PS3	9.95	1.816	0.654	0.815
	PS4	9.93	1.767	0.669	0.809
3	<b>Perceived environmental friendly and animal welfare</b> (Cronbach's Alpha = 0.819)				
	PEA1	13.40	2.859	0.706	0.754
	PEA2	13.46	3.106	0.601	0.787
	PEA4	13.51	3.217	0.520	0.810
	PEA5	13.46	3.088	0.636	0.777
	PEA6	13.46	3.157	0.596	0.788

4	<b>Perceived quality</b> (Cronbach's Alpha = 0.877)				
	PQ1	6.75	0.936	0.755	0.833
	PQ2	6.78	1.005	0.718	0.865
	PQ3	6.75	0.876	0.819	0.774
5	<b>Trust</b> (Cronbach's Alpha = 0.779)				
	TRU1	6.83	0.844	0.683	0.624
	TRU2	6.83	0.872	0.626	0.689
	TRU3	6.83	1.005	0.542	0.777
6	<b>Consumers' buying intention</b> (Cronbach's Alpha = 0.795)				
	CBI1	6.73	0.916	0.637	0.723
	CBI2	6.81	0.951	0.638	0.721
	CBI3	6.81	0.977	0.640	0.720
7	<b>Consumers' actual buying behavior</b> (Cronbach's Alpha = 0.858)				
	CAB1	10.03	1.944	0.656	0.839
	CAB2	10.03	2.012	0.724	0.811

	CAB3	10.04	1.859	0.795	0.779
	CAB4	10.02	2.008	0.641	0.844

Table 7. Reliability analysis results

#### 4.3. Exploratory Factor Analysis (EFA) for independent variables

Variables after being checked the reliability by Cronbach's Alpha and the corrected item - total correlation then continued to be checked their correlation by groups of variables. In this step, I analyzed the EFA with model 1 (hypothesis H1, H2, H3, H4, H5) and model 2 (hypothesis H6). In this study, the Principal factor extraction method with Varimax rotation were applied for factor analysis.

In this model, I conducted EFA for all independent variables at the same time, but the dependent variable of intention and actual buying behavior to purchase imported organic food would be analyzed separately.

##### 4.3.1. EFA for 5 independent variables

##### 4.3.1.1. EFA for the First run (Appendix 6.4)

The results of EFA in the first run showed:

- Test Bartlett's: Sig. = 0.000 < 0.05: The variables observed in the factor analysis above are correlated with each other in the overall.
- KMO coefficient: 0.5 < 0.845 < 1: factor analysis appropriated with research data.
- There are 5 factors extracted from EFA analysis.
- Total variance extracted = 68,220% > 50%: met the requirement that the above 5 factors can explain 68,22% of the variation of the data.
- The Eigenvalues coefficient value of all factors is greater than 1: satisfied.



Factors	Observed variables	Component (loading factor)				
		1	2	3	4	5
Perceived environment friendly and animal welfare	PEA1	0.802				
	PEA5	0.779				
	PEA2	0.758				
	PEA4	0.679				
	PEA6	0.670				0.429
Perceived safety	PS1		0.834			
	PS3		0.799			
	PS2		0.788			
	PS4		0.785			
Perceived health	PH4			0.801		
	PH1			0.799		
	PH2			0.798		
	PH3			0.713		

Perceived quality	PQ3				0.854	
	PQ2				0.800	
	PQ1				0.791	
Trust	TRU1					0.816
	TRU2					0.778
	TRU3					0.736

Table 8. Exploratory factor analysis for independent variables (first run) (Source: SPSS result)

However, as can be seen in table 8, in Rotated component matrix, the Discriminant Validity of PEA6 did not meet the requirements set in methodology chapter. Specifically, loading factor 1 and 5 were all greater than  $|0.40|$ , and the difference between them was  $|0.670| - |0.429| = 0.241$  which was under 0.3. So, I discarded this undesirable item (PEA6) and run the EFA one more time.

#### 4.3.1.2. EFA for the Second run (Appendix 6.5)

After eliminating PEA6, the result from EFA was satisfied all requirements:

- Test Bartlett's: Sig. = 0.000 < 0.05: The variables observed in the factor analysis above are correlated with each other in the overall.
- KMO coefficient: 0.5 < 0.836 < 1: factor analysis appropriated with research data.
- Total variance extracted = 68,933% > 50%: met the requirement that the above 5 factors can explain 68,933% of the variation of the data.
- The Eigenvalues coefficient value of all factors is greater than 1, and all 20 observed variables had loading factor greater than 0,5: satisfied

In summary, after the rotation, there are 5 factors extracted from EFA analysis which were recommended in proposed model; and EFA did not make any changes regarding 5 independent factors recommended at the beginning.

Factors	Observed variables	Component (loading factor)				
		1	2	3	4	5
Perceived environment friendly and animal welfare	PS1	0.836				
	PS3	0.801				
	PS2	0.788				
	PS4	0.786				
Perceived safety	PH4		0.801			
	PH1		0.799			
	PH2		0.798			
	PH3		0.713			
Perceived health	PEA1			0.804		
	PEA5			0.802		
	PEA2			0.735		

	PEA4			0.718		
Perceived quality	PQ3				0.859	
	PQ2				0.804	
	PQ1				0.800	
Trust	TRU1					0.826
	TRU2					0.778
	TRU3					0.754
Eigenvalues		15.546	14.686	13.893	12.807	12.003
Variance explained (%)		15.546	30.231	44.124	56.931	68.933
KMO		0.836				
Sig.		0.000				

Table 9. EFA for independent variables (second run) (Source: SPSS result)

#### 4.3.2. EFA for intermediate variable (Consumers' buying intention - CBI) (Appendix 6.6)

Results from SPSS for this variable all met the requirements.

- Test Bartlett's: Sig. = 0.000 < 0.05: The variables observed in the factor analysis were correlated with each other in the overall.
- KMO coefficient: 0.5 < 0.710 < 1: EFA appropriated with research data.

- Total variance extracted = 70.957 % > 50%: met the requirement that 1 factor can explain 70.957% of the data variation.
- The Eigenvalues was 2.129 (greater than 1), and all of 3 observed variables had loading factor which were 0.843; 0.842; and 0.842 (greater than 0.5): satisfied.

Therefore, this group of variables remains as Consumers' buying intention (CBI) factor.

#### 4.3.3. EFA for dependent variable (Consumers' actual buying behavior - CAB) (Appendix 6.7)

Similarly, results from SPSS for this variable were statisfied for the requirements.

- Test Bartlett's: Sig. = 0.000 < 0.05: The variables observed in the factor analysis were correlated with each other in the overall.
- KMO coefficient = 0.680 (0.5 < 0.710 < 1): EFA appropriated with research data.
- Total variance extracted = 70.528 % > 50%: met the requirement that 1 factor can explain 70.528% of the data variation.
- The Eigenvalues was 2.821 (greater than 1), and all of 4 observed variables had loading factor which were 0.910; 0.867; 0.794; 0.781 (greater than 0.5): satisfied.

After EFA analysis, 1 factor was extracted and it remained Consumers' actual buying behavior factor (CAB).

#### 4.4. Pearson correlations matrix

Pearson's correlation coefficient (denoted by  $r$ ) was used to quantify the degree of linear relationships between the independent and dependent variables. The higher the absolute value of  $r$ , the greater the correlation between the two variables. If the independent variables are closely correlated, the multicollinearity problem must be considered when analyzing the regression. I performed this analysis step with model 1 and model 2.

##### 4.4.1. Model 1

According to the results of the correlation matrix, the Pearson correlation coefficient among variables Perceived health, perceived safety, perceived environmental friendly and animal welfare, perceived quality and trust towards imported organic food of consumers and

dependent variable Consumers' buying intention was quite high (the respective coefficients were 0.452, 0.555, 0.577, 0.407, 0.527) (Appendix 6.9). In addition, sig. values were all 0.000 (< 0.05), indicating that these independent-dependent pairs are strongly correlated and Pearson's coefficients were statistically significant; and qualified the conditions for regression analysis step. Details about the results of Correlation matrix of independent variables to CBI in the first model were presented in Appendix 6.9

#### 4.4.2. Model 2

The Pearson correlation coefficient between the intermediate variable CBI (Consumers' buying intention) and the dependent variable CAB (consumers' actual buying behavior) in model 2 was satisfied at 0.402 and a sig value was 0.000 (less than 0.05) indicated that these variables were closely correlated and the Pearson coefficients were statistically significant.

<b>Correlations</b>			
		CAB	CBI
CAB	Pearson Correlation	1	0.402
	Sig. (2-tailed)		0.000
CBI	Pearson Correlation	0.402	1
	Sig. (2-tailed)	.000	

Table 10. Correlation matrix of CBI and CAB variables in model 2 (Appendix 6.12)

#### 4.5. Regression analysis

Based on the hypotheses and proposed research models, I built 2 linear regression models as follows:

$$\text{Model 1: CBI} = \beta_0 + \beta_1 \cdot \text{PH} + \beta_2 \cdot \text{PS} + \beta_3 \cdot \text{PEA} + \beta_4 \cdot \text{PQ} + \beta_5 \cdot \text{TRU} + e_i$$

Model 2:  $CAB = \beta_0' + \beta_1' * CBI + e_i$

In which:

- $\beta_0, \beta_0'$ : regression constant
- $\beta_i, \beta_i'$  ( $i = 1, 5$ ): regression weight
- $e_i$ : residual error
- Independent variables ( $X_i$ ): consisted of 5 variables PH (Perceived health), PS (Perceived safety), PEA (Perceived environmental friendly and animal welfare), PQ (Perceived quality), TRU (Trust)
- CBI: intermediate variable (Consumers' buying intention)
- CAB: dependent variables (Consumers' actual buying behavior)

#### 4.5.1. Multivariate regression of model 1

Multivariate regression analysis in model 1 was performed with 5 independent variables including: PH (Perceived health), PS (Perceived safety), PEA (Perceived environmental friendly and animal welfare), PQ (Perceived quality), TRU (Trust) and 1 dependent variable CBI (Consumers' buying intention) using the Enter method, in which the variables were included in one turn for analysis.

##### 4.5.1.1. Evaluate and test the suitability of the model

The coefficient of determination, denoted as  $R^2$ , reflected the variable part of the dependent variable explained by the independent variables (Hair et al., 2003). In this study, the adjusted  $R^2$  coefficient used to evaluate the suitability of the model would be more appropriate because it did not exaggerate the relevance of the multivariate regression model.

Analysis results showed that adjusted  $R^2$  was 56.8% (Appendix 6.9) about Evaluation criteria for regression analysis in model 1), meaning that 56.8% of variation in dependent variable CBI was explained by independent variables; The remaining 43.2% was due to error, including measurement error and other variables absent from the model.

Durbin - Watson coefficient test showed that the model did not violate the multiple regression method. The value of the Durbin - Watson coefficient is 2.021, in the range from 0 to 4, so there was no qualitative sequence correlation in the model.

In the ANOVA analysis, the F-test was a hypothesis test of the suitability of the overall linear regression model. The idea of this test was to consider whether the dependent variable is linearly related to the entire set of independent variables (Azizan and Suki, 2013). F-test resulted in ANOVA analysis from results (Appendix 6.9) showed that  $F = 63.161$  and coefficient Sig = 0.000, so we can safely reject the case when  $R^2 = 0$ . (So adjusted  $R^2 = 0.568$ ). In other words, it could be concluded that with a test significance of 5%, there was a linear relationship between the independent variables and the dependent variable.

#### 4.5.1.2. Testing model hypotheses

All independent variables had sig. beta less than 0.05 (Appendix 6.9 ) so they had effect on the dependent variable (consumers' buying intention - CBI).  $\beta$  value of all independent variables are positive ( $>0$ ) so they positively impact CBI.

The degree of  $\beta$  values also indicated the affecting degree of independent variables on the dependent one. And results showed that Perceived health (PH) had the greatest impact on CBI ( $\beta = 0.313$ ), following by Trust (TRU), Perceived quality (PQ), Perceived safety (PS) and Perceived environmental friendly and animal welfare (PEA) with  $\beta$  value were 0.235, 0.216, 0.190, 0.170 respectively.

No	Hypothesis	Result	Beta ( $\beta$ )	Sig.	VIF
H1	Perceived health will positively affect purchase intention towards imported organic food	Supported	0.313	0.000	1.232
H2	Perceived safety will positively affect purchase intention towards imported organic food	Supported	0.190	0.000	1.197



H3	Perceived environmental friendly and animal welfare of imported organic food products will positively affect purchase intention	Supported	0.170	0.000	1.160
H4	Perceived quality of imported organic food products will positively affect purchase intention	Supported	0.216	0.000	1.590
H5	Trust on imported organic food products will positively affect purchase intention	Supported	0.235	0.000	1.378

Table 11. Hypotheses testing results (Appendix 6.9)

So, the linear regression model for model 1 was as follows:

$$\text{CBI} = 0.313 \cdot \text{PH} + 0.190 \cdot \text{PS} + 0.170 \cdot \text{PEA} + 0.216 \cdot \text{PQ} + 0.235 \cdot \text{TRU} + e_i$$

#### 4.5.1.3. Multicollinearity assumption

Multicollinearity is a phenomenon in which the independent variables are related to each other (Tho, 2014). Studies often use the Variance Inflation Factor (VIF) index to check the multicollinearity phenomenon. According to Hair et al. (2006), if the VIF coefficient of a certain independent variable is greater than 10, there would be multicollinearity between the independent variables.

According to the results of regression analysis in Table 11, the VIF coefficients of the independent variables were all less than 2 (from 1,160 to 1,590)(Appendix 6.9). Therefore, it can be concluded that the multicollinearity phenomenon did not occur and this assumption was not violated.

#### 4.5.1.4. Homoscedasticity and independence of residuals assumption for model 1

The level of the line in the scatter plot (Appendix 6.10) was consistent with the observed data (assumption violation test). If the residual was randomly dispersed in an area around the line through the origin of the 0 coordinate, the homoscedasticity assumption was correct. Therefore, I concluded that the homoscedasticity assumption was satisfied and independence of residuals was not violated.

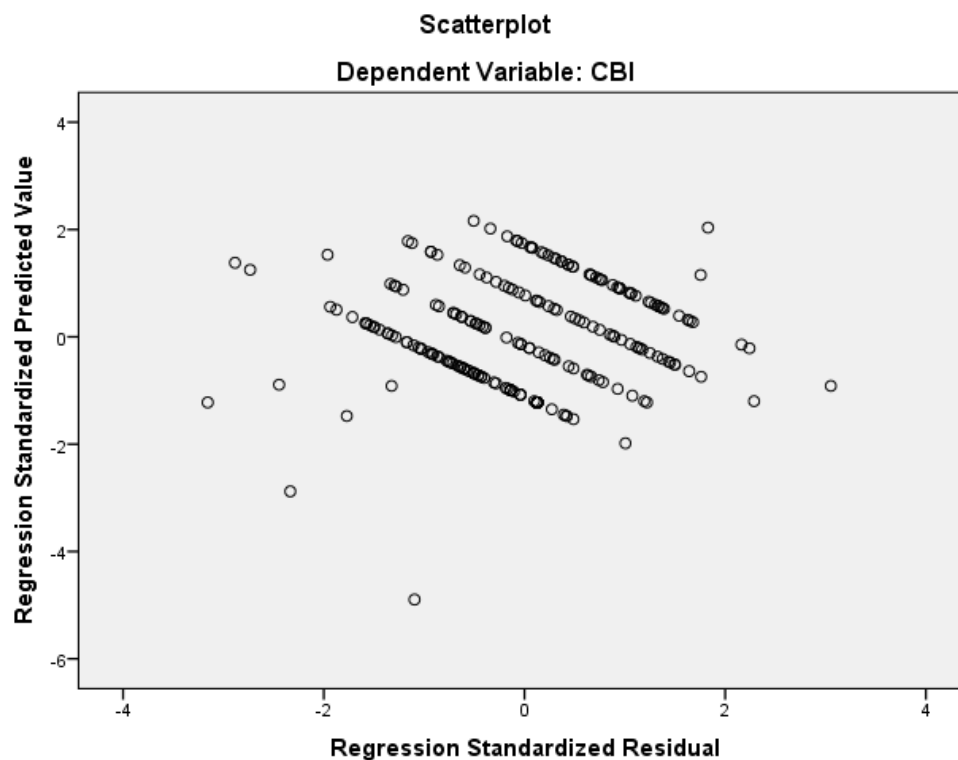


Figure. Scatterplot model 1

#### - Assumptions about the normal distribution of the residuals' assumption

Due to a number of reasons such as using the wrong model, the amount of residues is not enough for analysis ... the residue may not conform to the normal distribution. Therefore, I built the Histogram to examine the distribution of the residual.

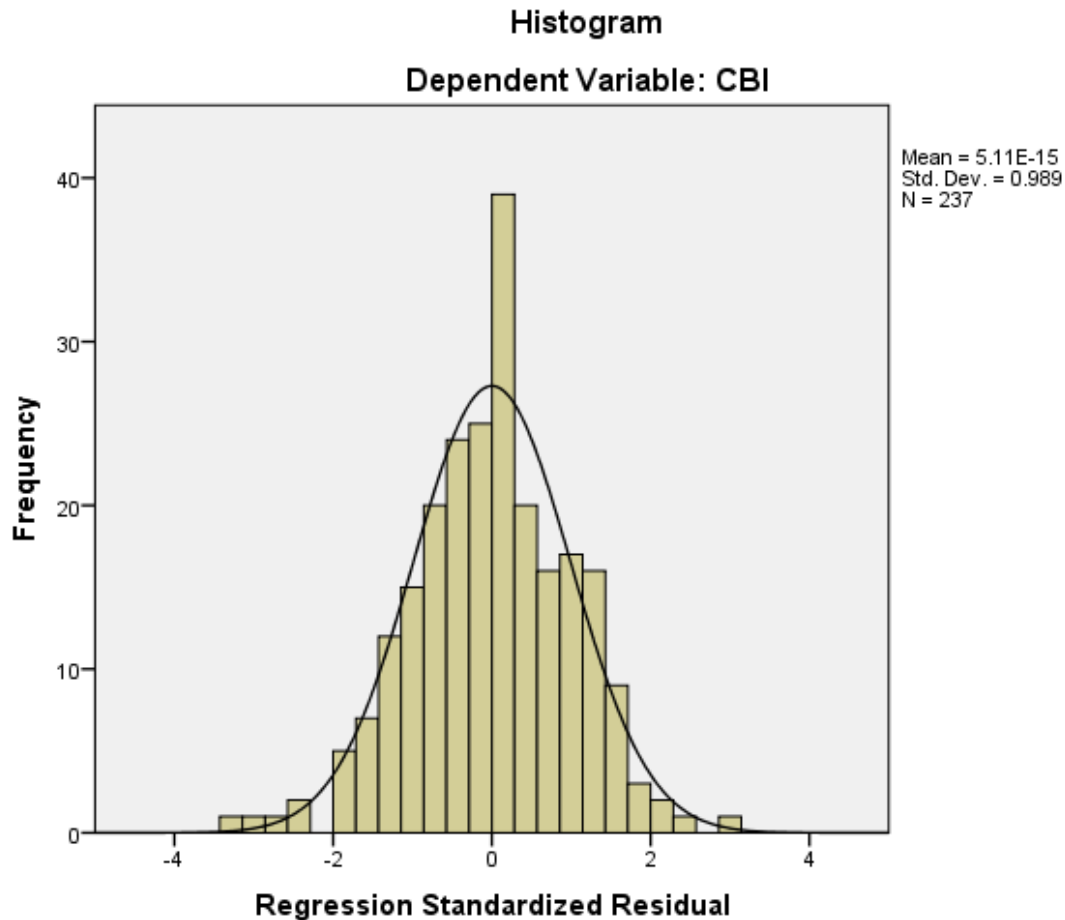


Figure 10. Histogram of residual frequency (Appendix 6.11)

As can be seen, the mean value was nearly 0 (mean = 5.11E-15) and standard deviation was 0.989 (nearly 1) which indicated that assumption of residual distribution was not violated

#### 4.5.2. Regression analysis of model 2

Single linear regression analysis in model 2 was performed with 1 intermediate variable, Consumers' buying intention (CBI) and 1 dependent variable, Consumers' actual buying behavior (CAB) using Enter method.

The results (Appendix 6.12) showed that model 2 was relatively suitable at the significance level of 0.05. Durbin - Watson coefficient test showed that the model does not violate the multiple regression method, and the satisfied significance level sig. = 0,000 < 0.05. The value of the Durbin - Watson coefficient is 1.930 in the range from 0 to 4, so there was no first order series correlation in the model. Thus, the regression model was given accordingly.

According to the Regression analysis results in Appendix 6.12, the adjusted regression coefficient (Beta) between the factors of consumers' buying intention and the their actual purchase reached 0.402 and had statistical significance with sig = 0.000. Therefore, I could conclude that the more intention consumers have towards buying imported organic food, the more likely they will actually buy them. Thus, the initial hypothesis H6 was accepted as follows:

H6: Intention to buy imported organic food products positively affects the consumers' actual buying behavior of imported organic food in Vietnam.

The linear regression equation for model 2 was as follows:

$$\text{CAB} = 0.402 * \text{CBI} + e_i$$

From the suggested hypotheses and the results of data analysis, the final research model is summarized as follows:

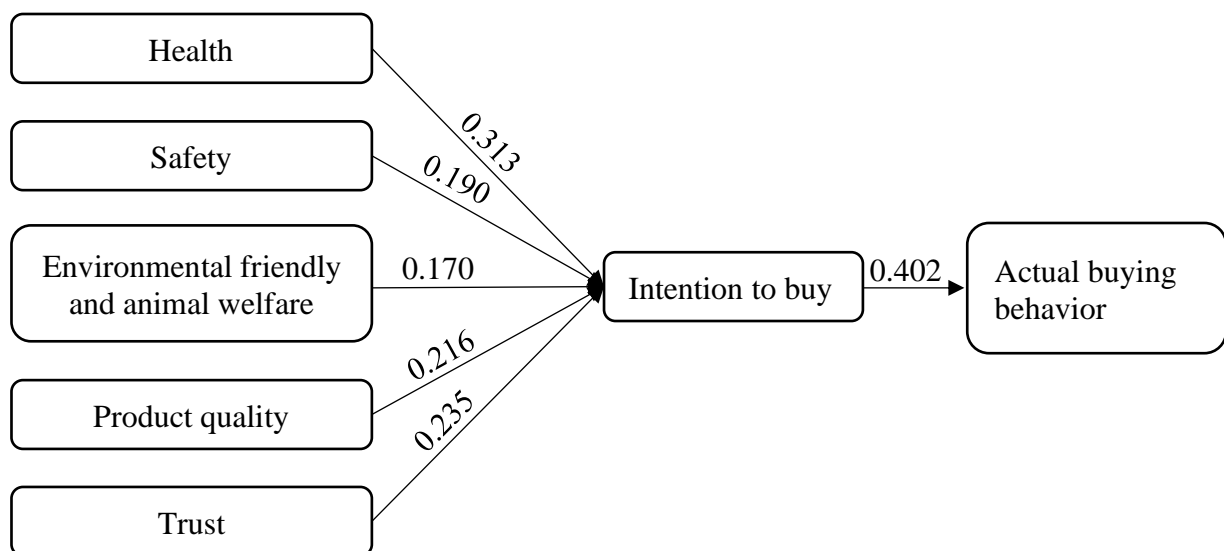


Figure 11. Proposed model in summary (Source: Synthesized by author)

#### 4.6. Analysis of the effect of demographic variables on consumers' actual buying behavior

To analyze the effect of the demographic variables on consumers' actual purchase of imported organic food, I conducted ANOVA analysis on the gender, age, educational level and monthly income variables. The results were presented in the Appendix 6.13.

#### 4.6.1. Test differences in actual buying behaviors by gender

The purpose of the ANOVA analysis in this section was to test the differences of different consumer groups by gender demographic characteristics of male and female buyers with regard to their actual buying behaviors of imported organic food. Before ANOVA analysis, testing of homogeneous variance by Levene Test was performed for the gender variable and the results were shown in the table below.

Variable	Levene Statistic	Sig.
Gender	0.970	0.326

Table 12. LEVENE Test result for Gender (Appendix 6.13)

Based on test of Homogeneity of Variances, Sig. Levene value which was 0,326 ( $> 0.05$ ) satisfied the condition that there was no difference in variance between male and female buyers. ANOVA analysis results showed significance level Sig. = 0.394 ( $> 0.05$ ), meaning that there was no statistically significant difference in actual purchase behaviors of imported organic food between 2 genders. This conclusion was in line with a recent research on willingness to pay and actual purchase decision of Luu (2019) within Vietnam context.

#### 4.6.2. Test differences in actual buying behaviors by age

In this study, I divided the respondents' age attributes into 4 groups (similarly to my previous project), which were: (1) Under 26 years old, (2) From 26 to 40 years old, (3) From 41 to 55 years old and (4) Above 55 (Nguyen, 2019). To test the difference in actual buying behaviors of imported organic food by age, similarly, I firstly run the Homogeneity of Variances to check the Sig. Levene value.

In this case, the Sig. Levene. value was 0.142 ( $> 0.05$ ) which satisfied for ANOVA test. In the ANOVA analysis, the Sig. was equal to 0.225 ( $> 0.05$ ) therefore, it was concluded that there was no statistically significant difference in actual purchase behaviors of imported organic food among groups of consumers by age. Although several recent reseraches indicated that age did affect consumers' buying behaviors (Jánská, Kollar and Celer, 2020; Lee, Fu and Chen, 2019;

Sultan et al., 2020), this conclusion was one more time similar to study of Luu (2019) in Vietnam, where he confirmed that there was minor influence of age on Vietnamese consumers' actual buying decision.

#### 4.6.3. Test differences in actual buying behaviors by educational level

The same technique was applied for educational level factor. Based on the result of Homogeneity of Variances Test, the sig. Levene = 0.252 ( $>0.05$ ) so I continued to run the ANOVA test. This results in the sig. = 0.000 ( $<0.05$ ), meaning there was statistically difference in actual purchase behaviors of imported organic food among groups of consumers by educational level.

After knowing there was a difference, I continued with the Posthoc analysis in order to know which segments were more likely to purchase imported organic food and the results were in Appendix 6.14.

In particular, when looking at the Descriptives results and Posthoc analysis, it could be concluded that people with university and higher educational level are more likely to purchase imported organic food, compared to those with college level, which was in line with several recent researches (Lee, Fu and Chen, 2019; Luu, 2019).

#### 4.6.4. Test differences in actual buying behaviors by monthly income

Monthly income of consumers were also divided into 4 groups, and data was used to firstly run the test of Homogeneity of Variances. The sig. Levene was 0.001 ( $<0.05$ ), therefore, instead of ANOVA, I run the Robust Tests of Equality of Means. Results from SPSS indicated that sig. of Robust tests was 0.000 ( $<0.05$ ). Thus, there was statistically difference in actual purchase behaviors of imported organic food among groups of consumers by monthly income.

Similarly to the educational level, I conducted the Posthoc analysis and acquired the result as below.

Dependent Variable: CAB
-------------------------

(A) Monthly income	(B) Monthly income	Mean Difference (A-B)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
=< 5 million VND	Over 5-10m VND	-0.11111	0.12478	0.934	-0.4671	0.2449
	Over 10-18m VND	-0.40594*	0.12253	0.018	-0.7573	-0.0545
	Over 18mVND	-0.48288*	0.12547	0.004	-0.8401	-0.1257
Over 5-10 million VND	=< 5m VND	0.11111	0.12478	0.934	-0.2449	0.4671
	Over 10-18m VND	-0.29483*	0.06662	0.000	-0.4732	-0.1165
	Over 18m VND	-0.37177*	0.07189	0.000	-0.5642	-0.1793
Over 10-18 million VND	=< 5m VND	0.40594*	0.12253	0.018	0.0545	0.7573
	Over 5-10m VND	0.29483*	0.06662	0.000	0.1165	0.4732
	Over 18m VND	-0.07694	0.06792	0.831	-0.2578	0.1040
Over 18 million VND	=< 5m VND	0.48288*	0.12547	0.004	0.1257	0.8401
	Over 5-10m VND	0.37177*	0.07189	0.000	0.1793	0.5642
	Over 10-18m VND	0.07694	0.06792	0.831	-0.1040	0.2578

\*. The mean difference is significant at the 0.05 level.

Table 13. Posthoc result for monthly income factor (Appendix 6.14)

Based on the Descriptives results and Posthoc analysis, I could confirm that people with high income level (over 10 million VND per month) are more likely to purchase imported organic food, compared to other segment in terms of income. This conclusion was particularly similar with a research on organic meat purchase in Vietnam context by Nguyen et al. (2019) and other researches (Lee, Fu and Chen, 2019; Sultan et al., 2020).



## **CHAPTER 5. DISCUSSION AND CONCLUSION**

In this chapter, I discussed a summary of the thesis's results and conclusion. Based on these analyses in chapter 4, I also made several recommendations for international organizations, international companies and exporters working in organic food industry to consider when they capturing the partly-serve market in Vietnam and pointed out recommended consumers segments who are more likely to purchase imported organic food. Finally, limitations of my project as well as future research suggestions were discussed.

### **5.1. Findings discussion**

One of the main goal of this thesis is to identify and measure the impact of factors affecting the consumers' buying intention towards imported organic food and whether this intention leads to their actual buying behaviors afterwards. After presenting necessary definitions, theories as well as conducting the systematic literature review, 6 hypotheses were proposed and measurement scales were built and evaluated. This research results showed that there are 5 factors positively affecting the consumers' buying intention towards imported organic food, in the descending impact order including (1) perceived health, (2) trust, (3) perceived quality, (4) perceived safety, and (5) perceived environmental friendly and animal welfare. The study also confirmed there was positive influence of consumers intention on their actual purchase of the products. In addition, demographic variables such as educational level, and income per month did have certain impact on consumers actual buying behaviors.

Although the research on consumers behavior is no longer a new study field, the results of the research did have some useful contributions. First, the study specifically focused on imported organic food, and analyzed until the final actual purchase behavior of consumers instead of stopping at their intention or attitude. Second, once again, the research confirms the important role and influence of the groups of variables in the model, especially the perceived health and trust on the products. Additionally, the research results also showed that the measurement scales of the topic were trustworthy enough to be references and provide empirical evidence for the future research directions. The author also hoped that the results in this study could assist international and global companies in developing solutions and strategies to enter or seize the opportunities to capture Vietnamese partly-serve market, and thereby provide Vietnamese consumers with high-quality imported organic food.

## 5.2. Implication

As discussed in the first chapter, despite being a country with there are still a big bite in Vietnamese market for organic food. Especially, in a recent report of Nielsen (2020), due to COVID-19, the eating habits of Asian consumers are expected to change after the COVID-19 pandemic passes as people tend to re-think of their eating habit during lock-down period and Vietnam was one of the countries having high demand for healthier food. This really makes the “big pie even bigger” in terms of organic food market size in the upcoming years; but how international companies capture it should be considered carefully. Regarding entering Vietnam market, there are several entry modes such as exporting, licensing, joint venture, direct investment... and this project particularly focus on recommendations for organic food exporters in Vietnam as well as companies contributing imported organic food.

Based on the affecting degree of factors on consumers’ buying intention towards imported organic food, I decided to utilized the implication from 2 factors having highest impact, which were Perceived health, and trust on imported organic food.

### 5.2.1. Carrying out campaigns to help raise consumers’ health consciousness towards imported organic food

#### 5.2.1.1. Base proposition

The results from this project indiceted that Perceived health had the strongest impact on consumers’ buying intention towards imported organic food, which was in line with many researches recently within the organic food consumpulption (Chauke and Duh, 2019; Lee, Fu and Chen, 2019; Lee, 2016; Lian, 2017; Luu, 2019).

Item stated	Mean
“Imported organic food products contain more vitamin and mineral”	3.34
“Growing food organically and naturally is better for health”	3.29

“Imported organic food products are healthier than conventional food because it produces without preservatives or artificial color”	3.36
“Choosing imported organic food products are good for ensure our health”	3.35

Table 14. Mean of measurement scale - Perceived health (Source: SPSS result)

From the results of Mean value for each scale, it could be implied that consumers really care about their own health and have certain knowledge about the benefits they can get. However, this perceptions is still in average level. Consumers have not fully been conscious of this.

#### 5.2.1.2. Recommendations

- Organic marketing communication should be deliver on a proper way to educate the consumers about the health benefits that organic food products can offer, especially its credence nature. This could be delivered through social media channels, editorials, or at least through products labels.
- As a country having a collectivistic society which scored 20 according to Hofstede-insights (2020), public campaigns, educational events, fairs, mass media... could be considered to raise consumers’ health awareness and form a better understanding about health perception towards imported organic food

→ By having proper health perception that imported organic food can offer, consumers would be more likely to add such products into daily consumption, especially in the age of COVID-19 where health is put into one of the first priorities.

#### 5.2.2. Promote trust on imported organic food through reliable identification

##### 5.2.2.1. Base proposition

The second powerful influence on consumers’ buying intention of this product among Vietnamese consumers is Trust. The more consumers trust on a particular organic food product, the more likely they would buy them (Sriyakul, Sutduean and Sirivanh, 2020). The result was in line with my previous project as well as many other studies (Ashraf, Joarder and Ratan, 2019;

Bai, Wang and Gong, 2019; Sultan et al., 2020). Not only does trust factor promote consumers' buying behaviors, it also positively affects their frequency of consumption (Golob et al., 2018).

Item stated	Mean
I trust the sellers of imported organic vegetables	3.41
If the imported product is organic labeled and/or certified organic, I believe that it is genuinely organic	3.42
I believe that the imported organic product is really organic	3.41

Table 15. Mean of measurement scale - Trust (Source: SPSS result)

The result indicated that Vietnamese consumers do trust imported organic food products, although it still remains at average level, meaning that they are probably still skeptical about the products or unofficial distributors of the products. In many cases, these sellers could be normal people stating that they have relatives in other countries and trying to sell imported food products.

#### 5.2.2.2. Recommendations

- Due to many scandals related to unknown and self-made organic certification in Vietnam, even at the big supermarket (Tuoitrenews, 2018), marketer of international companies should provide and deliver credible information and certification to the consumers and turn “imported” element into a “unique selling point” in such uncertain market. They could be, one more time, conveyed via mass media or in-store communication.
- Together with the proper and validated certification presentation, increasing the numbers of trustworthy retailers or distributors may also work as it increase the products availability which may impedes consumers from their actual purchase.

→ When consumers strongly trust the products as well as the products' distributors, they would be more confident and willing to buy imported organic food. Additionally, trust would make the business strategy implementation easier.

#### 5.2.3. Target the right segmentation

As concluded in the results, there were differences among groups of consumers by educational level and monthly income. To be more specific, highly educated consumers are supposed to be more likely to purchase imported organic food and those having over 10 million VND per month. In order to gain success, tailoring the marketing strategies for the right customers segment is considered as a key.

#### 5.3 Research limitations and future research suggestions

When conducting this project, there were several limitations which could be improved in the future research. Firstly, research data was collected using convenient sampling, with valid sample number is 237 in Ho Chi Minh City, so the representativeness is not high. Analysis of the Alpha's Cronbach's reliability and EFA analysis had both yielded positive results. However, future researches should conduct on the large-scale which will certainly still be better and more general which represent the whole country.

Additionally, the convenient sampling method in a small sample set of 237 may affect the results of the Robust-Test and ANOVA analysis which could not recognize the difference in imported organic food buying behavior among the customer groups within the same demographic segment such as Gender and Age. Increasing the sample scale in their future research, one more time, could improve this results and help develop better consumers segmentation.

Finally, the results show that the factors mentioned in this study only explain 68,9% of Vietnamese consumers' buying intention. The remaining percentage may result from other determinants or errors. To increase the explanatory power, future researches could add more factors such as taste, self-identity, availability....

#### 5.4. Conclusion

In the context of demand for organic food in Vietnam has not been fully served while predicted to continue growing after COVID-19 pandemic, and the uncertainty in many products aspects...,

I conducted research on 5 factors having positive impact on consumers buying intention towards imported organic food as well as examine the correlation between consumers intention over their actual purchase. Some of the findings in this project were different from other researches, some were in line, depending on many factors such as difference in study context, sampling or analysis method... As mentioned in the beginning, I conducted this research with 5 initial objectives and they were all met.

- First, after forming the problem and developing research topic, I presented necessary concepts and theories related to consumers' buying behaviors, then systematically reviewed the literature in order to propose the research model and hypotheses for my topic. Within the same research object and research context, this developed thesis did provide different and additionally practical outcomes compared to my previous project 1 year ago.
- Then, with 237 valid responses collected via online channels using convenience sampling method, I analysed them using SPSS and able to determine 5 factors affecting consumers' buying intention on imported organic food which were in descending impacting power order including (1) perceived health, (2) trust, (3) perceived quality, (4) perceived safety, and (5) perceived environmental friendly and animal welfare.
- The study also confirmed there was differences of consumers demographic profiles on their actual purchase of the products which were educational level and monthly income.
- Based on the research outcomes, recommendation for exporter of organic food, foreign organizations distributing or selling them to develop marketing and penetration strategies specific to the right target group and enter organic market in Vietnam, including the goal to properly raise consumers health perception while promote consumers trust.
- Finally, limitations were pointed out and suggestions for improvement in the future was presented aiming to create opportunities for Vietnamese consumers to get access to high-quality products.

## **CHAPTER 6. PHILOSOPHY OF SCIENCE**

In this final chapter, research paradigms and philosophy of science underpinning were discussed. In this project, in terms of paradigm, positivism paradigm in which I located my research. A paradigm can be simply understood as a basic viewing system with a set of theoretical assumptions in terms of ontology, epistemology, axiology and methodology (Kuada, 2009) and it affects every decision made in the research process including methodology and research method (Avramidis and Smith, 1999).

In terms of ontology, in my opinion, there are a tangible fact that consumers' buying intention and their actual purchase are affected by a set of determinants and I am trying to examine them. Regarding epistemology, because the propose reality exists, it is able to be emperically examined and I took the point as an outsider, meaning I detach myself from the research data collection and remain neutral. In other words, in my case, all of 7 variables are statiscally tested and by using SPSS software as well as proper techniques, I can achieve the goal of discovering the fact that I am researching without getting involved and become subjective.

As to axiology, the research's inquires were value-free without any moral or ethic break. As an outsider, I investigated the research with integrity

Finally, is the methodology aspects, I conducted a quantitative research and proposed research model based on systematic literature review. Data was acquired objectively through questionnaire with measurement scales satisfied a certain set of criteria. Then I analyzed data using SPSS software and run several tests as well as regression models.

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