



# Factors Affecting Thais' Organic Food Purchase Behavior in Bangkok, Thailand

Ms. Sasanun Kittipakdee

A Thesis Submitted in Partial Fulfillment of the Requirements  
for the Degree of Master of Business Administration in Marketing  
Graduate School of Business

Assumption University

Academic Year 2012

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Major	Marketing
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Academic Year	2012


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The Graduate School of Business, Assumption University, has approved this thesis as a partial fulfillment of the requirements for the Degree of Master of Business Administration in Marketing.


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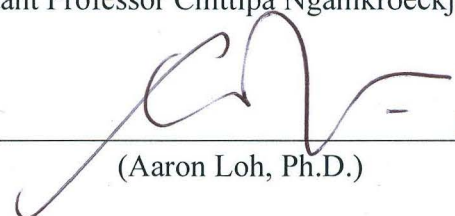
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## ABSTRACT

The purpose of this research is to study the relationship between influence factors (attitude towards buying organic food, health consciousness, environmental attitude, subjective norms, ecological affect, perception of availability, perceived value) and organic food purchase behavior of Thai consumers in Bangkok, Thailand. The researcher collects that data from 400 respondents who had an experience purchasing organic food from Lemon Farm shop by using the questionnaire survey method. The questionnaires were distributed to customers at four branches of Lemon Farm in Bangkok area. All of data were analyzed and summarized by applying the Statistical Package for Social Science (SPSS). Pearson Correlation Coefficient was the statistical tool adopted for interpreting and analyzing the significant relationship between each independent variable and dependent variable. Probability sampling (simple random) and Non- probability sampling (quota and convenience) were the sampling techniques that applied for this study.

The results of this study indicate that all independent variables (attitude towards buying organic food, health consciousness, environmental attitude, subjective norms, ecological affect, perception of availability, perceived value) have a significant relationship with dependent variable (organic food purchase behavior). Firstly, the strongest significant relationship was found between health consciousness and organic food purchase behavior (0.618). Secondly, there was a significant relationship between environmental attitude and purchase behavior (0.590). Thirdly, there was a significant relationship between ecological affect and purchase behavior (0.538). In addition, a relationship between attitude toward buying and purchase behavior was found (0.474), followed by a positive correlation between perceive value and purchase behavior (0.412), positive correlation between subjective norm and purchase behavior (0.258), and the lowest significant relationship between perception of availability and purchase behavior (0.217) were found.

From the finding of this research, it is useful for food manufacturers and organic food marketers in order to have a better understanding about Thai consumers' organic food purchase behavior and make them can set up suitable marketing strategies to attract more customers and extend their market size for the growing of organic food demand in the near future.

## บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างปัจจัยที่มีอิทธิพลต่อการซื้ออาหารเกษตรอินทรีย์ เช่น ทักษะการตัดสินใจซื้ออาหารเกษตรอินทรีย์, ความตระหนักในสุขภาพ, ทักษะการตัดสินใจซื้อ, บรรทัดฐานของบุคคล, ผลกระทบต่อระบบนิเวศ, ความพร้อมของผลิตภัณฑ์, การรับรู้ในคุณค่าของผลิตภัณฑ์ และพฤติกรรมการซื้ออาหารเกษตรอินทรีย์ ของผู้บริโภคคนไทยในเขตกรุงเทพมหานครโดยข้อมูลของงานวิจัยนี้ได้มาจากการเก็บแบบสอบถามจากกลุ่มตัวอย่างจำนวน 400 คนของผู้บริโภคคนไทยที่มีประสบการณ์ในการซื้ออาหารเกษตรอินทรีย์ จากร้านเลมอนฟาร์มทั้ง 4 สาขาในกรุงเทพมหานคร ผลการวิจัยผ่านการวิเคราะห์โดยใช้โปรแกรมสำเร็จรูปทางสถิติ (SPSS) โดยมีสมมติฐานความสัมพันธ์ที่เสนอเป็นเครื่องมือทางสถิติที่ใช้สำหรับวิเคราะห์ความสัมพันธ์ระหว่างตัวแปร 2 ตัวในสมมติฐาน

ผลที่ได้จากงานวิจัยนี้สามารถสรุปได้ว่า ตัวแปรอิสระทุกตัวแปร (ทักษะการตัดสินใจซื้ออาหารเกษตรอินทรีย์, ความตระหนักในสุขภาพ, ทักษะการตัดสินใจซื้อ, บรรทัดฐานของบุคคล, ผลกระทบต่อระบบนิเวศ, ความพร้อมของผลิตภัณฑ์, การรับรู้ในคุณค่าของผลิตภัณฑ์) มีความสัมพันธ์อย่างมีนัยสำคัญกับ พฤติกรรมการซื้ออาหารเกษตรอินทรีย์ โดยพบว่า ความตระหนักในสุขภาพและพฤติกรรมการซื้ออาหารเกษตรอินทรีย์ มีความสัมพันธ์กันสูงสุด (0.618), รองลงมาเป็นความสัมพันธ์ระหว่างทักษะการตัดสินใจซื้อและพฤติกรรมการซื้ออาหารเกษตรอินทรีย์ (0.590), ส่วนความสัมพันธ์ระหว่างความพร้อมของผลิตภัณฑ์และพฤติกรรมการซื้ออาหารเกษตรอินทรีย์ พบว่ามีความสัมพันธ์กันต่ำที่สุด (0.217)

ผลการศึกษาที่ได้จะเป็นประโยชน์สำหรับผู้สนใจทั่วไปโดยเฉพาะอย่างยิ่งสำหรับ กลุ่มผู้ผลิตอาหาร หรือฝ่ายการตลาดของธุรกิจอาหารเกษตรอินทรีย์ ในการที่จะทำความเข้าใจเกี่ยวกับพฤติกรรมการเลือกซื้ออาหารเกษตรอินทรีย์ ของผู้บริโภคไทยและยังมีประโยชน์อย่างยิ่งสำหรับการกำหนดกลยุทธ์การตลาดที่เหมาะสมเพื่อดึงดูดใจผู้บริโภคไทยและยังสามารถช่วยรองรับการขยายตัวของตลาดอาหารเกษตรอินทรีย์ ในอนาคตอันใกล้ได้อย่างเหมาะสมอีกด้วย

## ACKNOWLEDGEMENT

This thesis was completed with assistance and cooperation of many contributors who have given me their good help, great supports, excellent suggestion and understanding. I would like to avail this opportunity to express appreciation to all the people who sacrificed their precious time to provide information and offer support for the completion of the thesis.

First and foremost, I would like to express my sincere appreciation to my thesis advisor, Assistant Professor Dr. Sirion Chaipoopirutana, for being my thesis advisor and for all her generous guidance, statistical skill, valuable suggestion, consistent support and encouragement throughout the progress of this thesis. I would like to express my gratitude to all respected committee members of this thesis: Dr. Wisaroot Pariyaprasert, Dr. Aaron Loh and Dr. Chittipa Ngamkroekjoti for their helpful suggestions and valuable comments.

I would like to express my gratitude to my grammar editor, Acharn Srinath Ramnath for his great supports, advice, guidance and helps for me.

My sincere thanks are also extending to my friends that I always got their encouragement, great support, friendship, kindness. Also, the strongest relationship between us and my best friend were occurring during this thesis time. I am very grateful to my two best friends: Ms. Achaya Klavaech and Ms. Chayanee Sukawat.

Most importantly, I would like to express my gratitude to my deepest love my father, my mother, my brother, my sister, and my boyfriend for their love, understanding, warmth, encouragement, inspiration and very great support throughout this thesis completely done. Without their support, the completion of MBA study would probably just be a far-away dream and this thesis would have never been accomplished.

Sasanun Kittipakdee

August 12<sup>th</sup>, 2012

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## CHAPTER 1

### GENERALITIES OF THE STUDY

#### 1.1 Introduction

The continuous development of world' economy is improving the living standard of people but on the other hand; more negative environmental impacts such as global warming, air and water pollution, industrialization, more carbon dioxide emission from burning fossil fuel, and deforestation cause environmental problems that affect health and decline in the quality of human life (United Nations Environment Programme, 2002). In the past few decades, developing countries like Thailand rapidly grow and therefore lead to deterioration of the environment (World Bank, 2004). Dwyer (2009) mentioned that many people tried to protect the environmental as their social responsibility as environmental concern has become the main popular issue as a result of global warming. Thus, in this situation the companies are willing to utilize green opportunities and pay more attention to green marketing (Molina-Azorin et al., 2009; Haden et al., 2009; Chen, 2010). The business should apply green marketing strategies in order to improve the product's perceived value and it can enhance their competitive advantage (Chen and Chang, 2012). Since consumers pay more attention to the environmental protection, environmentally conscious people become more popular in the world because those consumes group tried to change their purchase behavior in order to recover the environment (Chase, 1991; McIntosh, 1991).

Paladino (2005) stated that environmental attitude is an important motivation for consumers' purchase behavior towards green products or organic food because environmentally conscious people more probably purchase organic food and they have expectations to consume environmentally safe products as many previous studies always mentioned about one of the important factors that affect purchasing behavior is subjective norms, which refers to the perceived social pressure to behave with a certain behavior (Ajzen, 1991). Supporting with Bamberg, (2003) and Kalafatis et al., (1999) also mentioned that subjective norm have a significant relationship with intention and leading to the purchase behavior of green products or organic consumers. If consumers believe that organic food or green products are good, consumers will have more willingness to buy those products.



Nowadays, many people in many big cities face the same problems, for example: a hectic life that leads to several severe health problems such as cancer, heart disease and diabetes. Worldwide consumers are becoming more concerned about health, quality of food or nutrition (Gil et al., 2000). One key factor that can reduce this problem is the quality of food which people consume every day. Therefore, green products or organic food has become the best choice of consumers who take care for their health. Chen (2010) is mentioned that consumers are more willing to buy organic food or green products because they perceive that organic food product is safe for their health and not harmful to the environment. Given the environmental and health conscious trend affects the increase for organic product's demand. Organic consumers who perceive the value of the product are willing to buy it but product price is one of the influential factors that affects to the decision-making process because the price of organic food is higher than conventional food. Mintel (2000) suggested that existing organic food consumers generally accept the premium price because they perceive the value but at the same time consumers who do not purchase claim that the higher price is the main reason that they decide to not purchase organic food. Maga (1983) also noticed that some organic consumers believe that organically grown fruits have good taste, better nutritional value and is safer for their health than conventionally grown and processed food.

Consequently the environmental problems have affected the resource usage of the people. Hence, the marketing program of the company has been changed from classical marketing to green marketing in order to serve the needs of customers who are concerned with the environment. Green marketing began in Europe in the early 1980s when certain products were found to be harmful to the earth's atmosphere. Therefore, new types of products were created, called "green product" that would cause less damage to the environment. The development of ecologically safer product, recyclable and biodegradable packaging, energy-efficient operations, and better pollution control are all aspects of green marketing. Green environment and eco-marketing are part of the new marketing approaches which do not just refocus, adjust or enhance existing marketing thinking and practice, but seek to challenge those approaches and provide a substantially different perspective (Belz and Peattie, 2009). Green marketing activities involve activities of products and service in terms of developing, differentiating, pricing, and promoting that create environmental customers satisfaction without environmental damage (Chen and Chang, 2012). The company that adds "green" claims or eco-labels to their marketing strategy may enhance the

brand image and assure market share among the growing number of environmentally concerned consumers (Source: <http://www.sba.gov/content/green-business-guide>, Accessed on May 25<sup>th</sup>, 2012).

Green marketing can be divided into 3 levels (Sunthana, 2009) which are: 1) the green level that is the marketing strategy that focuses on sales volume only and does not focus on measuring change in society, creating new environmental-friendly product, service and process that differ from the original: examples of green level are supermarkets that provide paper bags instead of plastic bags for their customers, energy-saving electrical, hybrid engine cars, etc. 2) the greener level is the marketing strategy that focuses on environmental conservation rather than sales volume, creating marketing activities for environmentally concerned customers in order to enhance their awareness with greener level measuring both sales volume and number of people that join the activities. And 3) the greenest level is the marketing activity, which creates new innovations that affect to social change such as car sharing campaigns.

Schlegelmilch et al., (1996) mentioned green products as products that contain with recycled material, do not apply animal testing, are environmental- friendly, reduce packaging or material usage, less toxic emission, reusable, ozone-friendly aerosols, efficiency-energy products, organically grown or sustainably produce, locally produced and socially responsible.

Businesses and consumers that want to be environmentally responsible are looking for the ways that make them confident when they go to market. Consequently, a wealth of certification labels has been developed in a variety of industries and contexts. Certification labels help reduce the mistake of information between producers and consumers by showing the credible characteristics of the product. An example of certification label is eco-labels that reflect adherence to some standard associated with food safety and environmental performance (Robert, 2011).

**Figure 1.1:** Green label: Thailand Eco-label for sustainable society and better quality of life



**Source:** <http://www.tei.or.th/greenlabel/about.html> (Accessed on May 11<sup>th</sup>, 2012).

Figure 1.1, shows the Thailand Green Label that is an environmental certification awarded to specific products that are shown to have minimum detrimental impact on the environment in comparison with other products serving the same function. The purposes of awarding the green label are: to provide reliable information and guide customers in their choice of products, to create an opportunity for customers to make an environmentally conscious decision, and to reduce environmental impacts which may occur during manufacturing, utilization, consumption and disposal of products. The Thai Green Label Scheme applies only to products and services (not including foods, drinks, and pharmaceuticals).

Organic food is one type of green product which refers to food that is generally free of synthetic substances, contains no hormones or antibiotics, and is not processed using irradiation or fertilized with sewage sludge, is grown without the use of most conventional pesticides, does not contain genetically modified ingredients, does not have industrial solvent, or chemical food additive (Allen and Albala, 2007). Organic farming refers to the whole system of ecological sustainable agriculture that depends on biological process in order to maintain the quality of soil and improve the quality of plant and animal (The USA's Department of Agriculture, 1981). The organic product is can not possible to prove by visual inspection, but it must be the products that come from growers, producers, or importers who are registered to inspection. The United Kingdom Register of Organic Food Standards (UKROF) mentions on organic production system as the system that design to produce optimum quantities of high nutritional quality food by manage to avoid usage of agrochemical and try to minimize damage to the human and environment (Jones, Clarke-Hill, Shears and Hillier, 2001).



## Organic Certification in Thailand

Organic standard and certification can help raise consumer confidence, and differentiate organic product at point of sale. In order to ensure the credibility of certification standards, transparency and independence are key criteria. Several certification bodies offer organic certification services for producers in Thailand. Certification bodies in Thailand are in 3 categories: Thai government bodies, Thai private entities, and foreign companies.

**Figure 1.2:** Organic Thailand logo



**Source:** <http://www.greennet.or.th/> (Accessed on May 11<sup>th</sup>, 2012).

Figure 1.2 shows the Organic Thailand logo. The Department of Agriculture established the Organic Crop Institute and approved “Organic Thailand” as a national logo in 2002. The Organic Thailand is the standard for organic crop production in compliance with international standards. The Organic Thailand brand was established through 5 pilot projects producing 15 organic crops, managed in collaboration with farmers, individual experts, and the private sector and consumer groups. The products that carry this logo not only assure that these products are chemical-free but GMO-free as well.

**Figure 1.3:** Organic Agriculture Certification of Thailand

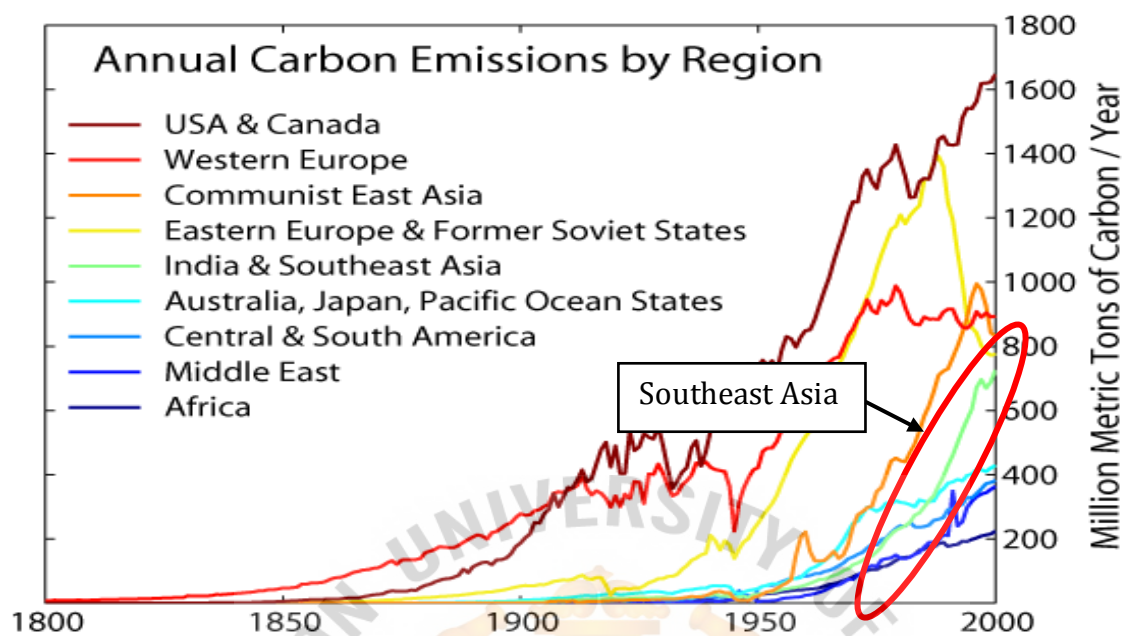


**Source:** [http://thailand.ipm-info.org/safe\\_food/logos.htm](http://thailand.ipm-info.org/safe_food/logos.htm) (Accessed on May 11<sup>th</sup>, 2012).

Figure 1.3 is the IFOAM organic logo. In 2002, The Organic Agriculture Certification Thailand was the first certification body in Asia to receive International Federation of Organic Agriculture Movements (IFOAM) accreditation. And the IFOAM logo can also be found on some products of Thailand. IFOAM is the worldwide umbrella organization of the organic agriculture movement, with about 750 member organizations and institutions in about 100 countries all over the world and it was established in 1972.

For Thai private certification body in Thailand, it has only one from Chiang Mai province that certifies farms and crops. The certification method is based on collaboration between growers and consumers to accept organic product. Moreover, the foreign company certifies about 50% of the Thai organic farmlands.

**Figure 1.4:** Global carbon emission



**Source:** [www.greennet.or.th](http://www.greennet.or.th) (Accessed on May 24<sup>th</sup>, 2012).

The graph in Figure 1.4 displayed the trend of carbon emission that was released by all regions from year 1800 to 2000 and it was found that the overall trend had sharply increased. Southeast Asian countries including Thailand have the same trend, facing the same environmental problems as other countries.

### Global Organic Market

According to the survey on certified organic agriculture worldwide, the data of organic agriculture are available from 160 countries (Data as December, 2010). The regions with the largest areas of organic agricultural land are Oceania, followed by Europe and Latin America. The countries with the most organic agricultural land are Australia, Argentina, and the United States. Compared to the survey data in 2009, it was found that organic agricultural land decreased slightly by about -0.1%. There was strong growth in Europe that area increased by 9% (source: [www.organic-world.net](http://www.organic-world.net), Access on June 2<sup>nd</sup>, 2012). However, in Asia the organic area decreased mainly due to a major decline of organic farmland in India and China.



Global sales of organic food and drink reached US dollars 59 billion in 2010. The market has expanded over three-fold in ten years (2000: 17.9 billion US dollars; source: [www.organic-world.net/fileadmin/documents/yearbook/2012/fibl-ifoam-2012-summary.pdf](http://www.organic-world.net/fileadmin/documents/yearbook/2012/fibl-ifoam-2012-summary.pdf), Access on 2 June, 2012). Although growth has slowed since the financial crisis that started in 2008, sales have continued to increase at a healthy consumer trend. Demand of organic products is concentrated in two regions, North America and Europe, which comprise 96% of the global revenues

The global organic market has grown rapidly in recent years. The North America and European Community's organic food markets are the world's leading single market and Thailand has been a major exporter of tropical fruits and vegetables to the EU market and is recognized as a source of reliable and quality products. Thailand's organic sector is a small part but has also grown very rapidly over the past 10 years in line with the global trend, due to growing consumer consciousness, crisis in the farm sector and environmental concern.

Organic agriculture is the most dynamic and rapidly growing sector of the global food industry. It has grown from a small-scale niche market to the international phenomenon with increasing consumer consciousness about safety and environmental issues.

### **Asia's Organic Market Trend**

The total organic agricultural land area in Asia is about 7% of the world's organic agricultural land (source: [www.organic-world.net](http://www.organic-world.net), Access on June 2<sup>nd</sup>, 2012). The leading countries by area are China and India; Timor-Leste has the most organic agricultural area as a proportion of total agricultural land. Compared to 2009, there has been a decrease of organic land, due to declines in China and India. Interestingly, the decline in land has not affected trade. Reports on the Chinese domestic market show a picture of strong growth. India's export volumes have increased by 20% over the previous year. Export destination figures indicated growing trade in the region. Thirteen percent of export by volume was in Asia.

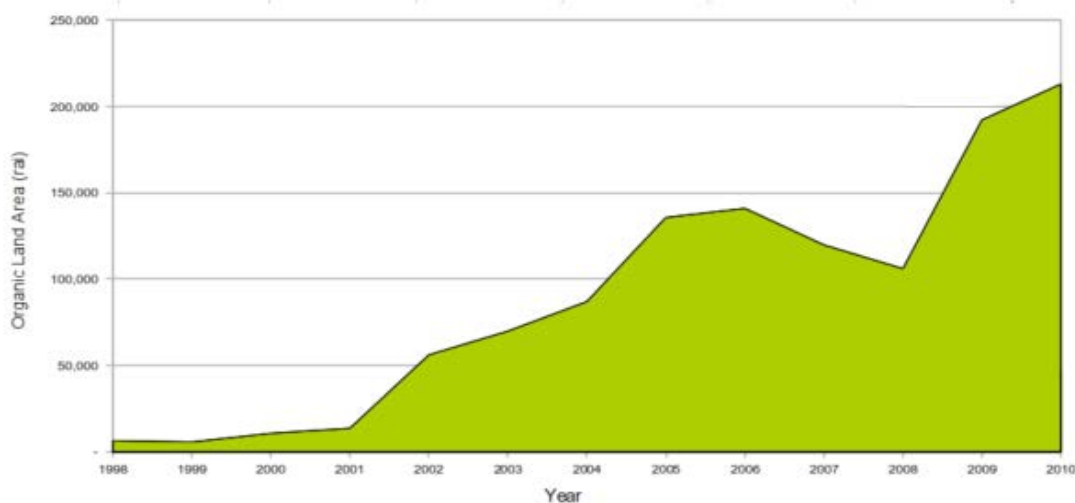
## Thailand Organic Market Trend

Thailand's organic sector is still at a relatively early development stage as most production systems are still simple, and without using technology. Most organic products are basic unprocessed commodities such as fresh fruit, vegetables and rice. The emerging popularity of organic agriculture in Thailand has resulted from a combination of three major trends. The first trend is an increasing public awareness of healthy living. Consuming natural and safety food is seen as important for both preventive and curative health care, leading to a growing concern and demand for safe foods, especially among urban middle classes with higher disposable incomes. Organic foods are seen as the safest option as they are perceived as having low or zero contamination by agro-chemicals (Source: [www.greennet.or.th](http://www.greennet.or.th), Access on June 2<sup>nd</sup>, 2012).

The second trend is the development of sustainable agriculture in response to the crisis faced in the farm sector. Depressed farm prices and declining productivity of high-input cash-crop monoculture systems have helped drive the establishment of many grassroots community development organizations and NGOs to promote more environmentally sustainable agriculture system in Thailand. The Alternative Agricultural Network (AAN) was established in 1989 with the co-operation of NGOs and farmer leaders, and is the beginning of a major driving force in the organic movement. AAN's activities focused mainly on creating a system for transferring knowledge and experience to grassroots NGOs and leaders of the farmers.

The third trend is the rise of environmental awareness, starting from a concern for environmental protection and conservation, but later transforming into a broader agenda covering the impact of conventional agriculture on environment, ecology and biodiversity, including land use, landscape, biodiversity, and pollution caused by use and mis-use of agro-chemicals.

**Figure 1.5:** The growth of Thai organic farming



**Source:** [www.greennet.or.th](http://www.greennet.or.th) (Accessed on May 21<sup>st</sup>, 2012).

Figure 1.5 shows the number of Thai organic farm areas from 1998 to 2010. This graph can display the continuous and rapid-growth of organic farming in Thailand. The production of Thai organic farming is used for both domestic and export markets. Thailand has been a major exporter of tropical fruits and vegetables to the EU market and the most important product of Thailand is rice followed by vegetables, fruit, corn then herbs and spices.

Organic food has become a popular issue at present for many people and it is an interesting topic, therefore the researcher considers learning this issue by studying about the influence factors that affect the consumers' actual purchase behavior of the organic food. The factors that the researcher studied are: health consciousness, environmental attitude, attitude toward buying, subjective norm, ecological effect, perception of availability, and perceived value.

This study focuses on Bangkok area because Bangkok is a capital city of Thailand and it is the largest urban area. Bangkok is the center of politics, society and is also the economic hub of Thailand and is one of the leading cities in Southeast Asia. The number of population in Bangkok area was 9.3 million people (Data of December, 2010) (Source: [www.un.or.th/thailand/index.html](http://www.un.or.th/thailand/index.html)). Bangkok has five borders which are Nonthaburi, Pathum

Thani, Samut Prakan, Samut Sakhon and Nakhon Pathom. Bangkok has 50 districts or khet and subdivided into 169 khwaeng. Bangkok is the capital city of Thailand, the economic centre and has the largest density of population. In addition, the high number of people who are living and working in Bangkok area may lead to more consumption of goods and services and in terms of economic growth, the people who have high incomes mostly live in Bangkok so it can be assumed that the businesses that operate in Bangkok area can enjoy continuous growth.

The target populations in this research were people who had experienced purchasing organic food products in Bangkok area.

## **1.2 Statement of the Problems**

The Bangkok organic retail shops such as Lemon Farm which was established in 1999 that is the early stage for organic food product in Thailand. So the company needs to expand its branches in order to get more customers to shop for organic food. Supporting the healthy trend, people are willing to consume organic food or green products. But in Thailand, there are a few shops selling organic food and they are mostly in shopping centres. Lemon Farm shops can be found at gas stations and malls. In the future, the company may try to build more shops around Bangkok.

This research focuses to study the factors that influence the organic food purchasing behavior of Thai consumers such as attitude towards buying, health consciousness, environmental attitude, subjective norm, ecological affect, perception of availability and perceived value. Based on the results of this study, Lemon Farm may apply to develop in order to gain more market share or expand and open more branches.

The purpose of this study is to clarify the factors that might affect the organic food purchase behavior of experienced Thai consumers, so it is necessary to test the relationship between each independent variable and dependent variable. All factors will offer support to this study. The research questions that will be answered from this research are shown below:



1. Is there any relationship between attitude toward buying organic food and organic food purchase behavior?
2. Is there any relationship between health consciousness and attitude toward buying organic food?
3. Is there any relationship between health consciousness and organic food purchase behavior?
4. Is there any relationship between health consciousness and environmental attitude?
5. Is there any relationship between environmental attitude and organic food purchase behavior?
6. Is there any relationship between subjective norm and attitude toward buying organic food?
7. Is there any relationship between subjective norm and organic food purchase behavior?
8. Is there any relationship between ecological affect and organic food purchase behavior?
9. Is there any relationship between perception of availability and organic food purchase behavior?
10. Is there any relationship between perceived value and organic food purchase behavior?

### **1.3 Research Objectives**

The main objective of this study is to identify factors that involve Thai consumers regarding their organic food purchase behavior. This research focuses on studying the attitude toward buying organic food, health consciousness, environment attitude, subjective norm, ecological affect, perception of availability and perceived value. The following are the main objectives of the study:

1. To study the relationship between attitude toward buying organic food and organic food purchase behavior.
2. To evaluate the relationship between health consciousness and attitude toward buying organic food.
3. To examine the relationship between health consciousness and organic food purchase behavior.

4. To analyze the relationship between health consciousness and environmental attitude.
5. To test the relationship between environmental attitude and organic food purchase behavior.
6. To assess the relationship between subjective norm and attitude toward buying organic food.
7. To investigate the relationship between subjective norm and organic food purchase behavior.
8. To explore the relationship between ecological affect and organic food purchase behavior.
9. To determine the relationship between perception of availability and organic food purchase behavior.
10. To clarify the relationship between perceived value and organic food purchase behavior.

#### **1.4 Scope of the Research**

This research focuses on finding the factors that affect the organic food purchase behavior by analyzing the relationship between independent and dependent variables. The independent variables include attitude toward buying organic food, health consciousness, environment attitude, subjective norms, ecological affect, perception of availability and perceived value. Organic food purchase behavior represents the dependent variable. Moreover, the researcher applied the Theory of Reason Action (TRA) and the Theory of Planned Behavior (TPB) models as theoretical supports for this research.

The target populations for this research were consumers who had an experience in purchasing organic food from Lemon farm shops in Bangkok, Thailand. The researcher decided to select Lemon farm shops for this study because there are 9 branches in Bangkok so it was convenient for the researcher to distribute and collect the questionnaires. The questionnaire consisted of four parts in which the first part was screening questions about the organic food purchasing experience. The second part included the factors that affect the organic food purchase behavior which were attitude toward buying organic food, health consciousness, subjective norm, ecological affect, perception of availability, perceived value and environment attitude. The third part was about the organic food purchase behavior and the last part was for personal information of the respondents.

## **1.5 Limitations of the Research**

This research selected study only one city of Thailand (Bangkok) and the actual number of population was unknown. Thus, the sample size that the researcher adapted in this research may not be perfect in order to represent the characteristics of the entire target population. Secondly, this research selected to study some factors that referred from previous studies so it did not cover all the factors that affect the consumers' organic food purchase behavior. Thirdly, this was a general study on consumers' organic food purchase behavior for any kind of organic food, so the information that are shown in this research may not be specific and sufficient enough for a particular product. In addition, this study was select to target on Lemon Farm customers so the result of this study may not good enough to apply to other organic shop. The budget was one of the research constraints in this study.

The findings of this research also have time limitation. Since the results of this study were based on the analysis of current collecting data, the findings may have shortcomings and further research may be necessary. Finally, this study was limited in terms of period of time. The researcher were collected the data during June - August, 2012 so the findings cannot be generalized for all times because respondents could always change their mind in each period of time or be influenced by internal and external motivators.

## **1.6 Significance of the Study**

Global warming and the consumption habits of the general public have a great influence on pollution as many people have more concern and awareness about environmental protection and food security which have been fuelled by rapid economic growth and food safety scandals across the globe.

This research provides the information that is useful for understanding the consumers' organic food purchase behavior in terms of their environmental attitude, attitude toward buying organic food, ecological affect, subjective norms, perceptions towards availability, perceived value and health consciousness. This research could benefit marketers in order to generate marketing strategies to keep existing customers and attract the new customers and to understand what consumers are concerned about (Endacott, 2004).

## 1.7 Definitions of Terms

**Attitude toward Buying:** is the extent to which consumers have a favorable or unfavorable appraisal or assessment of the behavior in question. Thus, the attitude towards buying behavior refers to the degree to which consumers express their likes or dislikes towards purchasing a particular product (Ajzen, 1991).

**Ecological Affect:** is the extent of emotional involvement where people have a regard for environmental issues (Dispoto, 1997).

**Environmental Attitude:** is a degree of judgment concerning environmental pollution, environmental damage and conservation practices and recycled use (De Magistris and Gracia, 2008).

**Green Products:** are the products that are recycled and do not use animals for testing, are environmental-friendly, detergents and chemicals, organically-grown fruit and vegetables, ozone-friendly aerosols, energy-efficient product (Schlegelmilch et al., 1996).

**Health Consciousness:** is the level of readiness to take healthy actions. It is a broad perception of the customers about healthy concept. The higher the level of consciousness, the higher the readiness of the customers to take the healthy actions (Schifferstein and Oude Ophuis, 1998).

**Organic foods:** refer to the whole process of producing foods that must be grown and produced by using organic methods that is safe, friendly to the environments and protects biodiversity. There are no toxic substances, pesticides or synthetic fertilizers added in the crops process (Food Marketing Institute).

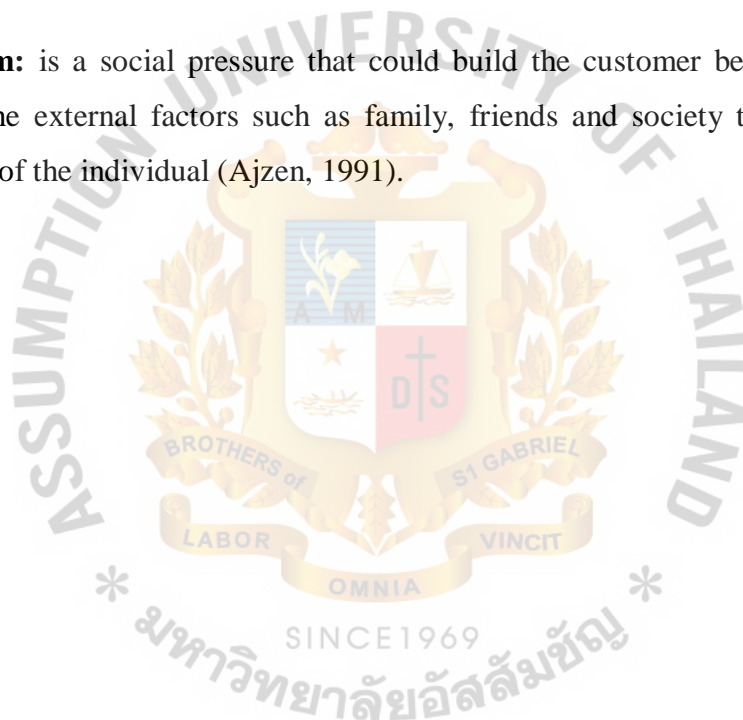
**Organic food Purchase Behavior:** is the behavior to consume those products that will not harm the environment but will be recycled for use or will be responsive to environmental concern (Mostafa, 2007).



**Perceived Value:** consumers' perceived value is a wide range of concept, which presents a balance between benefits and costs that are perceived by customers (Uлага and Chacour, 2001).

**Perception of Availability:** the considerable gap between behavioral intention and actions can be formed by perceived behavior control. Perceived behavior control refers to an individual perception of how easy or how difficult the situation will be for him or her to perform a particular behavior, and sufficiency level of product availability can determine the level of easiness or difficulty of purchasing goods, which is clearly out of the consumers' control (Ajzen, 2002).

**Subjective Norm:** is a social pressure that could build the customer behavior. Subjective norm includes the external factors such as family, friends and society that can affect the decision making of the individual (Ajzen, 1991).



## CHAPTER 2

### LITERATURE REVIEW

This chapter reviews the related literature and theories in order to form the research framework and is divided into three parts: The first part reviews the relevant theories to support the conceptual framework. The second part discusses about the related literature review that indicates relationship between each variable and the last part is the previous studies that are discussed and used to build the conceptual framework of this study.

#### 2.1 Theory and Model necessary to form the conceptual framework

This part describes the theories and model necessary that are used to develop the conceptual framework. The Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB) are discussed in this section. Both theoretical models are used for building the framework in this study.

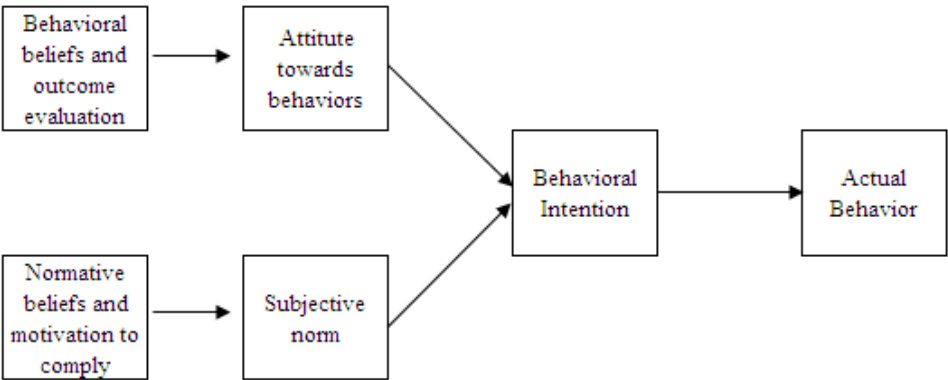
##### 2.1.1 Theory of Reason Action (TRA)

Fishbein and Ajzen (1975) developed the Theory of Reason Action (TRA) in 1975 and now TRA is considered as an excellent model of psychological processes that explain in observed link between attitude and behavior. The TRA suggests that the cause of behavior is a person's intention to engage in the behavior. Attitudes influence behavior by their influence on intentions, which are decision to act in a particular way. And intention is explained to be the person's motivation to exert effort to carry out a behavior. The intention is determined by the consumers' attitude and their subjective norm toward the behavior. Fishbein and Ajzen (1975) defined the subjective norm as "the individual perception that most people who are important to him think he should or should not perform the behavior in question"

This theory can be summarized by the following equation:

$$\text{Behavioral Intention} = \text{Attitude toward behavior} + \text{Subjective norms}$$

**Figure 2.1:** The Theory of Reason Action (TRA) model



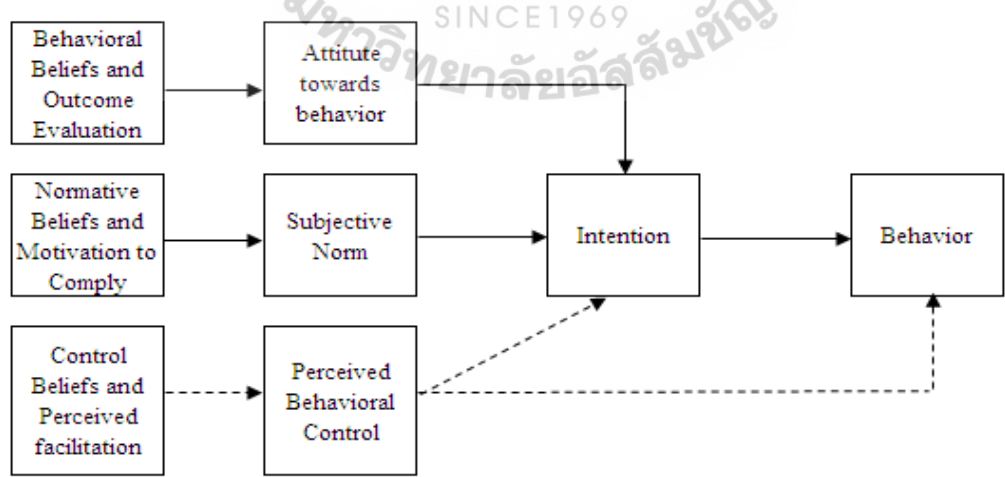
**Source:** Ajzen, I. and Fishbein, M. (1980). *Understanding attitude and predicting social behavior*. New Jersey: Prentice Hall, Englewood Cliffs.

According to the Figure 2.1, TRA was developed to examine the relationship between attitude and behavior by Fishbein and Ajzen in 1975. The components of TRA consists of three constructs which are: behavioral intention, attitude toward behavior and subjective norm. Behavioral intention measures a person's relative strength of intention to perform a behavior and it is determined by attitude and subjective norm (Ajzen and Fishbein, 1975). Attitude refers to the beliefs that positive or negative outcomes of a person's behavior with evaluation of these consequences by persons whose attitudes are influenced by a combination of two related factors: beliefs about the outcome of the behavior and evaluation of the potential outcome. Subjective norm is an individual's perception that those important references of his or her personal opinion that he or she should or should not behave in question (Ajzen and Fishbein, 1980). Subjective norms are influenced by their perception of the belief of those around them such as parents, friends, colleagues and partners. TRA suggested that a person's behavioral intention depends on the person's attitude about the behavior and subjective norm. Behavioral intention indicated how much effort an individual would like to commit to perform such behavior. Hence TRA model behavior is more predictable when an individual's behavior is totally under volitional control (Bright, 1993). The best predictor of behavior is intention; the higher the intention, the higher the behavior will occur. If a person intends to a behavior then it is likely that person will do it.

2.1.2 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) is a theory that studies about the relationship between attitudes and behavioral intention and constitutes a powerful tool to identify consumers’ behavior intention (Ajzen, 2001). TPB is a very powerful and one of the most predictive models which is used for explaining human behavior that is a theoretical improvement of the theory of reasoned action (TRA) model that, was created by Ajzen in 1991, through the uncontrollable elements involved in consumers’ performances of a particular behavior that has been assessed (Ajzen, 1991). In other words, the TPB model can be used to predict the consumer behavior when an individual’s behavior is not under full volitional control (Bright, 1993). The TPB model has been applied to study the relation among beliefs, attitudes, behavioral intentions and behaviors in various fields such as advertising and public relations. According to the TRA, if people evaluate the suggested behavior as positive (attitude), and if they think their significant others want them to perform the behavior (subjective norm), this result has a higher intention (motivation) and they are more likely to do so. A high correlation of attitude and subjective norm to behavior intention, and subsequently to behavior has been confirmed in many studies (Ajzen and Fishbein, 1980). In addition, Ajzen (1991) introduced the Theory of Planned Behavior (TPB) by adding the new component “perceived behavioral control” in TRA and has become the model of TPB as shown in Figure 2.2

Figure 2.2: The Theory of Planned Behavior (TPB) model



Source: Ajzen, I. (1991). The theory of Planned Behavior. *Organizational behavior and Human Decision Process*, 50(2), 179-211.



Figure 2.2, shows the TPB model that was proposed by Icek Ajzen in 1991. The Theory of Reasoned Action (TRA) model has limitation to predict behavior as behavioral intention can not determine the behavior where an individual's control over the behavior is incomplete, so Ajzen proposed the TPB model by adding a new component, "perceived behavioral control" in TRA and that become the model of TPB to be used for predicting consumers' behavior. Perceived behavioral control is determined by two factors: Control beliefs and Perceived facilitation. Perceived behavioral control indicated that a person's motivation is influenced by how difficult the behaviors are perceived to be, as well as the perception of how successfully the individual can or can not perform the activity. If a person holds strong control beliefs about the existence of the factor that will facilitate a behavior, then the individual will have high-perceived control over a behavior. Conversely, the person will have a low perception of control if they hold strong control beliefs that impede the behavior.

As indicated in Figure 2.2, a solid line ( $\rightarrow$ ) stands for the Theory of Reasoned Action (TRA) model and a dotted line ( $--\rightarrow$ ) stands for a new component of behavioral intention that makes TPB is a theoretical improvement of TRA, which is perceived behavioral control. The TPB posits that behavioral intention is a function of an individual's belief in three areas: 1) behavioral beliefs (link to attitude toward behavior) - meaning their beliefs about the probable outcome of the behavior, 2) normative beliefs (link to subjective norm) – meaning their beliefs about the normative expectations of significant others, and 3) control beliefs (link to perceived behavioral control) – meaning the beliefs regarding absence or presence of factor that might facilitate or impede the performance of the behavior (Ajzen, 1991). And Ajzen (1991) mentioned that to fulfill a particular behavior, behavioral intention is the most important factor to predict human behavior. TPB provides the clear model to study the influence of attitude, subjective norm and perceived behavioral control on consumers' purchase intention. So the actual purchase behavior of consumer has been exhibited. The TPB model works well when people behave under incomplete volitional control.

## **2.1.3 Supporting Literature**

### **2.1.3.1 Attitude**

#### **Definition of Attitude**

Attitude influences the lives of everyone, and affects the ways in which individuals judge and react towards other people, objects and events. When people often mention “attitudes” in conversation, few probably, could define precisely what this popular term actually means. Various studies suggest that attitudes play a very important role in personal and professional life. Therefore, the attitudes-favorable or otherwise-which are held by people reveal some deeper understanding of their nature and affect is called for.

Ajzen and Fishbein (1980) mentioned that attitude as the degree of favorableness and unfavorableness of an individual’s feeling towards a psychological object. Attitude is also acted as a predictor of an individual’s behavior in the Theory of Reason Action (Ajzen and Fishbein, 1975). However, Fishbein and Ajzen (1975) also pointed out that attitude is an individual’s positive or negative feelings (evaluative effect) about performing the target behavior. However, from a social, psychological viewpoint, attitude as a psychological phenomenon not only refers to people’s inner experience, but also covers people’s behavioral tendencies.

Allport (1967) revealed that attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which he or she is related.

Udell (1971) concluded that attitude describes the way people may incline or decline to react to a stimulus. According to Loudon and Della’s study (1988), the researcher conceptualized attitude as an enduring organization of motivational, emotional, perceptual and cognitive processes with respect to some aspect of our environment. It is a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object. Thus, an attitude is the way we think, feel and act toward some aspect of our environment.

Asseal (1995) pronounced that attitudes are consumer's learned tendencies to evaluated brands in a consistently favorable or unfavorable way; that is consumers evaluate brands in a particular brand on an overall basis from poor to excellent. Similar to Kinnear and Taylor (1996) who noticed attitude as an individual's enduring perceptual, knowledge-based, evaluative and action-oriented processes with respect to an object or phenomenon. In addition, Churchill (1995) implied that attitude is used to refer to an individual's "preference, inclination, view or feelings toward some phenomenon". Attitude is one of the more important concepts in marketing literature, because it is generally thought that attitudes are related to behavior.

Mowen and Minor (1998) proposed that an attitude describes a person's enduring favorable or unfavorable cognitive evaluations, emotional feelings and action tendencies toward some object or idea. People have attitude toward almost everything: religion, politics, clothes, music, food, etc. Attitudes put people into a frame of mind of liking or disliking an object. Attitudes lead a person to behave in a fairly consistent way toward similar objects. For many reasons, it can be concluded that attitudes are very difficult to change. A person's attitudes settle into a consistent pattern, and to change a single attitude may require major adjustments in other attitudes.

East (1999) summarized that attitudes are learned and thus the attitudes relevant to purchase behavior are formed as a result of direct experience with the product, including: word-of-mouth information acquired from others or exposure to mass-media advertising. Furthermore, Frank (2000) also recognized attitude as a person's enduring favorable or unfavorable evaluations, emotional feelings and action tendencies toward some object or idea. Similar to Schiffman and Kanuk (2004) who mentioned that attitude is a psychological tendency that is expressed by evaluating the intention to buy with some degree of favor or disfavor. In accordance with Hanna and Wozniak (2001) who concluded that attitudes are consistent whether favorable or unfavorable that people hold toward products, services, people, places or events and attitudes can affect an individual's behavior in a myriad of ways. Identically, Huang and Lee (2004) explained that an attitude is an individual's disposition to respond in a certain way to an object, person, institution or event or to any other discriminable aspect of the individual's world. Attitude is the lasting, general evaluations of people, objects or issues.

Then, from all of the definitions above, attitudes can be concluded that they are formed by four characteristics:

1. Attitudes are mental state.
2. Attitudes are learned.
3. Attitudes are characterized by consistency.
4. Attitudes are responsive.

## **Components of Attitudes**

Schiffman and Kanuk (2004) mentioned that there are three components of attitudes: cognitive, affective and conative. Each of these attitude components is discussed in more detail below.

### **Cognitive Component**

Cognitive component or thoughts about objects are also called beliefs. The cognitive component consists of a person's cognition, that is knowledge and perceptions that are acquired by a combination of direct experience with the attitude object and related information from various sources (Hanna and Wozniak, 2001). Also, Hanna and Wozniak (2001) stated that this knowledge and resulting perception commonly take the form of belief, that is, the consumer believes that the attitude object possesses various attributes and that specific behavior will lead to specific outcomes. An individual's belief could be based on knowledge, opinion, faith or value systems. Whereas attitude refers to a person's favorable or unfavorable evaluation of an object, belief represents the information that he or she has about the object. Specifically, a belief links an object to some attribute.

### **Affective Component**

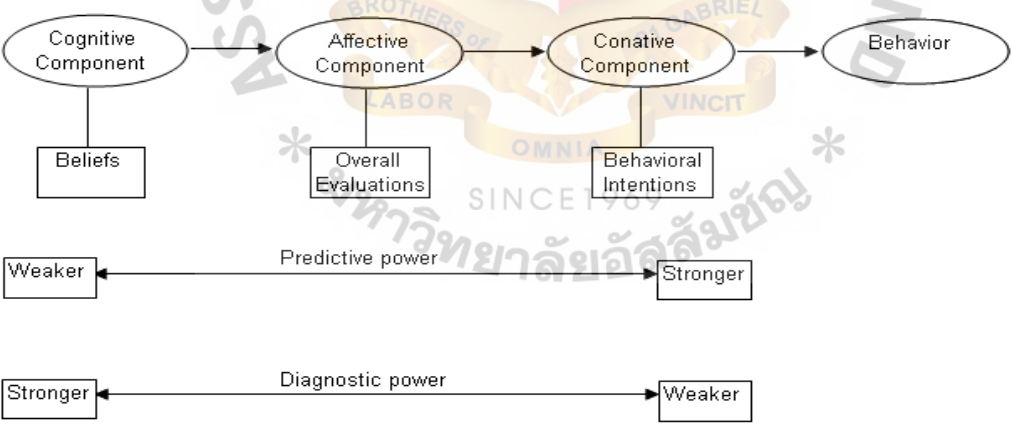
A consumer's emotions or feelings or reactions to an object represent the affective component of an attitude. These emotions and feelings are frequently treated by consumer researchers as primarily evaluation in nature; that is, they capture an individual's direct or global assessment of the attitude-objective as favorable or unfavorable, good or bad (Schiffman and Kanuk, 2004).



Conative Component

Conation is concerned with the likelihood or tendency that an individual will undertake a specific action or behave in a particular way with regard to the attitude object. According to some interceptions, the conative component may include the actual behavior itself. In marketing and consumer research, the conative component is frequently treated as an expression of the consumer’s intention to buy. Buyer intention scales are used to assess the likelihood of a consumer purchasing a product or behaving in a certain way (Schiffman and Kanuk, 2004). The behavioral component may take the form of overt behavior. Assael (1981) suggested an example that a consumer’s rush to purchase and use a product after reading any article is a manifestation of the response to the positive feeling generated by the article. This is generally measured in terms of intention to buy. Measuring purchase intention is particularly important in developing a marketing strategy. Marketing managers frequently test the components of marketing mix to determine what most effective influences purchase behavior (Assael, 1981).

Figure 2.3: The Cognitive, Affective and Conative Components of Attitude



**Source:** Engel, J. F., Blackwell, R. D., Miniard, P. W. (1993). The Cognitive, Affective and Conative Component of Attitude. *Consumer Behavior*, 7<sup>th</sup> edition, 320-350.

Engel et al. (1993) have given a more contemporary view of attitude reflected in Figure 2.3, They further discussed that rather than conceptualizing attitude as possessing

three different components, attitudes are restricted to only the affective component, as reflected by the definition of attitude presented earlier. The remaining components, while closely related to attitudes are viewed as distinct entities. Elements residing within the cognitive component are seen as a major determinant of the evaluations comprising the affective component which in turn, is positioned as influencing the conative component. The conative component is viewed as the immediate determinant of actual behavior.

Fishbein (1967) developed an attitude model in order to have a better understanding of the relations between attitude, intention and behavior. Intention can be described as a person's subjective probability that he will perform some behavior and it is the conative component of attitude (Fishbein and Ajzen, 1975). It has usually been assumed that the conative component is related to the attitude's affective component. This conceptualization has directed the assumption of a strong relation between attitude and intention (Fishbein and Ajzen, 1975). In addition, the relationship between attitude, intention and actual behavior were focused. Based on the consistency idea, attitude toward an object are generally anticipated to be related to behaviors toward the object (Peter and Olson, 1987).

#### **2.1.3.2 Behavioral Intention**

Fishbein and Ajzen (1975) defined behavioral intention as intention of consumers to behave in a particular way with regard to the acquisition, disposition, and use of products and services or consumers' tendency to act toward an object.

Behavioral intention is a proposition connecting self and a future action. Behavioral intention is created through a choice or decision process in which beliefs about two types of consequence: performing behaviors and social influences are considered and integrated to evaluate alternative behaviors and select among them (Peter and Olson, 2002).

Ajzen (2002) explained behavioral intention as an indicative concept referring to a person's readiness to perform a given behavior. Intention is an internal power aggravating individual activities and maintaining as well as promoting the activities toward a target, while behavior is an individual's response to the given target.

Behavioral intention can be shown as an affirmed likelihood to engage in a specific behavior. In the absence of measuring the actual behavior, Zeithaml et al., (1996) view behavioral intention as an indicator that can predict whether consumers will remain with or defect from the company. The practice of green purchase is the new thing in the market, therefore most of the studies are focused on the intention to purchase rather than re-purchase intention to predict the actual behavior that mentioned by Chan (2001) and Tarkiainen and Sundqvist (2005).

In the TPB model, behavioral intention is determined by three factors, which are: attitude toward behavior, subjective norm and perceived behavioral control (Ajzen, 1991). Behavioral intention acts as an important mediator linking actual behavior and these three factors.

There is connection between behavioral intention and attitude as attitude can predict a consumer's behavioral intention. According to Ajzen and Fishbein (1980), they noticed that attitude and behavioral phenomena comprise of four elements: the action, the target of that action, the context in which the action occurs, and the time in which it takes place. The correspondence between the attitude and prediction and the behavioral criterion depends on the degree to which attitude entity matches the behavioral entity in these four elements. Consistent strength in the relationship between an individual's attitude and behavior occurs when both are directed toward an identical target and both refer to the same action (Foxall, 1996).

Ajzen and Fishbein (1975) explained that the relationship between intention and behavior is not a perfect correlation. It can be overestimated or underestimated. At the same time, various studies have shown that, either in theoretical or empirical terms, behavioral intention and actual behavior have a strong correlation (Lucas and Spitler, 1999 and Vijayasathay, 2004). Wilson (1975) proposed that, there is a strong relationship between behavioral intention and actual behavior during the time interval between intention and behavior. However, Mowen (1993) explained that the correlation between behavioral intention and actual behavior is higher than the attitude-behavior correlation.

In many respects, intention may be viewed as a special case of belief. As a belief, the strength of the intention is indicated by the person's subjective probability that he or she will perform the behavior in question. It can be recommended that the strength of the intention be

measured by the procedure, which places the subject along a subjective-probability dimension involving a relation between him or herself and some action. Fishbein and Ajzen (1975) revealed that, when the probability dimension links the person to a behavior, the concept of behavior intention should be applied.

### **2.1.3.3 Purchase Intention**

Purchase intention is defined as a consumer's future demand for a product, the potential for their likely requirement to purchase or their readiness to devote to the purchase of a particular item (Chadon et al., 2005).

Purchase intention refers to a mental state that reflects the buyer's plan to buy some specified number of units of a product in a particular specified time period. Purchase intention relates to beliefs and brand evaluations and the likelihood of buying a brand has been shown as being influenced by attitude toward advertising as well as attitude toward brand (Blythe, 1997). Furthermore, based on various previous theories it has been found that purchase intention can be considered as the predictor of the future purchase decision that were mentioned by Warshaw (1980), Bagozzi (1983), and Fishbein and Ajzen (1975). There are two scales are used to analyze purchase intention and they are: 1) purchase intent scale (McDaniel and Gates, 1991) and 2) 11-point purchase probability scale which mentioned by Wright et al., (2002) and Juster (1996) that is designed to test the response of the customer about liking level regarding an item that will be purchased in the future. Both purchase intent and probability scales have shown the reliabilities in the results with greater accurateness (Wright and MacRae, 2007).

Hewette and Bruse (2002) determined that buyers' perceptions about the quality of their relationships with sellers were positively associated with the buyers' intention to purchase from those sellers. Purchase intention is the buyer's forecast of which product that consumer will buy. It includes not only the buyer's predisposition toward a product, but also a forecast of inhibitors.



#### **2.1.3.4 Attitude toward behavior**

Ajzen (1991) defined attitude toward behavior as the extent to which an individual expresses his or her favorableness or unfavorableness toward evaluating a particular behavior in question. Attitude toward behavior is the sum of the outcome of an individual's strength and assessment of beliefs for each of the crucial beliefs towards a certain behavior under examination (Beharrell and Crockett, 1992). Ajzen (1991) implied that the more positive the attitude toward behavior of consumer, the stronger the consumer intention will be to perform the behavior under his or her control. There are two types of attitude: 1) The attitude toward particular objects, cultural community, institutes and policies that can represent a good measurement for various behavioral actions and 2) The attitude toward a particular behavior, symbolizing a determination of a solo behavior (Ajzen and Fishbein, 2005). Consumers' purchase intention and purchase behavior can be predicted by attitude (Hill and Lynchehaun, 2002) and some intervening factors such as searching time, availability, price, product recognition can also affect an individual's attitude.

#### **2.1.3.5 Attitude toward buying organic food**

Ajzen (1991) mentioned that the individual has a stronger intention to perform a behavior with consideration only when the individual's attitude with respect to that behavior becomes more favorable. Loureiro et al., (2001) explained that when consumers purchase organic food it means that their attitude toward organic food as a food safety with is one major factor of customer motivation. Durham and Andrade (2005) highlighted that consumers' attitude toward health was one of the major reasons to purchase organic foods. Padel and Foster (2005) also pointed out that as consumers perceived organic food as good products that can ensure them to get better health, they would be more active to purchase organic food products.

#### **2.1.3.6 Environmental attitude toward organic food**

According to Ajzen (1991), he mentioned about attitude toward behavior as the extent to which an individual expresses his or her favorableness or unfavorableness towards evaluating a particular behavior in question, De Magistris and Gracia (2008) defined

environmental attitude as a degree of judgment concerning green product, environmental pollution, environmental damages, conservation practices and recycle use. The studies of the relationship between environmental attitude and environmental-based behaviors found that environmental attitude toward organic food plays a key role in predicting the environmental-based behavior and participation decision as environmental attitude is considered a substantial indicator of behavior intention to buy organic food (Kotchen and Reiling, 2000). Grunert and Juhl (1995) stated that as consumers hold positive attitude toward environmental issues, an active acquisition of organic foods and positive frequency of acquisition would be occurring. Padel and Foster (2005) revealed that the reason for decision making of consumer to purchase organic food is their attitude toward environmental protection. And consumers' attitudes are directly link to energy-saving consumption and eco-purchasing activities (Walsh and McGuire, 1992).

Grunert and Juhl (1995) studied the relationship between the environmental attitudes and buying decision of organic food and found that the positive attitude toward environmental factors could lead to the positive attitudes of purchasing decision in organic food and the buying frequency. Also, the environmental attitudes can also be linked to this definition that included beliefs and response toward an object (Heberlein, 1981). In the general study of environmental attributes, the relationship between the attitudes and environmental factors is explored. The relationship between environmental purchase behavior and the measures of environmental attitudes has been mentioned by several researchers such Elkington (1989) and Henley (1990). The rationale for this argument rests on the fact that consumer purchase behavior towards the environment has been reflected by the expression of their environmental attitudes.

Environmental attitudes are not understood properly although they are important, widely discussed and frequently measured. For this reason, fewer researchers have examined the environmental attitude deeply. Even the researchers and the psychologists have used more than 40 years to examine about it. However, it is quite easy to collect data about the environmental attitudes.

### 2.1.3.7 Subjective Norm

Subjective norm is defined as “the person’s perception that most people who are important to him or her think he should or should not perform the behavior in question” (Fishbein and Ajzen, 1980). Subjective norm is related to a person’s beliefs about pressures and expectations from other people (Chang, 1998). According to Ray (1991) and Kobella (1988) they found that different social pressures are involved in subjective norms such as peers, friends, teachers, relatives, political parties and religious organizations. Subjective norm is a function of two subcomponents: the associative normative belief, which is related to one’s perception of the influence of opinion among reference groups such as family and friends, and the consumer’s motivation to comply with the referent, is the extent to which the individual wants to comply with the wishes of the referent (Mathieson, 1991). The strength of each normative belief is weighed by the person’s motivation to comply with that referent (Ajzen, 1991).

Subjective norm is used to predict an individual’s intention by many researchers such as Crawley and Black (1992), Hartwick and Barki (1994). The result indicated that it has a positive or negative impact on attitude or behavior intention. Hartwick and Barki (1994) noted that when the customers have only limited direct experience to develop their own attitudes, subjective norm plays a better outstanding role in this early stage of execution.

### 2.1.3.8 Perceived Value

The definition of perceived value is “the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given” by Zeithaml (1988). Perceived value is the concentration that researchers and food manufacturers focus on because it is the main determinant in forecasting purchase behavior and competitive advantages which were mentioned by many researcher such as Zeithaml (1988), Holbrook (1999), Dodds et al., (1991), Cronin et al., (2000). The definition of perceived value is understood at the benefits of product level. Perceived product benefits are based on different characteristics of product and availability of the product in the different purposes of using and buying. Customer’s payments such as normal price, costs or the service charges are defined as the perceived sacrifices that were studied by Ulaga and Chacour (2001), Zeithaml (1988), Slater and Narver (2000), and Monroe (1990). Perceived value is related to the value

of money that consumers receive and pay, “what you get for what you pay” (Sirohi et al., 1998). Furthermore, the reliability of the perceived value will be high when the customers have the shopping experiences because they can measure the product value and they can optimize the full process of decision-making and positive response actions (Simon, 1976).

Thus, perceived value is a good instrument to forecast consumer buying behavior which studied by many researcher such as Schechter (1984), Dodds et al., (1991), and Bishop (1984). Many marketing researches are examined in order to understand the concept of perceived value. Value perception includes price, quality, experience and other factors (Schechter, 1984). Zeithaml (1988) explored that consumers responded with a variety of definitions of value including *“Value is low price; Value is whatever I want in a product; Value is the quality I get for the price I pay; and Value is what I get for what I give”*

For more understanding of perceived value, marketers consider important roles of the perceived value. They are finding the proper understanding about perceived value because by understanding value the researchers can design a value scale for measuring the product values. The scale has been based on the value factors such as price, quality or consumer’s perception. Zeithaml (1988) mentioned that researchers could ask the customers about *“what value is; what value is made of; and when perceived value is more or less; etc.”* Thereby, the researchers can identify the various ranges of value.

#### Ways to increase the Perceived Value of your product

Dotson (2004) concluded that there are many ways to increase the perceived value of the product.

1. Let people try to get experience about your product to show that you are confident in your product.
2. Include testimonials of the products. From the experienced customers they could prove and provide the positive word-of-mouth about your product.
3. Give the benefit to the advertisement copy. People perceive about the availability of solution for the problems.
4. Offer a corporation with your product. Your product could help people get the money.



5. Give people a strong guarantee. You are standing behind your product with a strong guarantee.
6. Give the bonuses. It could make people think that they paid and they could gain the good benefit from the product.
7. Advertise the product with a famous person to get the brand reputation. Famous people come with the famous brands.
8. Give people the right to reproduce your product to help them start the business and make money.
9. Get the word-of-mouth about your product and build the brand reputation. This increases perceived value about the quality of the product.

#### **2.1.3.9 Health Consciousness**

A few researchers can define the specific answer for the question of consciousness. Consciousness has the wide understanding because it is related to the mental system of human beings, which were mentioned by Rosenthal (1986), Carruthers (2000), and Gennaro (1995).

Health was defined as being "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, 1948).

There are many factors that can affect the human health such as the disease, external and internal factors of environment, medication, food consumption, etc. From these reasons, consumers become cautious in food selection and safety factor. Thus, healthiness is an important factor for buying decision which mentioned by Wandel and Bugge (1997), and Magnusson et al., (2001). The linkage between the health perception and conscious is build to become one potential factor in the research is health conscious.

#### **2.1.3.10 Perception of Availability**

Product availability has influenced consumers to perform their purchasing behavior like buying organic food (Davies et al., 1995). In case of products that are hard to be found or unavailable, the consumers may have difficulty to obtain the product (Tanner and Kast, 2003). There is an obstacle for the consumer purchasing organic food in a shop if the product

is unavailable (Magnusson et al., 2001). According to Ajzen (2002), the considerable difference in behavioral intention and action can be formed by perceived behavior control, and unavailability is a hindrance for purchasing goods, which is clearly out of consumers' control (Takiainen and Sundqvist, 2005). Unavailability is one of the reasons that consumers refrain from buying organic food, which mentioned by Boccaletti and Nardella (2000), Mangusson et al., (2001), Fotopoulos and Krystallis (2002), Zanolli and Naspetti (2002). Based on previous studies, perception of availability in this study is referring to the availability and accessibility of organic food.

#### **2.1.3.11 Ecological Effect**

Ecological effect is referred to the level of emotional reaction of an individual toward environmental issues (Maloney and Ward, 1973). Many previous studies found that there is a positive relationship between ecological affect and a singular behavior that studied by Dispoto (1997) and Li (1997). According to Hines et al., (1987) revealed that an average correlation between ecological effect and individual behavior is 0.37. Chan and Yam (1995) mentioned that ecological effect could be a distinct variable that has impacts on behavioral responses. Engel et al., (1993) stated that an individual's emotional response is the main indicator of his or her intention to execute the behavior.

According to empirical findings exhibited that even people who have little knowledge about the environment still express a high emotional commitment to do it that were studied by various researcher such as Dispoto (1997), Grunert (1993), Henion and Wilson (1976) Li (1997), Maloney and Ward (1973). Those studies imply that ecological effect and ecological knowledge can influence the environmental act independently and Martin and Simintiras (1995) well established this view in their research, and those findings are also adopted by Chan (2001).

#### **2.1.3.12 Purchase Behavior**

##### **Consumer Behavior**

Consumer behavior consists of the activities that people engage in when selecting, purchasing, and using products so as to satisfy needs and desires. Such activities involve

mental and emotional process, in addition to physical action. Consumer behavior is the way an individual chooses, purchases, uses, and disposes of goods and services in order to satisfy personal or household needs. The consumer behavior describes the process used to make purchase decisions, as well as to use and dispose of good or service. The study of consumer behavior also includes the analysis of factors that influence purchase decisions and product use.

Schiffman and Kanuk (2000) implied that the study of consumer behavior focuses on how individuals make decisions to spend their available resources (time, money, effort) on consumption-related items. That includes what they buy, why they buy it, how often they buy it, and how they use it as follows:

1. Who buys the product?

Management needs to distinguish between industrial and consumer users in analyzing buyers. Industrial buying is often done by professional purchasing agents or buying committees who make their decision based on carefully analyzed information. Consumer purchase decisions are typically not made by committees. Even for the consumer product, nonetheless, the buyer is not always the user or even the initiator of the purchase. Therefore, firms need to know who consumers really are.

2. What do consumers do with the product?

Information is needed on the use of the product or service. Panel data can provide information on consumer purchase histories and product use. Defining both industrial and consumer segments in terms of the product currently used can suggest opportunities for additional market segments. Understanding the usage situation also helps to determine not only how it is used but where and when.

3. Where do consumers buy?

Understanding the purchase location can help management structure promotion and media campaigns to target buyers. The sources from which buyers seek information, for example, is often different from where they make the purchase.

4. When do consumers buy?

“When” focuses on the time of day, month or year during which the purchase is made. “When” also encompasses whether the item is normally purchased on sale, purchased, purchased when a rebate is available, or when a coupon can be used. The time dimension of buying has implications for promoting scheduling. Promotional messages must reach consumers when they are in a decision-making frame of mind. They also influences pricing decisions, as when marketers adjust price in an attempt to even out demand. For instance, supermarkets may offer double coupons on Tuesday which is usually a slow business day.

5. Why do consumers purchase? (Motive to purchase)

Understanding motives to purchase focuses on understanding the need to be satisfied by the purchase. Consumers may seek to satisfy an emotional or physical need, for example but “why” focuses on the specific attributes of the offer that are attractive to either the consumers or industrial buyers. The reasons can include price, reliability, service, terms of payment, speed of delivery, brand name, or to satisfy an ego need.

6. How do consumers buy? (Frequency in purchasing)

Understanding how consumers buy can be a key in developing appropriate marketing strategies as reflected in media-use decision, location strategies, and similar decisions. Consumer buying decisions are generally made by individuals, although, influence may come from several persons. Children may influence their parents’ buying decision for cereal, and various family members may be involved in an anniversary purchase for a husband and wife. Still other decisions may include the size and frequency of purchase and the method of payment. In addition, purchase may be made either in stores, by direct mail, by telephone, or by the use of various forms of video technology. Consumers may often alter their purchasing patterns depending upon the usage situation. To indicate the consumer behavior, marketers should realize how often they purchase. There are 3 main determinants of food choice: environment, cultural practices, and the position of the human being in society (Nobis, 1993).



## **ORGANIC FOOD PURCHASE BEHAVIOR**

### **2.2 Related Literature Review**

#### **2.2.1 The Related Literature between Attitude and Behavioral Intention**

In a 1980 survey, Ajzen and Fishbein (1980) argued that the attitude of an object would affect the behavioral intention of people to use this object. Their finding is quite similar to that of Davis et al., (1989) which posited that an individual's behavior intention toward a specified system usage is determined by attitude. Bagozzi et al., (1990) mentioned that the level of a person's intention in the attitude-behavior relation depends on the efforts that the person needs to put in order to perform a specified behavior. Follows and Jobber (2000) applied the attitude-behavior model in order to study about consumers' environmentally responsible purchase behavior. In the study, a hierarchical path from values through attitudes to purchase intention to purchase was defined, and the finding shows that the negative attitude towards individual consequences can eliminate the positive influence of environmental attitude on purchase intention. De Magistris and Gracia (2008) identified the influence of consumers' attitude on consumers' decision-making process, and the researchers found that when consumers have positive attitudes to follow a healthy lifestyle, they will hold more positive attitude towards environmental issues and organic food product and furthermore they are most likely to have a higher intention to buy organic food product. Soler and Gil (2002) studied about consumers' acceptability of organic food in Spain, in which consumers' attitudes towards food safety, environmental impact of agriculture, nutrition and food price sensitiveness were examined. The results showed a significant relationship between consumers' attitude towards environmental impact of agriculture and their decision to pay premium price for organic product. Also, consumers' food safety concerns play an important role in their decision-making process as well.

#### **2.2.2 The Related Literature between Perceived Behavior Control (Perception of availability and Perceived value/price) and Behavioral Intention**

Perceived behavior control (PBC) presents a way through which an individual perceives his or her own ability in order to perform a specified behavior. According to Dean et al., (2008) PBC has a significant influence on consumers' intention to purchase organic apples. Thogerson (2007) indicated that PBC plays an important role in consumers' purchase

intention of organic food product. Perceived quality and perceived value/price were employed to investigate the formation of consumers' intention for purchasing organic product (Kyriakopoulos and van Dijk, 1997). In addition, PBC also presents a significant influence on medical professionals' ethical behavior (Randall and Gibson, 1991). Moreover, PBC contributes strong influence on purchase intention of organic food in Finland (Tarkiainen and Sundqvist, 2005) and of organic vegetables (Sparks and Shepherd, 1992).

### **2.2.3 The Related Literature between Subjective Norm and Behavioral Intention**

Chung and Change (2005) pointed out that subjective norm reflects a force of social influence that can influence consumers' beliefs inside their communities. Social influence can motivate an individual to act in a way that his or her referent group expects, mentioned by Ajzen (1991). Lee (2008) carried out a study to examine green purchase behavior of young consumers in Hong Kong and the result showed that social influence is the best predictor of young consumers' green purchase behavior. In addition, the significant influence of subjective norm on purchase intentions was explicated in a cross-market examination, which was conducted by Kalafatis et al., (1999) by applying the TPB model to test consumers' purchase intention in UK and Greece. Tarkiainen and Sundqvist (2005) applied a modified TPB model to examine Finnish consumers' buying intention of organic food, in which subjective norm influences consumers' intentions indirectly through attitude formation.

### **2.2.4 The Related Literature between Ecological Effect and Behavioral Intention**

Effect can be divided into two parts are positive and negative effects were mentioned by Smith and Reynolds (2009). People, who are positively affected, feel good, safe, confident, relaxed and valued. In contrast, people who are negatively affected, feel shy, angry, irritated and unhappy. In addition, effect is one of the predictor of behavioral intention (Smith and Reynolds, 2009). The affect plays important roles through various studies, and emotional states have been injected in to the model of traditional consumer behavior (Philips and Baumgartner, 2002). When people are in a positive mood, they become non-analytic, top-down and creative; when people are in a negative mood, they are more analytical and make more efforts (Murry and Dacin, 1996).

In this study, ecological effects refer to a negative effect toward environmental issues to test how consumers' ecological effect influences their purchase behaviors. As mentioned above, when consumers have negative effect, they generally become more analytic and diligent about environmental issues. Disposito (1997) described that ecological effect as the extent to which people emotionally respond to environmental issues. Li (1997), Maloney and Ward (1973) asserted a positive relation between ecological effect and behavior. Hines et al., (1987) found that the correlation between ecological effect and behavior intention has an average level of 0.37. Ecological effect could be considered as a dissimilar factor that affects an individual's behavior responses as mentioned by Chan and Yam (1995).

### **2.2.5 The Related Literature between Environmental attitude, health consciousness and Purchase Intention**

Nowadays, good health has become an important determinant for food purchases and one of the parameters in terms of quality of life for many consumers that mentioned by Magnusson et al., (2001), and Wandel and Bugge (1997). Many consumers believe that organic foods can provide safer and greater health benefits than conventional alternative food and they have positive attitudes toward organic foods, which mentioned by Beharrel and MacFie (1991) and Jolly et al., (1989). Instead of using the health food choice motive to predict the consumer attitude toward organic food, health consciousness is adopted to predict the consumer's attitude toward organic food. Health consciousness, which assesses the degree of readiness to undertake healthy action (Schifferstein and Oude Ophuis, 1998), is a broader construct to reflect people's readiness to do something to their own health. It is believed that if individuals are ready to take measures to make themselves healthier, then their attitude toward organic food should be more positive. Schifferstein and Oude Ophuis (1998) stated that health factors have the strong effect on the purchase intention for organic food consumption. Consumers who want to buy organic foods they could think that they have highly responsibility for their health. Health consciousness of these customers is valued at high level and high sacrifice about the money for safety, health aspects, etc. All reasons that are mentioned above, safety, healthiness and better taste can lead consumers to have organic food purchase intention. Some previous studies showed that personal health is more important than his or her environmental concern, which mentioned by Magnusson et al., (2001), Tregear et al., (1994), Wandel and Bugge (1997). In addition, the consumer's positive attitude toward organic food can be determined by health consciousness and environmental

attitudes if they are enthusiastic about undertaking healthy physical activities such as natural food consumption, health care and life equilibrium (Gil et al., 2000). A higher health consciousness will lead to a more positive attitude toward organic foods.

#### **2.2.6 The Related Literature between Subjective norms, health consciousness and Attitudes toward organic food.**

Chang (1998) stated that there is a significant relationship between the subjective norms and attitude toward behavior and the reasons come from influence of society or environment to attitude of a person. Furthermore, attitude toward the behavior is based on the level of favorable or unfavorable perception of a person and usually asks the questions about the product evaluation (Ajzen, 1991). According to Ajzen (1991) the more favorable the attitude toward behavior, the stronger the customer's intention about the product and that could lead to the stronger behavior.

Being healthy or the health perception of the customer is considered as a strong motive in purchasing organic food (Davies et al., 1995). According to Zanolli and Naspetti (2002) mentioned that a health consciousness is usually considered as the control variable.

### **2.3 Previous Studies**

Tarkiainen and Sundqvist (2005) studied about Finnish consumers' acquisition in buying organic food through the application of the TPB model, which was developed by Ajzen (1991). The objective of this study was to examine the different roles of the subjective norms when compared to the original model with the modification of the TPB model. A sample of 200 Finnish consumers in one local hypermarket in South-eastern Finland was chosen. Before starting the data collection, the hypotheses testing such as cross-tabulation, regression and other analysis tool were applied and the researchers also tested the availability of the organic product in the market. In this study, the influence of the subjective norms, attitude, and perceived behavioral control on consumers' purchase intention and the relationship between purchase intention and actual purchase were examined. The result showed in many areas such as, in terms of fitting data, the adjusted model of TPB is better than the original model, and that implied that subjective norms play a distinctive role in organic food-buying context that differ from the original TPB model. In purchasing organic



food the subjective norms can affect the buying intention indirectly through the attitude formation. In addition the adjusted TPB model is able to estimate consumers' purchase intention better than the original model. There is a significant relationship between behavioral intention and self-reported behavior. Based on the results, it can be said that consumers' intention to buy organic food can be predicted with their attitudes, which can further be predicted by subjective norm, and self-reported behavior can be reliably envisaged by behavioral intention.

O'Donovan and McCarthy (2002) examined the Irish consumers' perception of organic meat. They identified many factors that could affect purchase intention of the Irish consumers such as health consciousness, perceived value, income, and environmental concern in order to test the Irish consumers' perception toward organic meat. They chose 250 respondents for this study as the representative of the Irish population. The researchers separated respondents into three groups: respondents, who purchased, intended to purchase and the last group was purchased without any intention. The hypotheses testing such as Correlation Coefficient and Chi-Square statistical method were applied. The result indicated that consumers who purchased organic food expressed higher concern on health issue when compared with non-purchasers. Consumers purchased organic food because they believed that organic food were superior to conventional food in terms of quality, safety, labeling, production method and value. Availability and price were the main factors that affected purchasing decision of the organic food. However, the consumers would have the purchase intention regarding the organic food if it was convenient and available in the proper places. Furthermore, the study also indicated that the higher socio-economic levels of consumers were more willing to purchase organic food and the higher concern by consumers on food safety and environmental issue are increasing also.

De Magistris and Gracia (2008) studied the decision to buy organic food product in Southern Italy. The objective of this research was to explore how consumers in Southern Italy made their purchase decision about organic food. There were a total 200 questionnaires distributed in Naples. The Structural Equation Model (SEM) method was used to analyze the factors that influenced consumers' purchase intention of organic foods. The result of this research indicated that consumers' attitude toward health and environmental issue were the most important factors to explain consumers' decision-making process of organic food. In addition, consumers' knowledge about organic product positively determined consumers'



attitude toward organic food product also. Finally, consumers who were concerned about their health such as, eating a healthy having a diet, or balanced lifestyle, actively expressed their attitude toward organic food and environmental issues, and also participated in purchasing organic food product.

Chen (2009) studied the Taiwanese consumers' attitude toward organic food in Taiwan in order to predict their attitude toward organic food and that there are many related factors such as health consciousness and environmental attitude. There were 470 successful survey respondents used for this empirical analysis. In this study the researcher applied Pearson correlation, Descriptive statistics and standardized regression coefficients in order to test and analyze the hypotheses. The results of this study were in accordance with many previous studies. The result indicated that there was a positive relationship between health consciousness, environmental attitude and the consumers' attitude toward organic food. And it was also found that health consciousness and environmental attitude influenced the consumer's attitude toward organic food through their healthy lifestyle and more healthy perception of consumers will influence the positive intention in purchasing organic food.

Chan and Lau (2000) studied the influence of cultural values, ecological effect and ecological knowledge on green purchasing behavior of Chinese consumers. The objective of this study is to examine how Chinese consumers' effective response toward and knowledge of ecological issues influence their commitment to green purchase. A total of 274 usable questionnaires were collected from two cities of China: Beijing and Guangzhou. The researchers applied many analytical techniques in this survey. Firstly, The Two-Way ANOVA was used in order to test the possibility of the combination of corresponding descriptive statistics from both cities. Secondly, Structural Equation Modeling (SEM) was employed for examining the hypotheses. Lastly, the confirmatory factor analysis was applied to collaborate all of the variables. The result of this survey indicated that Chinese people were relatively positive about ecological effect and green purchase intention but in contrast, they still had low knowledge about ecological effect and the actual purchasing of green product.

Choo, Chung and Pysarchik (2004) studied about antecedents to new food product purchasing behavior of Indian consumers in India. The objective of this research was to study the impact of innovation on Indian consumers' purchase behavior of new processed food

through the applied theory of reasoned action (TRA) model to analyze and explain the Indian consumers' purchase behavior. There were 297 completed survey samples collected from the various sites of India. The reliability of the multi-item scale; attitude and subjective norms; were calculated by using the Cronbach alpha coefficients. The hypothesized relationships among the variables were analyzed by using a Structural Equation Model (SEM) program. The confirmatory factor was used for collaboration of all the variables. The finding of the study can be summarized as follows: Firstly, Subjective norms play a key factor in decision-making to purchasing green product of Indian consumers and subjective norms have a great influence on Indian consumers' attitude, intention to purchase and actual purchase behavior for new processed foods. Secondly, attitude has a small effect on purchase intention. Finally, Indian consumers have more favorable attitude, greater purchase intention and actual purchase behavior when they are more familiar with a processed food product. Also, there is a greater impact of subjective norm when Indian consumers are more familiar with food product. From the result it can be concluded that, the Theory of reasoned action (TRA) model did not fit well with the Indian consumers' food purchase behavior. But if the TRA model was revised to have direct path from subjective norm to behavior it can successfully predict the Indian consumers' purchase behavior for new processed food product.

Ishaswini (2011) studied the topic: pro-environmental concern influencing green buying of Indian consumers in India. The main objectives of this study were to determine the consumers' pro-environmental concerns, environmental knowledge, and awareness of eco-friendly product that affect the green purchasing behavior of Indian consumers. The samples of 200 questionnaires were distributed to respondents who were a highly educated segment of the general population. Descriptive statistics, factor analysis and correlation techniques were used to analyze the finding of this study. The reliability of the questionnaires was tested by Cronbach alpha coefficients. The result of this study indicated that overall environmental concern is positively related with consumers' green purchasing behavior. The finding revealed that consumers' awareness toward eco-friendly product and their environmental concern had an impact on their green product purchasing behavior. Also, consumers were willing to buy eco-friendly products, but not pay a higher price for such products. Increase in consumers demand will help reduce costs in production of eco-friendly products. Awareness among consumers that their buying choices can make a difference to the environment should be promoted to accelerate the consumption of eco-friendly product.

**Table 2.1 Summary of Previous Studies**

Author	Objective	Key Findings
Tarkiainen and Sundqvist (2005)	To test the extension of the TPB model in the context of organic food buying.	The adjusted TPB model is better than the original TPB model in order to estimate consumers' purchase intention. Subjective norms play a distinctive role in the context of organic food purchasing that differ from that in the original TPB model. There is a significant relationship between behavioral intention and self-reported behavior.
O'Donovan and McCarthy (2002)	To examine the influence of four variables on Irish consumers' perceptions of organic meat.	Price is the main reason that affects purchasing decision of the organic meat. Lack of the knowledge can lead consumers to perceive that conventional foods have the same benefits as organic products. The consumers would have the purchase intention regarding the organic food if it is convenient and available in the proper places.
De Magistris and Gracia (2008)	To explore how consumers in Southern Italy make purchase decision regarding organic foods.	Consumers' attitude toward health and environmental issues are the most viral elements to form consumers' decision for acquisition of organic food product. Consumers who have higher concern healthy diet and balanced lifestyle will be more actively express their attitudes towards organic foods and environmental issues and also

		participate in purchasing organic food product.
Chen (2009)	To test the hypotheses whether health consciousness and environmental attitudes influence the consumers' attitude toward organic foods through their healthy lifestyle.	There are the positive relationship between health consciousness and environmental attitude that influence consumers' lifestyle. The healthier perception of the consumers will positively influence the purchase intention on organic foods of consumers.
Chan and Lau (2000)	To investigate the effect of cultural values, ecological effect and ecological knowledge on Chinese consumers' green purchase behavior.	A significant path respectively from ecological effect and ecological knowledge to green purchase intention and actual green purchase behavior was found. Chinese consumers are relatively positive about ecological effect and green purchase intention, but their actual purchase of green product and ecological knowledge are low.
Choo, Chung and Pysarchik (2004)	To study the impact of innovation on Indian consumers' purchase behavior of new processed foods.	Subjective norms play a key factor in decision-making to purchasing green product and have a great influence on Indian consumers' attitude, intention to purchase and actual purchase behavior for new processed foods. And there is a greater impact of subjective norm when Indian consumers are more familiar with the food product.
Ishaswini (2011)	To determine the consumers' pro-environmental concerns,	The overall environmental concern and consumers' awareness toward eco-friendly product are positively

	environmental knowledge, and awareness of eco-friendly products that affect the green purchasing behavior of Indian consumers.	related with consumers' green product purchasing behavior. Consumers are willing to buy eco-friendly products, but not pay a higher price for such products. And increasing consumers demand will help the cost reduction of eco-friendly products.
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## CHAPTER 3

### THEORETICAL AND CONCEPTUAL FRAMEWORK

This chapter discusses about the previous theoretical frameworks that are used for forming the conceptual framework of this study. This chapter consists of four parts. The first part is about the theoretical framework. The second part is about the illustration of the conceptual framework. The third part demonstrates the specific hypothesis for testing the relationship between each variable. And the last part is about operation of the variable that explains all independents and dependent variables that are used in this study.

#### 3.1 Theoretical Framework

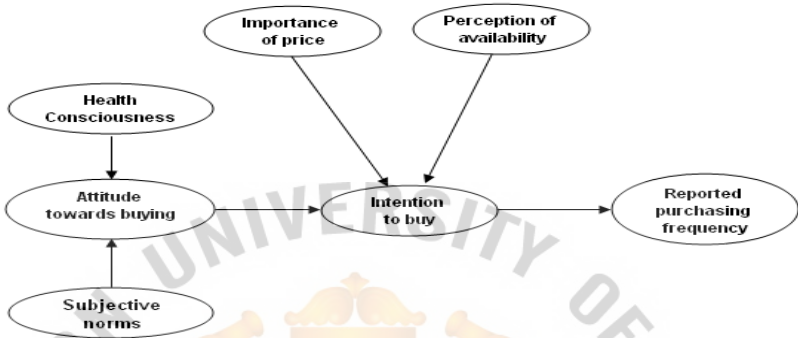
The relationship between different variables that are discussed in the literature review will be explained through various previous studies. Organic food purchasing behavior is influenced by various factors.

One of the main factors that affect organic food purchasing behavior is subjective norm, which was studied by Tarkiainen and Sundqvist (2005) which adapted the Theory of Planned Behavior (TPB) model to evaluate the correlation between subjective norm, attitude and intention to purchase organic food. O'Donovan and McCarthy (2002) studied the purchase intention of Irish consumers and the result indicated that consumers who purchased organic food have a higher awareness about their health than consumers who did not purchase. Chen (2009) studied the relationship between health consciousness and environmental attitude and found that consumers who have higher health consciousness and positive environmental attitude have a positive attitude toward organic food. Choo, Chung and Pysarchik (2004) studied the correlation between attitude, subjective norms and intention to buy of Indian consumers and found that subjective norms have positive relationship with attitude, intention to buy and intention leading to purchase behavior. De Magistris and Gracia (2008) studied the relationship of environment attitude and attitude toward buying and both factors lead to purchase intention and the result found that attitude toward organic food has more influence on the purchase intention than environment attitude. Chan and Lau (2000) studied the correlation of cultural values, ecological effects and ecological knowledge of Chinese consumers' green purchase behaviors and found that ecological effects and

ecological knowledge have positive effect on the Chinese consumers’ purchase intention of green product.

All of the factors that have influence on organic food purchase behavior are shown in Figure 3.1 to 3.7 in the following:

**Figure 3.1:** The research study of the factors that affect organic food purchase behavior



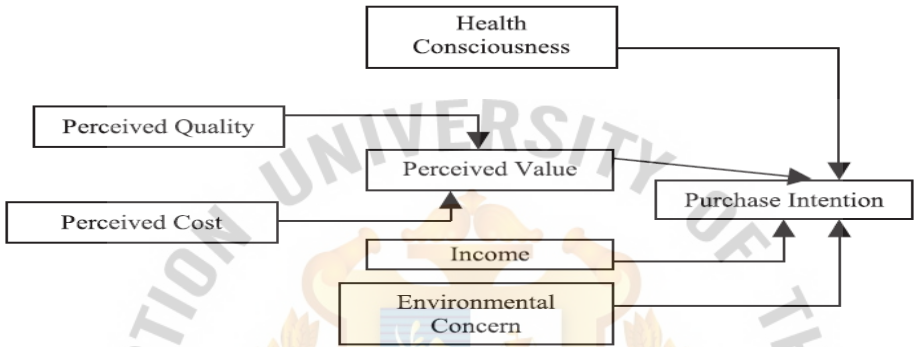
**Source:** Tarkiainen, A. and Sundqvist, S. (2005). Subjective norms, attitudes and intention of Finnish consumers in buying organic food. *British food Journal*, 107 (11), 808- 822.

According to Figure 3.1, Tarkiainen and Sundqvist (2005) studied and implemented the extension of the theory of planned behavior (TPB) model which studied about Finnish consumers’ acquisition towards organic food, by studying the relationship of three independent variables (attitude towards buying, importance of price and perception of availability) that affect intention to buy of consumers and furthermore there are two factors (health consciousness and subjective norms) that support the attitude towards the buying decision and relationship between intention to buy and actual purchase was included in this theory also.

In this study the hypotheses were examined by using the structural equation modeling technique. The result from this study found that the relationship between attitude towards buying and intention to buy was significant (0.558) and relationship between subjective norms and attitude towards buying was also significant (0.374) but relationship between health consciousness and attitude towards buying was not significant. Furthermore, both relationship between importance of price and intention and relationship of perception of

availability and intention to buy were not significant. The part of relationship between intention to buy and reported purchasing frequency was significant also (0.824). From the result of the study the researchers can conclude that consumers' attitude significantly affected the intention to purchase of consumers and subjective norms can affect purchase intention indirectly through the formation of attitude. Intention is the best predictor of actual purchase behavior, because the higher the purchase intention, the higher the actual purchase will occur.

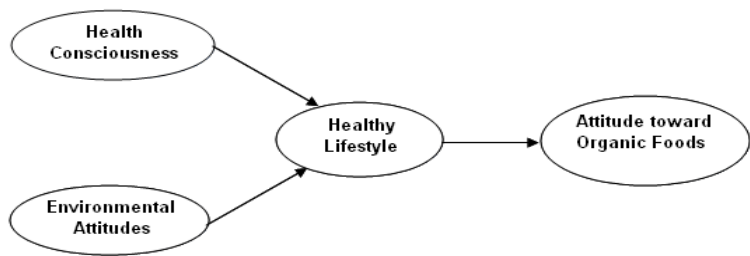
**Figure 3.2:** The conceptual model: Kyriakopoulos and Van Dijk's (1997) conceptual framework



**Source:** O'Donovan, P. and McCarthy, M. (2002). Irish consumer preference for organic meat. *British food journal*, 104 (3/4/5), 353-370.

In Figure 3.2, the conceptual framework was built based on the potential factors such as health consciousness, perceived value and environmental concern that are important roles of consumer perception. O'Donovan and McCarthy (2002) mentioned that these potential factors could affect purchase intention of organic meat eating customers. And from this research, the researchers found that there is positive relationship between health consciousness, perceived value and environmental concern regarding the intention to purchase. Furthermore, this research also showed that the customers who have positive attitude toward environmental issues and have high health perception would have the intention to purchase organic food because they perceive that organic food is superior than conventional food in terms of quality, safety, production method, and value. Price is the key factor that affects purchase intention. High price is one of the main reasons for consumers not to purchase organic food.

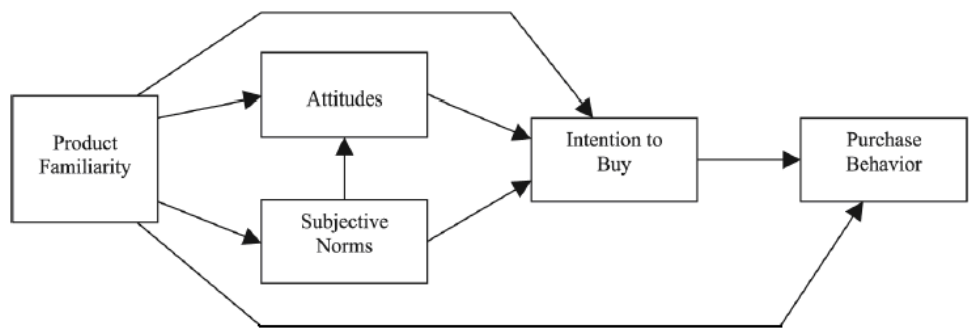
**Figure 3.3:** The research on the mediating effect of a healthy lifestyle on consumer’s attitude towards organic food: research framework



**Source:** Chen, F. M. (2009) Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle. *British food journal*, 111(2), 165-178.

According to Figure 3.3, this research examined about factors that affect the consumer’s attitude toward organic foods by Chen (2009). The result from this research showed that the consumers’ health consciousness has a stronger relationship to the consumer’s attitude toward organic foods than do environmental attitudes. In other words, the consumers’ concern for their personal health is more important than their concern for the environment that mentioned by Magnusson et al., (2001), Tregear et al., (1994), Wandel and Bugge (1997). Moreover if consumers have higher health consciousness and positive environmental attitude will lead to more positive attitude toward organic foods. And healthy lifestyle plays a positive intermediary role that guides health consciousness and environmental attitude, which affect the consumer’s attitude toward organic food or green product.

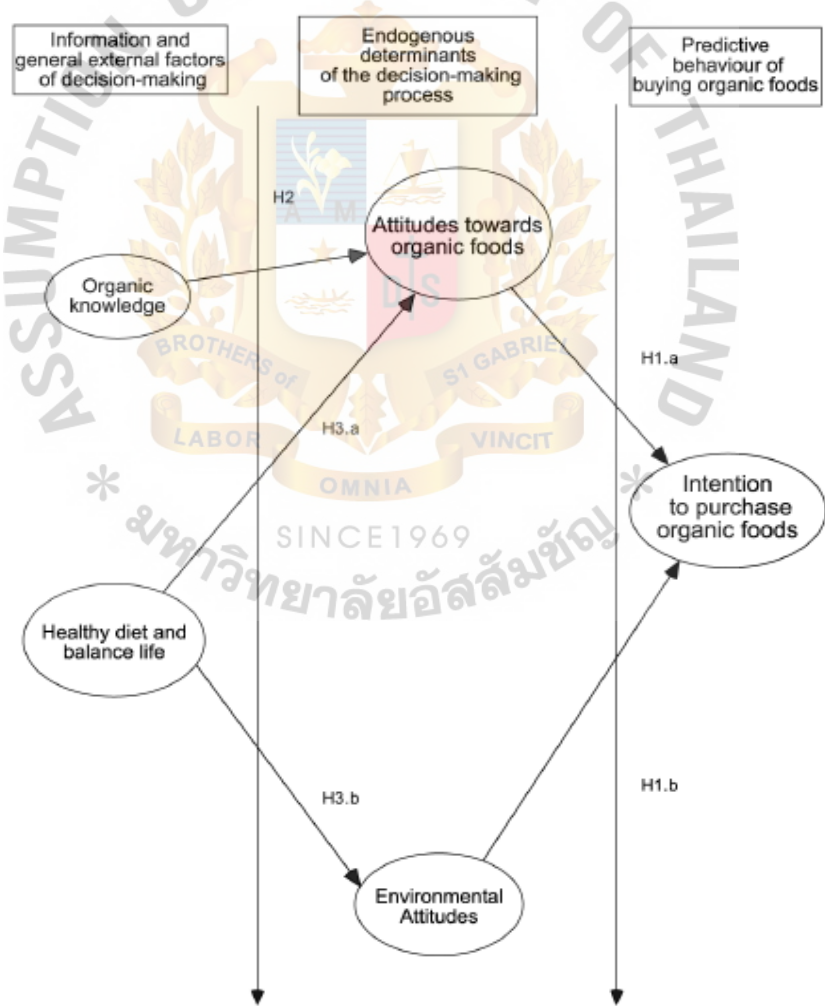
**Figure 3.4:** The research study of the factors that affect purchase behavior of Indian consumers



**Source:** Choo, J. H., Chung, E. J, and Pysarchik, T. D (2004). Antecedents to new food product purchasing behavior among innovator groups in India. *European journal of marketing*, 38 (5/6), 608-625.

In Figure 3.4, through structural equation modeling, Ajzen and Fishbein (1980) modified the theory of reasoned action (TRA) model in order to fit for prediction Indian consumers’ purchase behavior by testing the impact of innovations in consumer buying behavior of Indian processed foods. The hypotheses of this research examine about the relationship between the factors that affect intention to buy and lead to purchase behavior of Indian consumers tested by Choo, Chung and Pysarchik (2004). The result from this research indicates that subjective norms have the positive relationship with attitude, intention to buy and lead to the purchase behaviors. Thus, subjective norms play the main role to understanding consumers’ purchase decision of processed food in India.

**Figure 3.5:** The research of the decision to buy organic food product of Southern Italian consumers

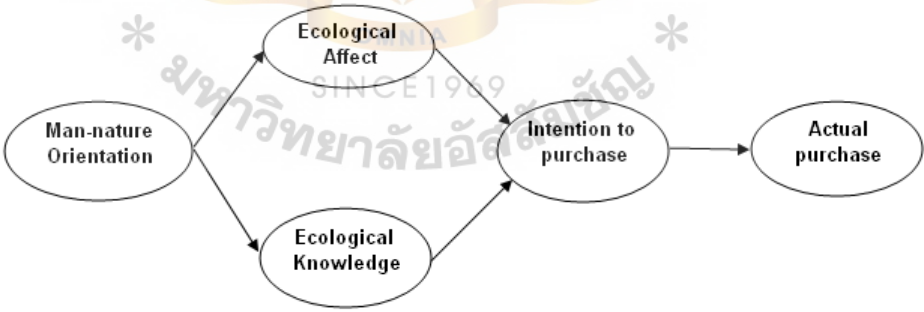


**Source:** De Magistris, T. and Gracia, A. (2008). The decision to buy organic food products in Southern Italy. *British food journal*, 110(9), 929-947.



According to Figure 3.5, the purpose of this research is to investigate the consumers' decision-making process of organic food product of a group of Italian consumers that was studied by De Magistris and Gracia (2008). This research examined relationship between the environmental attitude and attitude toward organic food that affect the purchase intention of organic foods in Italy. The result indicated that attitude toward organic food (including health consciousness and organic knowledge) and environmental attitude are the important factors that affect the intention to purchase organic foods of Italian consumers. Moreover, the attitude toward organic food has a grater influence on the intention to purchase organic food (0.47) than environmental attitude (0.30). In particular, consumers who have more information can help them to get better knowledge and understanding about organic food and it can guide the consumers to have the positive attitude toward organic food because they believe that organic food is superior in quality than conventional food. Moreover, the researchers concluded that those customers who strongly perceive the better quality, healthy attributes and benefits of organic foods when compared with conventional food will show the stronger intention to purchase organic foods. Moreover, consumers who are worried about the environmental damage are more involved in environmental practices and this leads to high willingness to buy organic food products.

**Figure 3.6:** The study of the relationship between ecological constructs and the man-nature orientation.



**Source:** Chan, R. Y. K., and Lau L. B. Y. (2000). Antecedents of green purchases: a survey in China. *Journal of consumer marketing*, 17(4), 338-357.

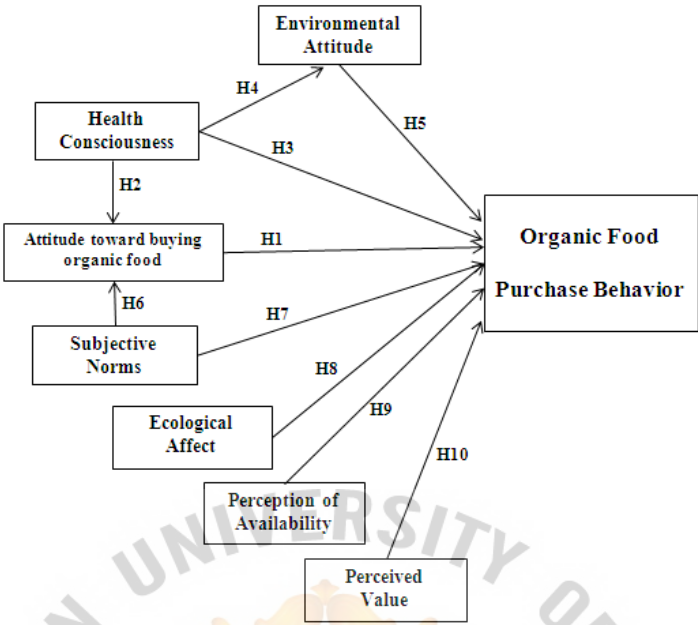
Figure 3.6, shows the framework of the study of the relationship between ecological constructs and the man-nature orientation that was studied by Chan and Lau (2000). The researchers examined the relationship among ecological affect, ecological knowledge

(independent variables), green purchase intention (intervening variable) and actual green purchase behavior (dependent variable). The result from this study found that the relationship between ecological effect and intention to purchase is significant (0.70), the relationship between ecological knowledge and intention to purchase is significant (0.73) and the relationship between intention to purchase and actual green purchase is also significant (0.84). Moreover, the man-nature orientation, it has a positive influence on ecological effect (0.23) but on the ecological knowledge term it has less influence (0.08). The researchers concluded that both ecological effect and ecological knowledge are important determinants of consumers' green purchase intention, which is a significant predictor of Chinese consumers' green product actual purchase.

### 3.2 Conceptual Framework

All of the theoretical frameworks from Figure 3.1 to 3.6 are the bases for researchers to develop a new conceptual framework for study regarding the influencing factors that affect organic food purchase behavior of Thai consumers. According to the variables that researchers select to form a conceptual framework there are seven independent variables which are attitude toward buying organic food, health consciousness, environmental attitude, subjective norm, ecological effect, perception of availability and perceived value. The intervening variables are attitude toward buying organic food and environmental attitude. The dependent variable is organic food purchase behavior

**Figure 3.7:** The modified conceptual framework



**3.3 Research Hypotheses**

From the conceptual framework of this research and the objective of this study, the researcher has determined a total of 10 hypotheses that were developed from the research objective of this study.

**Hypothesis 1**

- H1o: There is no statistically significant relationship between attitude toward buying organic food and organic food purchase behavior.
- H1a: There is a statistically significant relationship between attitude toward buying organic food and organic food purchase behavior.

**Hypothesis 2**

- H2o: There is no statistically significant relationship between health consciousness and attitude toward buying organic food.
- H2a: There is a statistically significant relationship between health consciousness and attitude toward buying organic food.

### **Hypothesis 3**

H3o: There is no statistically significant relationship between health consciousness and organic food purchase behavior.

H3a: There is a statistically significant relationship between health consciousness and organic food purchase behavior.

### **Hypothesis 4**

H4o: There is no statistically significant relationship between health consciousness and environmental attitude.

H4a: There is a statistically significant relationship between health consciousness and environmental attitude.

### **Hypothesis 5**

H5o: There is no statistically significant relationship between environmental attitude and organic food purchase behavior.

H5a: There is a statistically significant relationship between environmental attitude and organic food purchase behavior.

### **Hypothesis 6**

H6o: There is no statistically significant relationship between subjective norm and attitude toward buying organic food.

H6a: There is a statistically significant relationship between subjective norm and attitude toward buying organic food.

### **Hypothesis 7**

H7o: There is no statistically significant relationship between subjective norm and organic food purchase behavior.

H7a: There is a statistically significant relationship between subjective norm and organic food purchase behavior.

## **Hypothesis 8**

H8o: There is no statistically significant relationship between ecological affect and organic food purchase behavior.

H8a: There is a statistically significant relationship between ecological affect and organic food purchase behavior.

## **Hypothesis 9**

H9o: There is no statistically significant relationship between perception of availability and organic food purchase behavior.

H9a: There is a statistically significant relationship between perception of availability and organic food purchase behavior.

## **Hypothesis 10**

H10o: There is no statistically significant relationship between perceived value and organic food purchase behavior.

H10a: There is a statistically significant relationship between perceived value and organic food purchase behavior.

## **3.4 Operationalization of Variables**

All of the independent and dependent variables are defined and developed as the operational components for each variable and the measurement scales are used to analyze the data. All the details of the independent and dependent variables about operational definition are shown in the Table 3.1 below



**Table 3.1:** Operational Definition of Independent and Dependent Variable

Variables	Conceptual Definition	Operational Components	Measurement Scale
Organic food purchasing behavior	Organic food purchasing behavior is the action to consume those products that are recycled, preserve advantageous to the environment, and quick to respond to ecological concerns (Mostafa, 2007).	-I often buy organic food. -I often buy product that is labeled as environmentally-safe. -I agree to buy product that use recycled/recyclable packaging. -I agree to buy product that contain no or fewer chemical ingredients.	Interval Scale
Attitude toward buying organic food	Attitude towards the behavior is defined as the extent to which a person expresses his or her liking or disliking of the assessment of the behavior (Ajzen,1991).	-I buy organic food because of it is reasonable. -Most of organic food has superior quality. -I buy organic food because of it can ensure good health. -I buy organic food because of it is safe. -My attitude toward buying organic food is positive.	Interval Scale
Health consciousness	Health consciousness is based on the level of readiness to take healthy actions. It is a broad perception of the customers about healthy concepts. The higher the level of consciousness, the higher the readiness of the customers to take the healthy actions (Schifferstein and Oude Ophuis, 1998).	-I have the impression that I seriously protect my health. -I consider myself very health conscious. -I plan to eat as healthy as possible. -I choose food carefully to ensure good health. - I study how to eat healthy. -I think of myself as a health-conscious consumer.	Interval Scale

Environmental attitude	Environmental attitude is perceived as a cognitive judgment toward environmental protection concerning environmental pollution, environmental damages, conservation practices and recycled uses (De Magistris and Gracia, 2008).	<ul style="list-style-type: none"> <li>-The current development path is destroying the environment.</li> <li>-Environmental damage will be reversible if we do something.</li> <li>-I have knowledge and practice regarding the environmental protection.</li> <li>-Sometime I consume recycled product.</li> <li>-Sometime I dispose of my garbage in different rubbish bins.</li> </ul>	Interval Scale
Subjective norms	<p>Subjective norms are the social pressures that could build the customer behavior (Ajzen, 1991).</p> <p>Subjective norms include the external factors such as family, friends and society that can affect the decision of the individual.</p>	<ul style="list-style-type: none"> <li>-People, who influence my behavior, think that my purchase of organic food is a wise choice.</li> <li>-People, who are important to me, think that I should purchase of organic food.</li> <li>-My family members, who influence me most, think that my purchase of organic food is a wise choice.</li> <li>-My family members, who are important to me, think that my purchase of organic food is a wise choice.</li> </ul>	Interval Scale
Ecological effect	Ecological effect refers to the extent to which people are emotionally involved with the environmental issues (Dispoto, 1997).	<ul style="list-style-type: none"> <li>-It frightens me to think that much of the food I eat is contaminated with pesticides.</li> <li>-It genuinely infuriates me to think that the government doesn't do more to help control pollution of the</li> </ul>	Interval Scale

		<p>environment.</p> <p>-I become incensed when I think about the harm being done to plant and animal life by pollution.</p> <p>-When I think of the ways industries are causing pollution, I get frustrated and angry.</p>	
Perception of availability	<p>Perceived behavioral control can form considerable difference in behavioral intention and actions, which consists of perceived self-efficacy and perceived controllability.</p> <p>Insufficient availability is perceived as a hindrance for acquiring goods, which is clearly not under consumers' control (Ajzen, 2002).</p>	<p>-Organic food is always sufficiency available.</p> <p>-I consider purchasing organic food if it is available at my regular place of good purchase.</p> <p>-I consider making a special trip to a store that sell organic food if organic food is not available at my regular shopping place.</p>	Interval Scale
Perceived value	<p>Perceived value is considered as the perception, feelings and attitudes toward the importance of price of organic food when consumers make an acquisition (Takiainen and Sundqvist, 2005).</p>	<p>-Organic food is better quality than conventionally produced food.</p> <p>-Organic food is more nutritious than conventionally produced food.</p> <p>-Organic food has more freshness.</p> <p>-Organic food is worth the price.</p>	Interval Scale

## **CHAPTER 4**

### **RESEARCH METHODOLOGY**

This chapter focuses on the research methodology that is used in this study. The researcher has applied the appropriate research techniques to analyze the data in order to achieve the research objectives. This chapter is divided into seven parts. The first part describes the research method that is used in this study. The second part is the target respondents and sampling procedures, which include the determination of the sample size. The third part is the research instrument that provides the measurement for the questionnaire and methods. The fourth part is the pretest for checking the reliability of the questionnaires. The fifth part describes the collection of the data and the gathering procedure. The sixth part shows the statistical treatments of data that were applied in the study. And the last part is summary of statistical tools that were used for hypotheses testing for this research.

#### **4.1 Research Method**

This study applied descriptive research as the research method, which is designed for describing the characteristics of a population. The objectives of descriptive research are to prepare the answers for who, what, when, where and how questions (Zikmund, 2003). It is useful for the target and segmentation of the market. Therefore, descriptive research is used for providing a systematic description that is as factual and accurate as possible. It provides the number of times something occurs or frequency, and leads itself to statistical calculations such as determining the average number of occurrences or central tendencies. The research technique used in this study is the survey method, which is defined as a method of primary data collection in which information is gathered by communicating with a representative sample of people (Zikmund, 2003). The survey is conducted by using self-administered questionnaires to collect the data. This type of technique provides quick, inexpensive, efficient and accurate means of gathering information from a population (Zikmund, 2003).

4.2 Target Respondents and Sampling Procedures

4.2.1 Population

Cosenza and Davis (1988) implied that population is a whole set of items of analysis beneath examination. In addition, Malhotra and Birks (2006) stated that the target population is the way that the researcher groups the information required into component sets. Also, the researcher must define accurate target population in order to get the results accurately. Based on the conceptual framework of this research that study about the Thai consumers’ actual purchase behavior of organic food at Lemon Farm shops, the target population in this study is the persons who have experience in the acquisition of organic food at Lemon Farm shops in Bangkok, Thailand, so they are considered as the users of organic food.

Thailand is a Southeast Asian country that shares the border with Burma, Laos, Cambodia and Malaysia. Thailand has a population of around 64 million (January, 2012) and ranks 18<sup>th</sup> regarding the population in the world and 4<sup>th</sup> in Southeast Asia (<http://www.thailandmeters.mahidol.ac.th>). The capital of Thailand is Bangkok city that has the population of around 9.3 million people (<http://www.un.or.th/thailand/index.html>, Data as December, 2010).

Figure 4.1: Thailand Map



Source: <http://www.un.or.th/thailand/index.html> (Accessed on March 01, 2012)



The map displays the following provinces and districts:

- Pathum Thani**: กรุงเทพมหานคร (Bangkok)
- Don Muang**: ดอนเมือง
- Sai Mai**: สายไหม
- Lak Si**: หลักสี่
- Bang Khun**: บางขุน
- Klong Sam Wa**: คลองสามวา
- Nong Chok**:หนองจอก
- Min Buri**: มีนบุรี
- Bung Kum**: บึงกุ่ม
- Khan Na Yao**: คันนายาว
- Lat Phrao**: หลักพร้าว
- Chatuchak**: จตุจักร
- Bang Sue**: บางซื่อ
- Phaya Thai**: พญาไท
- Wang Thonglang**: วังทองหลาง
- Dusit**: ดุสิต
- Bangkok Noi**: บางกอกน้อย
- Ratcha Theewi**: รatcha เทวี
- Huai Khwang**: ห้วยขวาง
- Bang Kapi**: บางกะปิ
- Saphan Sung**: สะพานสูง
- Lat Krabang**:ลาดกระบัง
- Chachoengsao**: ฉะเชิงเทรา
- Prawet**: ประเวศ
- Phra Khanong**: พระโขนง
- Bang Na**: บางนา
- Yannawa**: ย่านนาวา
- Rat Burana**: รามบุรณะ
- Thon Buri**: ธนบุรี
- Bang Rak**: บางรัก
- Watthana**: วadhana
- Suan Luang**: สวนหลวง
- Bang Kho Laem**: บางคอแหลม
- Chom Thong**: ชอมทอง
- Bang Khuae**: บางคูหา
- Bang Bon**: บางบอน
- Bang Khun Thian**: บางขุนเทียน
- Thung Kru**: ทองครุ
- Taweewhatana**: ทวีวัฒนา
- Taling Chan**: ตลิ่งชัน
- Samut Prakan**:สมุทรปราการ
- Samut Sakhon**:สมุทรสาคร
- AO THAI**: อำเภอยะลา

Figure 4.1 and 4.2 show, Bangkok as the capital city of Thailand and it is the center of political, social and economic hub of Thailand, and one of the leading cities in Southeast Asia. Bangkok is located in the central area so that it is the appropriate area of Thailand to operate all kinds of business.

Bangkok is the centre of several businesses including the organic retail market, and as indicated that Bangkok has the largest organic product market in Thailand. Urban consumers believe in the benefits of consuming organic foods because they receive information and perceive the benefit of organic foods, which are available in the market. By the end of 2004, the volume and brands of fresh organic vegetables have all expanded considerably and many certified brands of organic farm produce have appeared in local supermarkets and modern trade outlets, particularly in Bangkok. The examples of the organic retail shops in Bangkok are: Lemon Farm, Royal project foundation Thailand and Doikam.

**Table 4.1:** Main Organic Retail Shops in Bangkok area

Organic Retail Shop	Numbers of Shops
Lemon Farm	9
Royal project foundation Thailand	5
Doikam	6

This table was created by the author based on the information from three website below:

<http://www.lemonfarm.com> (Accessed on May 25<sup>th</sup>, 2012),

<http://www.royalprojectthailand.com> (Accessed on May 25<sup>th</sup>, 2012)

<http://www.doikham.co.th> (Accessed on May 25<sup>th</sup>, 2012)

Table 4.1 displays the number of organic retail shops in the Bangkok area and shows that the Lemon Farm is the biggest organic chain shop which currently has 9 branches in the following areas: 1. Chaeng Wattana, 2. Pracha Chuen, 3. Chit Lom, 4. Phetkasem, 5. Sukumvit 39, 6. Pradit Manudham, 7. Paradise Park, 8. Srinakarin, 9. Kaset. The Doikam currently has 6 branches in Bangkok and that is ranked 2<sup>nd</sup> and the 3<sup>rd</sup> is the Royal project foundation Thailand that currently has 5 branches.

**Logo of Lemon Farm**



If you think about organic and macrobiotic product in Thailand. Lemon Farm is one of the most well-known organic, health and environment-friendly products shop for Thai people. Lemon Farm is a consumer organization selling pesticide-safe and organic farm products that was established in 1999, It aims to promote organic food, local production and fair trade in Thailand. Lemon Farm stocks a little of everything from organic products and examples of the products such as organic or pesticide-free vegetables, other natural foods, health products, herbal medicine, massage oil, as well as takeaway ready to eat vegetarian food such as: rad na, spicy rice salad and khanom jeen are provided. Most of the rice and

vegetables in this shop come from Lemon Farm's own farm and from the King's projects, which promote agricultural and fishery technology to the impoverished people in distant areas. Now, Lemon Farm has 23,000 members/shareholders distributed all over the country. Lemon Farm shops serve as direct market outlets for products from some 4,000 families from 300 rural communities in 50 provinces. Lemon Farm has joined several social welfare activities, including the provision of training and promotion of naturally produced or chemical/toxic-free vegetables, fragrant rice, cane sugar, pork, fish and other products. Moreover inside the Lemon Farm shop the seating area is provided for customers who want to enjoy a healthy snack or meal including fresh salads, healthy breads, fresh juice or vegetarian food.

**Figure 4.3:** Lemon Farm Shop: Chaeng Wattana branch



**Source:**<http://th.88db.com/Food-Beverage/Food-Beverage-Products/ad-337627/>  
[www.thaismefranchise.com/?p=21670](http://www.thaismefranchise.com/?p=21670) (Accessed on May 25<sup>th</sup>, 2012)

Figure 4.3 shows one of the Lemon Farm shops in Chaeng Wattana, that is the head office of Lemon Farm. This branch not only has organic and macrobiotic food provided to customers but also has the natural cotton cloth shop and the designers of this brand are Japanese people who want to conserve the environment by using clothing that come from 100% natural under the brand “Usaato”.

**Figure 4.4:** Lemon Farm Shop: Paradise Park branch



**Source:**<http://media.photobucket.com/image/lemon%20farm/iamnuchy2/090819ParadisePark/Para18LemonFarm.jpg> (Accessed on March 25<sup>th</sup>, 2012)  
<http://www.manager.co.th/asp-bin/Image.aspx?ID=554000016498801>

Figure 4.4, shows the one branch of Lemon Farm at Paradise Park and this branch of Lemon Farm has an organic restaurant, in which they use all the fresh organic vegetables, fruits and food products of Thailand, under the name “be Organic” (organic and macrobiotic kitchen). The Be Organic restaurant is a health-orientated restaurant by Lemon Farm that was established in 2010 at G floor of Paradise Park and it is the first macrobiotic restaurant in Thailand which serves up one kind cuisine prepared according to macrobiotic recipes with safe and fresh organic ingredients and provides many menu of healthy or organically produced Thai foods.

### **Population Summary:**

This study focuses on the people who had an experience in purchasing organic food at Lemon Farm shops in Bangkok. Therefore, in Bangkok it has a total of 9 branches of Lemon Farm: 1. Chaeng Wattana, 2. Pracha Chuen, 3. Pradit Manudham 4. Kaset, 5. Phetkasem, 6. Sukumvit 39, 7. Paradise Park, 8. Srinakarin, 9. Chit Lom. So the target population of this study is customers who had an experience in purchasing organic food from Lemon Farm shops in Bangkok.



#### 4.2.2 Sampling Size

Zikmund (1997) described a sampling unit as a single element or group of elements subject to selection in the sample. Therefore, the people who have had experience in purchasing green products at Lemon Farm shops are the sampling unit for this study. Zikmund (2003) also stated that the sample size refers to the number of the respondents or the number of observations or cases specified by the estimated variance of the population where it is necessary to consider the magnitude of acceptable error and confidence level. In this study, since the target population is unknown, the researcher selected the following statistical formula which is well known as proportion technique of Berenson and Levine (1999) to determine the sample size. Moreover, the respondents were chosen at 95% confidence level and 5% sampling error.

The formula is as follows:

$$n = \frac{p(1-p)Z^2}{e^2}$$

Where,

n = number of items in sample

p = the population proportion in this research, which is calculated by the percentage of respondents which is assumed as 0.50 or 50% (Vanichbuncha, 2003)

1-p = the estimated proportion of failure

$Z^2$  = square of the confidence level in standard error units that the researcher has set at 95%

$e^2$  = square of the maximum allowance for error between the true proportion and the sample proportion or level of confidence. The allowance error is 0.05

The sample size of this research amounts to:

Formula

$$n = \frac{p(1-p)Z^2}{e^2}$$

$$n = \frac{(0.50)(1-0.50)1.96^2}{0.05^2}$$



$$n = 384.16$$

$$n \approx 385 \text{ samples}$$

From the calculation, the sample size for this research is around 385 samples. Zikmund (2003) defined that if more number of questionnaires are distributed, the result will be more accurate. The researcher decided to round up the sample size to 400 samples or more than that in order to get the results that are more reliable and accurate and to decrease the deviations.

#### **4.2.3 Sampling Procedure**

As Zikmund (2003) mentioned that sampling is a method to select a part of a representative sample from the research population and in accordance with this part of the sample to infer the general situation. In many situations, it is not easy to do research on an entire population but part of it can be studied. The choice of this part is necessary to rely on sampling to complete as well as save the cost and time of the research.

There are two basic sampling forms: probability sampling and non-probability sampling that are mentioned by Zikmund (2003). In this study, the probability sampling technique consists of Simple Random Sampling, while the non-probability sampling technique consists of Quota Sampling and Convenience Sampling.

Probability sampling is a simple technique in which every unit of the population is a known and there is no zero chance of being chosen (Morgan et al., 2005). While simple random sampling is a sampling procedure that assures each element in the population has equal chance of being included in the sample (Zikmund, 2003). And under the simple random sampling, the researcher also applied the drawing technique in this study.

Zikmund (2003) mentioned that Non-probability sampling is a sampling technique in which units of the sample are selected on the basis of personal judgment or convenience while quota sampling under the non-probability technique uses the same proportion to select the sample from the target population (Urdan, 2005). Another sampling procedure is convenience sampling that refers to the sampling that selects the people or the target population who are most conveniently available (Zikmund, 2003).

1. Simple Random Sampling

The simple random sampling technique is used to ensure that each element in the population shares an equal chance of being included in the sample (Zikmund, 2003). In this study, each branch of the Lemon Farm shop has an equal chance to be selected and the researcher random by selected 4 branches from the 9 branches of Lemon Farm shops in Bangkok. These are: Chaeng Wattana, Kaset, Srinakharin and Paradise Park. These 4 branches of Lemon Farm can represent the sample for the whole target population of organic food consumers in Bangkok. In this study, the researcher targeted the consumers in the Bangkok area. Bentler and Chou (1987) defined the ratio of sample size to the number of population parameters as 10%. However, the researcher randomly chose 4 branches from the 9 branches, which accounted for 44.44% that is more than 10%. So it has more concentration on the population.

2. Quota Sampling

Quota sampling refers to how the investigator classified or stratified the overall population into mutually exclusive sub-groups according to certain characteristics to determine the amount of sample units in different sub-groups (Zikmund, 2003). The researcher used this technique to ensure sample size of each sub-group for collecting data from respondents. The number of experienced customers was unknown. The researcher focused on the consumers’ actual purchase behavior of organic food, so the data was collected from approximately  $400/4 = 100$  consumers at each branch. The proportion and the selected branches are shown in the Table 4.2

Table 4.2: Four Selected Lemon Farm Branches

Lemon Farm Branch	Amount (respondents)
1. ChaengWattana	100
2. Kaset	100
3. Srinakharin	100
4. Paradise Park	100
Total	400

### **3. Convenience Sampling**

Convenience sampling can be defined as the sampling procedure by selecting the people or the target population who are most conveniently available (Zikmund, 2003). As Zikmund (2003) mentioned researcher got convenience samples to obtain a large number of completed questionnaires quickly and economically. In this research, the researcher selected the sample based on chance or opportunity to get the target respondents. This method can help the researcher get data quickly. The researcher collected the data from respondents who were available to answer the questions and collected 100 sets of questionnaires from each branch of the Lemon Farm shop.

#### **4.3 Research Instrument**

The researcher used questionnaire conducting based on the study of previous theoretical frameworks in order to collect primary data from respondents. The questionnaire was translated into Thai language for convenience, ease of understanding and time saving of respondents to answer the questions. The questionnaire (see Appendix A) consisted of 4 parts and the total number of questions was 41.

The five points Likert-scale was used in this study to measure actual organic food purchase behavior of consumers. The advantage of using a five points Likert-scale is that it can allow respondents to express the degree of their agreement or disagreement toward some objectives or attitudes through the ranking from strongly positive to strongly negative (Cosenza and Davis, 1988).

#### **Part 1: Screening Question**

The screening questions (Yes or No question) were asked to every respondent in order to screen whether the respondents have had experience in purchasing organic food before they continued answering the questionnaires.

## **Part 2: Factors Influencing Organic Food Purchase Behavior**

This part consists of 7 variables and a total of 31 questions that are Attitude toward buying organic food, Health consciousness, Environmental attitudes, Subjective norms, Ecological affect, Perception of availability and Perceived value. The researcher has used the five points Likert-scale for the even variables to measure the extent of consumers' favorableness toward organic food. As Zikmund (2003) mentioned the Likert scale is a measurement of attitudes used for describing respondents' extent of agreements or disagreements with constructed statements that vary from strongly positive to strongly negative towards an attitudinal object. The scale in this part was ranked as following: 1 refers to "Strongly disagree", 2 refers to "Disagree", 3 refers to "Neutral", 4 refers to "Agree" and 5 refers to "Strongly agree".

## **Part 3: Organic Food Purchase Behavior**

This part consists of 4 questions to measure the degree of consumers' actual purchase of organic food. The five points Likert-scale was applied in this part and ranked as follows: 1 refers to "Strongly disagree", 2 refers to "Disagree", 3 refers to "Neutral", 4 refers to "Agree" and 5 refers to "Strongly agree".

## **Part 4: Personal Information**

As Robert (1996) indicated that the demographic factors are useful to segment the market and ecological conscious behavior can be estimated by the demographic factors (Schlegelmilch et al., 1996). The demographic factors are included in this research as background factors. According to Robert (1996), gender, age, education, occupation and income are the elements of standard demographic variables.

- Gender: There are two choices offered male and female
- Age: There are five age ranges that describe the age ranges of the respondents
- Education: There are four choices provided high school or less, college graduate, bachelor degree and master degree or higher
- Occupation: There are five choices provided university student, government sector employee, private sector employee, business owner and others

- Monthly income: There are five levels of monthly income offered to gather the income information of the respondents

#### 4.4 Pretest

It is often beneficial to conduct a pre-test before completing the final questionnaire because it can provide the better understanding of the questionnaires and it is a good preparation for the final survey which were mentioned by Oppenheim (1992), Czaja and Blair (1996). The purpose of the pre-test is to check the comprehension of the questions so it can be made sure that respondents have no problems in answering the questions and the researcher has no difficulties in analyzing the data (Zikmund, 2003). In order to test the reliability of the questionnaire, the researcher conducted a pre-test to keep accurate intercommunication between the researcher and the respondents. A pre-test can help a researcher identify problems that can occur and then avoid these mistakes or ambiguity during conducting research (Zikmund, 2003). In this study, the survey technique used by was distributing self-administered questionnaires in which the researcher could see how clear the questions were and how the respondents responded to the questions. As part of the pre-test, the questionnaire was given to a small sample size to test whether it was well-designed and easy to answer. According to Cooper and Schindler (2001) the sample size of the pre-test should be 20 to 100 respondents. In this study, the researcher collected the data from 50 respondents for the pre-test in order to ensure the success of the questionnaire and the accuracy of the information for a trial study.

Cronbach's Alpha Coefficient is one of the most frequently used internal reliability testing method to test the reliability of the questionnaire by using the five points Likert-scale ranging from 5 strongly agree to 1 strongly disagree. Thus, the researcher tested part 2 and 3 of the questionnaire by using Cronbach's Alpha Coefficient through the SPSS program. Reliability was used to measure the internal consistency of multi-items in measuring their respective constructs (Hair et al., 2006). According to Sekaran (1992) the Cronbach's alpha level should reliability value equal or more than 0.6, it means that the questionnaires will be reliable and acceptable. If the Cronbach's alpha level is less than 0.6, it means that the questionnaires are considered poor and unreliable. The result of reliability testing is shown in Table 4.3 as follows



**Table 4.3:** Reliability of the questionnaire in each dimension

Variables	Alpha
Attitude towards buying organic food	0.8344
Health consciousness	0.8799
Environmental attitude	0.7267
Subjective Norms	0.8270
Ecological Affect	0.8300
Perception of Availability	0.6949
Perceived Value	0.8564
Organic food purchase behavior	0.7466

**4.5 Collection of Data**

Primary data refers to the data gathered and assembled specially for the project at hand, in other words, they are the raw data or original works of study which can never be demonstrated or interpreted as “an official opinion or position” which mentioned by Zikmund (2003), Cooper and Schindler (2001). The primary data was collected by the survey method, since survey is commonly used to generate the primary data. In this study, the primary data was collected from the target respondents who have had experience in purchasing organic food from Lemon Farm shops in the Bangkok area. All data were analyzed by using the statistical package for social science (SPSS) program. Secondary data is the data that has been previously collected for a prior intention rather than for an immediate study at hand (Lacobucci, 2002). Representatives of secondary data are: research journals, newspaper articles, newscasts, textbooks, encyclopedias, magazines, information available on the internet, articles and the previous studies, which had been done by various researchers. The secondary link to this study can help the researcher to find out the concepts to assist in the analysis recommendations and to write the great conclusion for this research.

In this study, the researcher used both the primary data and the secondary data to gather the information that can be a good foundation for the researcher to conduct the study. Collecting the primary data is expensive and takes long time consuming. Collecting the secondary data can be cheaper and less time consuming than the primary data.

## 4.6 Statistical Treatment of Data

In this study, the researcher analyzed variance procedure by using the Statistical Package for Social Science (SPSS) program. Descriptive analysis was used for analyzing demographic factors. For inferential analysis the researcher used the Pearson Correlation Coefficient. The SPSS program was used for both descriptive analysis and tested the hypotheses.

### 4.6.1 Descriptive Analysis

Zikmund (2003) implied descriptive analysis as the transformation of raw data into a form that will make those data more understandable and interpretable. The most common ways to summarize the data are calculating averages, frequency distributions, and percentage distributions. In this research, the descriptive analysis was used to explore the data collection manifested in terms of the descriptive analysis for age range, gender, monthly income, education background and occupation and manifested through a series of tables or graphics. The formula which include in this study are shown in following

- **Mean:** perhaps the most important numerical measure of location is the mean or average value. The mean provides a measure of central location for a data set (Anderson et al., 2001).

$$\bar{X} = \frac{\sum x}{n}$$

Where:  $\bar{X}$  = the mean values

$\sum X$  = the sum of the observation

$N$  = the number of the observation

- **Percentage:** is the total frequency that will be standardized to a value of 100 (Anderson et al., 2001).

$$\text{Percentage (\%)} = (f/n) \times 100$$

Where:  $f$  = frequency

$n$  = the number of the observation

- **Standard Deviation (SD):** SD is the positive square root of the variance and the standard deviation is measured in the same units as the original data. For this reason the standard

deviation is easier when compared to the mean and other statistics that are measured in the same units as the original data (Anderson et al., 2001).

$$SD = \sqrt{\frac{\sum (x - \bar{x})^2}{N - 1}}$$

Where: SD = Standard Deviation value

X = the value of each observation in the sample

$\bar{X}$  = the mean or average value

N = the number of the observation

$\sum$  means that we sum across the values

### 4.6.2 Inferential Analysis

#### - Pearson's Product Moment Correlation Coefficient

Correlation is a method to study the relationship between two variables in a linear fashion (Coakes et al., 2006). A Pearson Product Moment Correlation Coefficient is used for illustrating the relationship between two continuous variables and is variable through the analysis and correlate menus. Its range of possible values is from -1 to +1. In addition, Bivariate correlation refers to the correlation between two continuous variables. In this study, the Pearson product moment correlation coefficient (Bivariate correlation) measures the relationship between environmental attitudes and organic food purchasing behavior, perception of availability and organic food purchasing behavior, attitude toward buying and organic food purchasing behavior, perceived value and organic food purchasing behavior, ecological affect and organic food purchasing behavior, subjective norm and organic food purchasing behavior, and health consciousness and organic food purchasing behavior. Zikmund (2003) mentioned that the formula calculating of the correlation coefficient for the two variables are as follows:

$$r = \frac{\sum_{i=1}^n ((x_i - \bar{x})(y_i - \bar{y}))}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}}$$

Where:  $r$  = sample correlation coefficient

$\overline{X}$  and  $\overline{Y}$  = sample mean of  $X$  and  $Y$

$X_i$  and  $Y_i$  = values for sample unit  $i$

The correlation coefficient ( $r$ ) ranges from +1.0 to -1.0. The value +1.0 implies as a perfect positive linear relationship and the value -1.0 implies a perfect negative linear relationship as shown in the Table 4.4.

**Table 4.4:** R- value and Corresponding Strength of Association

Correlation ( $r$ )	Interpret
1	Perfect positive linear association
0	No linear association
-1	Perfect negative linear association
0.90 to 0.99	Very high positive correlation
0.70 to 0.89	High positive correlation
0.40 to 0.69	Medium positive correlation
0 to 0.39	Low positive correlation
0 to -0.39	Low negative correlation
-0.40 to -0.69	Medium negative correlation
-0.70 to -0.89	High negative correlation
-0.90 to -0.99	Very high negative correlation

**Source:** Hussey (1997) *Business research: a practical guide for undergraduate and Post graduate students*, p.227, MacMillan, London.

**4.7 Summary of Statistical tools used in testing the hypotheses**

Pearson Correlation Coefficient test and the SPSS program will provide the p-value (two-tailed hypotheses test). From the result, the researcher made the comparison with the significant level (provided by SPSS program). As Zikmund (2003) stated the significant level

is a critical probability in choosing between the null and alternative hypotheses and the significant level can be set at 0.01 or 0.05. The confidence level is a percentage that indicates the long-run probability that the result will be correct, and traditionally the 95% confidence level has been used by the researcher (Kitchens, 1998). Based on the previous theories, the researcher in this study has defined the significant level as 0.05. If the P-value is greater than the significant level (0.05), the null hypotheses would fail to be rejected, which means that there is no relationship between the two variables. If the P-value is less than the significant level (0.05), the null hypotheses will be rejected, which means that there is a relationship between the two variables.

**Table 4.5:** Summary of Statistical tools used in testing hypotheses

Null Hypotheses	Null hypotheses description	Statistical tools used
H1o	There is no statistically significant relationship between attitude toward buying organic food and organic food purchase behavior	Pearson Correlation
H2o	There is no statistically significant relationship between health consciousness and attitude toward buying organic food	Pearson Correlation
H3o	There is no statistically significant relationship between health consciousness and organic food purchase behavior	Pearson Correlation
H4o	There is no statistically significant relationship between health consciousness and environmental attitude	Pearson Correlation
H5o	There is no statistically significant relationship between environmental attitude and organic food purchase behavior	Pearson Correlation
H6o	There is no statistically significant relationship between subjective norm and attitude toward buying organic food	Pearson Correlation
H7o	There is no statistically significant relationship between subjective norm and organic food purchase behavior	Pearson Correlation



H8o	There is no statistically significant relationship between ecological effect and organic food purchase behavior	Pearson Correlation
H9o	There is no statistically significant relationship between perception of availability and organic food purchase behavior	Pearson Correlation
H10o	There is no statistically significant relationship between perceived value and organic food purchase behavior	Pearson Correlation



## **CHAPTER 5**

### **DATA ANALYSIS**

This chapter presents the results of the research hypothesis. The researcher analyzed the data, collected from 400 respondents in Bangkok area by distributing the questionnaires. The Statistical Package for Social Sciences for Windows (SPSS) was used to analyze the data. In this chapter, the primary data can be divided into four main parts. The first part is descriptive analysis for demographic factors that identify the data in the form of frequency and percentage. The second part is descriptive analysis for variables in the form of mean and standard deviation. The third part shows the result of the reliability test. The fourth part is hypothesis testing in which researcher applied the Pearson's correlation coefficient in order to test the relationship of variables for all the ten hypotheses.

#### **5.1 Descriptive Analysis of Demographic Factors**

Zikmund (2003) mentioned descriptive analysis, as the transformation of raw data into a form that will make the data easy to understand and interpret. To calculate averages, frequency distributions and percentage distribution are the common ways to summarize the data for general information such as age, gender, education, occupation and income. The descriptive analysis of respondents' demographic information in this study was demonstrated as follows in Table 5.1:

**Table 5.1:** Summary of Descriptive Analysis for demographic factors by applying frequency and percentage

Variable	Frequency (f)	Percentage (%)
Gender: <ul style="list-style-type: none"><li>• Male</li><li>• Female</li></ul>	168 232	42 58
Age level <ul style="list-style-type: none"><li>• 25 or less years old</li><li>• 26-35 years old</li><li>• 36-45 years old</li><li>• 46-55 years old</li><li>• 56 or more years old</li></ul>	92 207 51 9 41	23 51.8 12.8 2.3 10.3
Occupation <ul style="list-style-type: none"><li>• University students</li><li>• Government sector employee</li><li>• Private sector employee</li><li>• Business owner</li><li>• Others</li></ul>	41 39 176 89 55	10.3 9.8 44 22.3 13.8
Education <ul style="list-style-type: none"><li>• High school or less</li><li>• College graduate</li><li>• Bachelor degree</li><li>• Master degree or higher</li></ul>	28 29 227 116	7 7.3 56.8 29
Income Level <ul style="list-style-type: none"><li>• 15,000 or less THB</li><li>• 15,001-25,000 THB</li><li>• 25,001-35,000 THB</li><li>• 35,001-45,000 THB</li><li>• 45,001 or more THB</li></ul>	51 119 78 46 106	12.8 29.8 19.5 11.5 26.5
Total	400	100

As shown in Table 5.1, the majority of respondents were female respondents as 232(58%) followed by male were 168(42%). The total respondents were 400 persons. The result showed that the female consumers play a great part in purchasing organic food.

Most of Thai organic food consumers who joined this research were in the age range 26-35 years as 207(51.8%), followed by 25 years or less as 92(23%), 51 respondents (12.8%) in range of 36-45 years, 41 respondents (10.3%) in 56 years or more and 9 respondents (2.3%) in the age range of 46-55 years, respectively.

The majority of the respondents were private sector employed or 176 respondents (44%), followed by 89 respondents (22.3%) of business owner, followed by 55 respondents (13.8%) of others, 41 respondents (10.3%) of university students, and 39 respondents (9.8%) with government sector employees were represent, respectively.

The education level of most respondents was bachelor degree that accounted for 227 respondents (56.8%), followed by 116 respondents (29%) of master degree or higher, 29 respondents (7.3%) of college graduate, and 28 respondents (7%) of high school or less, respectively.

The largest monthly income range of respondents was between 15,001-25,000 THB. which account for 119 respondents (29.8%), followed by 106 respondents (26.5%) in the monthly income range of 45,001 THB. or more, 78 respondents (19.5%) in the monthly income range 25,001-35,000 THB., followed by 51 respondents (12.8%) in the range of 15,000 THB. or less, and in the monthly income range of 35,001-45,000 THB. which account for 46 respondents (11.5%), respectively.

5.2 Descriptive Analysis for variable

In this part, the researcher measured the Mean and Standard Deviation of the factors affecting respondents’ organic food purchase behavior that totally have 8 variables which are attitude toward buying, health consciousness, environmental attitude, subjective norm, ecological affect, perception of availability, perceived value, and organic food purchase behavior as shown in Table 5.2 – 5.10

**Table 5.2:** The Analysis of Attitude toward buying organic food by using Mean and Standard Deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
I buy organic food because of it is reasonable.	400	3.9750	.68961
Most of organic food have superior quality.	400	3.9300	.71511
I buy organic food because of it can ensure good health.	400	4.0125	.70611
I buy organic food because of it is safety.	400	4.0700	.71860
My attitude toward buying organic food is positive.	400	4.1500	.66604
Valid N (listwise)	400		

As shown in Table 5.2 is the analysis of attitude toward buying organic food by using mean and standard deviation. There were five questions in this variable that were rated at mean level between 3.93 to 4.15. The result shows that the question about “My attitude toward buying organic food is positive” has the highest mean as 4.15 whereas the question about “Most organic food has superior quality” has the lowest mean as 3.93.

The lowest standard deviation was for the question “My attitude toward buying organic food is positive” which account for 0.66604 and the highest standard deviation was for the question “I buy organic food because of its safety” which accounts for 0.71860.



**Table 5.3:** The Analysis of Health consciousness by using Mean and Standard Deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
I have the impression that I seriously protect my health.	400	3.7350	.59638
I consider myself very health conscious.	400	3.8625	.62013
I plan to eat as healthy as possible.	400	3.8775	.63126
I choose food carefully to ensure good health.	400	3.9075	.56987
I study how to eat healthy	400	4.3925	.60362
I think of myself as a health-conscious consumer.	400	4.0000	.52981
Valid N (listwise)	400		

As shown in Table 5.3 the analysis of health consciousness by using mean and standard deviation. There were six questions in this variable that rated the mean level between 3.7350 to 4.3925. The result shown that the question about “I study how to eat healthy food” has the highest mean as 4.3925 whereas the question about “I have the impression that I seriously protect my health” has the lowest mean as 3.7350.

The lowest standard deviation is the question “I think of myself as a health-conscious consumer” which accounts for 0.52981. And the highest standard deviation is the question “I plan to eat as healthy as possible” which account for 0.63126.

**Table 5.4:** The Analysis of Environmental attitude by using Mean and Standard Deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
The current development path is destroying the environment.	400	3.8925	.66487
Environmental damage will be reversible if we do something.	400	3.9275	.67704
I have knowledge and practice in the environmental protection.	400	3.9825	.62704
Sometime I consume recycled product.	400	3.8925	.58464
Sometime I dispose of my garbage in different rubbish bins.	400	3.9450	.63481
Valid N (listwise)	400		

As shown in Table 5.4 is the analysis of environmental attitude by using mean and standard deviation. There were five questions in this variable that were rated of mean level between 3.8925 to 3.9825. The result shows that the question “I have knowledge and practice in the environmental protection” has the highest mean as 3.9825 whereas the lowest mean as 3.8925 have two statements in the question of “ The current development path is destroying the environment” and “Sometimes I consume recycled products”.

The lowest standard deviation was for the question “Sometime I consume recycled product” which account for 0.58464. And the highest standard deviation was for the question “Environmental damage will be reversible if we do something” which accounts for 0.67704.

**Table 5.5:** The Analysis of Subjective norms by using Mean and Standard Deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
People, who influence my behavior, think that my purchase of organic food is a wise choice	400	3.9300	.69014
People, who are important to me, think that I should purchase of organic food	400	3.8250	.70043
My family members, who influenced me most, think that my purchase of organic food is a wise choice	400	3.8775	.64306
My family members, who are important to me, think that my purchase of organic food is a wise choice	400	3.8400	.64455
Valid N (listwise)	400		

Table 5.5 shows the analysis of subjective norms by using mean and standard deviation. There were four questions in this variable that were rated at mean level between 3.8250 to 3.9300. The result shows that the question about “People, who influence my behavior, think that my purchase of organic food is a wise choice” has the highest mean as 3.9300 whereas the question about “People, who are important to me, think that I should purchase organic food” has the lowest mean as 3.8250.

The lowest standard deviation is the question “My family members, who influenced me most, think that my purchase of organic food is a wise choice” which account for 0.64306. And the highest standard deviation was for the question “People, who are important to me, think that I should purchase organic food” which accounts for 0.70043.

**Table 5.6:** The Analysis of Ecological affect by using Mean and Standard Deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
It frightens me to think that much of the food I eat is contaminated with pesticides	400	4.0825	.73624
It genuinely infuriates me to think that the government doesn't do more to help control pollution of the environment	400	4.0975	.74457
I became incensed when I think about the harm being done to plant and animal life by pollution	400	3.9850	.75246
When I think of the ways industries are causing pollution, I get frustrated and angry	400	4.1050	.72822
Valid N (listwise)	400		

Table 5.6 shows the analysis of ecological affect by using mean and standard deviation. The researcher converted the score in the negative question in this variable and there were four questions in this part that were rated at mean level between 3.9850 to 4.1050. The result shows that the question about “When I think of the ways industries are causing pollution, I get frustrated and angry” has the highest mean as 4.1050 whereas the question about “I became incensed when I think about the harm being done to plant and animal life by pollution” has the lowest mean as 3.9850.

The lowest standard deviation was for the question “When I think of the ways industries are causing pollution, I get frustrated and angry” which account for 0.72822. And the highest standard deviation was for the question “I became incensed when I think about the harm being done to plant and animal life by pollution” which accounts for 0.75246.

**Table 5.7:** The Analysis of Perception of availability by using Mean and Standard Deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
Organic food is always sufficiency available.	400	3.8625	.72796
I consider purchasing organic food if it is available at my regular place of good purchase	400	4.0250	.70400
I consider making a special trip to a store that sell organic food if organic food is not available at my regular shopping place	400	3.9125	.74244
Valid N (listwise)	400		

Table 5.7 shows the analysis of perception of availability by using mean and standard deviation. There were three questions in this variable that were rated of mean level between 3.8625 to 4.0250. The result shows that the question “I consider purchasing organic food if it is available at my regular place of good purchase” has the highest mean as 4.0250 whereas the question about “Organic food is always sufficiently available” has the lowest mean at 3.8625.

The lowest standard deviation was for the question “I consider purchasing organic food if it is available at my regular place of good purchase” which account for 0.70400. And the highest standard deviation was for the question “I consider making a special trip to a store that sell organic food if organic food is not available at my regular shopping place” which accounts for 0.74244.



**Table 5.8:** The Analysis of Perceived value by using Mean and Standard Deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
Organic food is better quality than conventionally produced food.	400	4.1075	.71219
Organic food is more nutritious than conventionally produced food.	400	3.7625	.70877
Organic food has more freshness.	400	3.7875	.73396
Organic food is worth the price.	400	3.8250	.74885
Valid N (listwise)	400		

Table 5.8 shows the analysis of perceived value by using mean and standard deviation. There were four questions in this variable that were rated at mean level between 3.7625 to 4.1075. The result shows that the question about “Organic food is better quality than conventionally produced food” has the highest mean at 4.1075 whereas the question about “Organic food is more nutritious than conventionally produced food” has the lowest mean at 3.7625.

The lowest standard deviation was for the question “Organic food is more nutritious than conventionally produced food” which account for 0.70877. And the highest standard deviation is the question “Organic food is worth the price” which accounts for 0.74885.

**Table 5.9:** The Analysis of Organic food purchase behavior by using Mean and Standard Deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
I often buy organic food.	400	3.8475	.62867
I often buy product that is labeled as environmentally -safe.	400	3.9425	.68217
I agree to buy product that use recycled/recyclable packaging.	400	4.0200	.66762
I agree to buy product that contain no or fewer chemical ingredients.	400	4.2075	.74217
Valid N (listwise)	400		

Table 5.9 shows the analysis of organic food purchase behavior by using mean and standard deviation. There were four questions in this variable that were rated at mean level between 3.8475to 4.2075. The result shows that the question about “I agree to buy products that contain no or fewer chemical ingredients” has the highest mean at 4.2075 whereas the question about “I often buy organic food” has the lowest mean at 3.8475.

The lowest standard deviation is the question “I often buy organic food” which accounts for 0.62867. And the highest standard deviation was for the question “I agree to buy products that contain no or fewer chemical ingredients” which accounts for 0.74217.

**Table 5.10:** The Analysis of Attitude toward buying organic food, Health consciousness, Environmental attitude, Subjective norm, Ecological affect, Perception of availability, Perceived value and Organic food purchase behavior by using Mean and Standard Deviation

Descriptive Statistics			
	N	Mean	Std. Deviation
Attitude toward buying organic food	400	4.0275	.52252
Health consciousness	400	3.9625	.32010
Environmental attitude	400	3.9280	.36269
Subjective norms	400	3.8681	.54722
Ecological affect	400	4.0675	.52339
Perception of availability	400	3.9333	.61495
Perceived value	400	3.8706	.55181
Organic food purchase behavior	400	4.0044	.46944
Valid N (listwise)	400		

Based on Table 5.10, is the analysis of attitude toward buying organic food, health consciousness, environmental attitude, subjective norms, ecological affect, perception of availability, perceived value and organic food purchase behavior by using mean and standard deviation. The results found that ecological affect has the highest mean, which accounted for 4.0675. Followed by attitude toward buying organic food 4.0275. The third mean was equal to 4.0044 from organic food purchase behavior. The fourth mean was 3.9625 from health consciousness. The fifth mean was 3.9333 from perception of availability factor. The last three factors were environmental attitude, perceived value and subjective norm have mean which accounted for 3.9280, 3.8706 and 3.8681, respectively.

The lowest standard deviation was for health consciousness, which accounted for 0.32010 whereas the highest standard deviation is 0.61495 from perception of availability factor.

5.3 Reliability Analysis

In this research, the researcher applied Cronbach’s Alpha Coefficient to measure the reliability of the questionnaire of each variable by collecting from 400 respondents in Bangkok area. Testing of reliability has been pre-conducted to ensure the measurement (Zikmund, 2003). The results of reliability test are shown in Table 5.10.

**Table 5.11:** The Reliability of the questionnaire of each variables dimensions

Variables	Alpha
Attitude towards buying organic food	0.834
Health consciousness	0.876
Environmental attitude	0.670
Subjective Norms	0.827
Ecological Affect	0.830
Perception of Availability	0.695
Perceived Value	0.856
Organic food purchase behavior	0.693

Sekaran (1992) mentioned that when alpha value is greater than 0.6 it means that the questionnaire is reliable and acceptable. From Table 5.11, found that all variables have alpha value greater than 0.6. Therefore, it means that the questionnaire of this study is reliable and acceptable.

5.4 Hypothesis Testing

In this research, there were totally ten hypotheses examined in accordance with the research requirement. Pearson Correlation Coefficient was applied to test the relationship between each independent variable and dependent variable

Hypothesis1

- H1o: There is no statistical significant relationship between attitude toward buying organic food and organic food purchase behavior.
- H1a: There is a statistical significant relationship between attitude toward buying organic food and organic food purchase behavior.

Table 5.12: The analysis of the relationship between attitude toward buying organic food and organic food purchase behavior

Correlations			
		Attitude toward buying organic food	Organic food purchase behavior
Attitude toward buying organic food	Pearson Correlation	1	.474**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.474**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.12 shows that the significant level of attitude toward buying organic food and organic food purchase behavior is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between attitude toward buying organic food and organic food purchase behavior at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.474, which means that there is a moderate positive correlation between attitude toward buying organic food and organic food purchase behavior. These two variables move in the same direction. If attitude toward buying organic food increases, the organic food purchase behavior will also increase.



**Hypothesis2**

H2o: There is no statistical significant relationship between health consciousness and attitude toward buying organic food.

H2a: There is a statistical significant relationship between health consciousness and attitude toward buying organic food.

**Table 5.13:** The analysis of the relationship between health consciousness and attitude toward buying organic food

Correlations			
		Health consciou sness	Attitude toward buying organic food
Health consciousness	Pearson Correlation	1	.428**
	Sig. (2-tailed)		.000
	N	400	400
Attitude toward buying organic food	Pearson Correlation	.428**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\*. Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.13 shows that the significant level of health consciousness and attitude toward buying organic food is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between health consciousness and attitude towards buying organic food at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.428, which means that there is a moderate positive correlation between health consciousness and attitude toward buying organic food. These two variables move in the same direction. If health consciousness increases, the attitude towards buying organic food will also increase.

**Hypothesis3**

H3o: There is no statistical significant relationship between health consciousness and organic food purchase behavior.

H3a: There is a statistical significant relationship between health consciousness and organic food purchase behavior.

**Table 5.14:** The analysis of the relationship between health consciousness and organic food purchase behavior

Correlations			
		Health consciou sness	Organic food purchase behavior
Health consciousness	Pearson Correlation	1	.618**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.618**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.14 shows that the significant level of health consciousness and organic food purchase behavior is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between health consciousness and organic food purchase behavior at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.618, which means that there is a moderate positive correlation between health consciousness and organic food purchase behavior. These two variables move in the same direction. If health consciousness increases, the organic food purchase behavior will also increase.

**Hypothesis4**

H4o: There is no statistical significant relationship between health consciousness and environmental attitude.

H4a: There is a statistical significant relationship between health consciousness and environmental attitude

**Table 5.15:** The analysis of the relationship between health consciousness and environmental attitude

Correlations			
		Health consciou sness	Environmen tal attitude
Health consciousness	Pearson Correlation	1	.729**
	Sig. (2-tailed)		.000
	N	400	400
Environmental attitude	Pearson Correlation	.729**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.15 shows that the significant level of health consciousness and environmental attitude is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between health consciousness and environmental attitude at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.729, which means that there is a high positive correlation between health consciousness and environmental attitude. These two variables move in the same direction. If health consciousness increases, the environmental attitude will also increase.

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**Hypothesis5**

H5o: There is no statistical significant relationship between environmental attitude and organic food purchase behavior.

H5a: There is a statistical significant relationship between environmental attitude and organic food purchase behavior.

**Table 5.16:** The analysis of the relationship between environmental attitude and organic food purchase behavior

Correlations			
		Environmen tal attitude	Organic food purchase behavior
Environmental attitude	Pearson Correlation	1	.590**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.590**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\*. Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.16 shows that the significant level of environmental attitude and organic food purchase behavior is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between environmental attitude and organic food purchase behavior at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.590, which means that there is a moderate positive correlation between environmental attitude and organic food purchase behavior. These two variables move in the same direction. If environmental attitude increases, the organic food purchase behavior will also increase.

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**Hypothesis6**

H6o: There is no statistical significant relationship between subjective norm and attitude toward buying organic food.

H6a: There is a statistical significant relationship between subjective norm and attitude toward buying organic food.

**Table 5.17:** The analysis of the relationship between subjective norm and attitude toward buying organic food

Correlations			
		Subjective norms	Attitude toward buying organic food
Subjective norms	Pearson Correlation	1	.240**
	Sig. (2-tailed)		.000
	N	400	400
Attitude toward buying organic food	Pearson Correlation	.240**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.17 shows that the significant level of subjective norm and attitude toward buying organic food is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between subjective norm and attitude toward buying organic food at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.240, which means that there is a low positive correlation between subjective norm and attitude toward buying organic food. These two variables move in the same direction. If subjective norm increases, the attitude toward buying organic food will also increase.



**Hypothesis7**

H7o: There is no statistical significant relationship between subjective norm and organic food purchase behavior.

H7a: There is a statistical significant relationship between subjective norm and organic food purchase behavior.

**Table 5.18:** The analysis of the relationship between subjective norm and organic food purchase behavior

Correlations		Subjective norms	Organic food purchase behavior
Subjective norms	Pearson Correlation	1	.258**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.258**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\*.

Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.18 shows that the significant level of subjective norm and organic food purchase behavior is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between subjective norm and organic food purchase behavior at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.258, which means that there is a low positive correlation between subjective norm and organic food purchase behavior. These two variables move in the same direction. If subjective norm increases, the organic food purchase behavior will also increase.

**Hypothesis8**

H8o: There is no statistical significant relationship between ecological affect and organic food purchase behavior.

H8a: There is a statistical significant relationship between ecological affect and organic food purchase behavior.

**Table 5.19:** The analysis of the relationship between ecological affect and organic food purchase behavior

Correlations		Ecological affect	Organic food purchase behavior
Ecological affect	Pearson Correlation	1	.538**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.538**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.19 shows that the significant level of ecological affect and organic food purchase behavior is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between ecological affect and organic food purchase behavior at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.538, which means that there is a moderate positive correlation between ecological affect and organic food purchase behavior. These two variables move in the same direction. If ecological affect increases, the organic food purchase behavior will also increase.

**Hypothesis9**

H9o: There is no statistical significant relationship between perception of availability and organic food purchase behavior.

H9a: There is a statistical significant relationship between perception of availability and organic food purchase behavior.

**Table 5.20:** The analysis of the relationship between perception of availability and organic food purchase behavior

Correlations			
		Perception of availability	Organic food purchase behavior
Perception of availability	Pearson Correlation	1	.217**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.217**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.20 shows that the significant level of perception of availability and organic food purchase behavior is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between perception of availability and organic food purchase behavior at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.217, which means that there is a low positive correlation between perception of availability and organic food purchase behavior. These two variables move in the same direction. If perception of availability increases, the organic food purchase behavior will also increase.

**Hypothesis10**

H10o: There is no statistical significant relationship between perceived value and organic food purchase behavior.

H10a: There is a statistical significant relationship between perceived value and organic food purchase behavior.

**Table 5.21:** The analysis of the relationship between perceived value and organic food purchase behavior

Correlations		Perceived value	Organic food purchase behavior
Perceived value	Pearson Correlation	1	.412**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.412**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The analysis of Pearson Correlation Coefficient in Table 5.21 shows that the significant level of perceived value and organic food purchase behavior is equal to 0.000 which is less than 0.01 ( $0.000 < 0.01$ ). The result indicated that the null hypothesis is rejected. Therefore, there is a significant relationship between perceived value and organic food purchase behavior at the 0.01 significant level. In addition, the correlation coefficient value is equal to 0.412, which means that there is a moderate positive correlation between perceived value and organic food purchase behavior. These two variables move in the same direction. If perceived value increases, the organic food purchase behavior will also increase.

**Table 5.22:** Summary of Hypotheses Testing Results

<b>Null Hypotheses</b>	<b>Null hypotheses description</b>	<b>Result of Null Hypotheses testing</b>
H1o	There is no statistically significant relationship between attitude toward buying organic food and organic food purchase behavior	Rejected
H2o	There is no statistically significant relationship between health consciousness and attitude toward buying organic food	Rejected
H3o	There is no statistically significant relationship between health consciousness and organic food purchase behavior	Rejected
H4o	There is no statistically significant relationship between health consciousness and environmental attitude	Rejected
H5o	There is no statistically significant relationship between environmental attitude and organic food purchase behavior	Rejected
H6o	There is no statistically significant relationship between subjective norm and attitude toward buying organic food	Rejected
H7o	There is no statistically significant relationship between subjective norm and organic food purchase behavior	Rejected
H8o	There is no statistically significant relationship between ecological effect and organic food purchase behavior	Rejected
H9o	There is no statistically significant relationship between perception of availability and organic food purchase behavior	Rejected
H10o	There is no statistically significant relationship between perceived value and organic food purchase behavior	Rejected



CHAPTER 6

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

The purpose of this chapter is to summarize and conclude the research results that are presented in Chapter 5. This chapter consists of five sections, the first section discusses the research findings in term of descriptive statistics and hypothesis testing, the second section is the discussion and the implication of this research, the third section presents the conclusions of the study, the fourth section considers recommendations of this research and the last section contains suggestions for further studies.

6.1 Summary of Research Findings

This part presents the interpretations of the results from the data gathered, which includes a summary of respondents’ characteristics, organic food purchase behavior, attitude toward buying organic food, health consciousness, environmental attitude, subjective norm, ecological affect, perception of availability, perceived value and a summary of hypothesis testing.

6.1.1 Summary of Demographic Factors

This study collected data from 400 respondents, who had experienced purchasing organic food in Bangkok area. All of the highest percentages of demographic factors of each variable are summarized as followed in Table 6.1:

Table 6.1: Summary of Overall Majority in the highest percentage of all respondents

Consumer Profile	Variables	Percentage (%)
Gender	Female	58
Age	26-35 years old	51.8
Occupation	Private sector employee	44
Education	Bachelor degree	56.8
Income	15,001-25,000 THB	29.8

As indicated in Table 6.1, the researcher found that the majority of all respondents were female which accounted for 58 percent of the respondents, and most of the respondents were in the age range between 26-35 years old that accounted for 51.8 percent. In this survey, private sector employees accounted the most for 44 percent, and for education level, the highest percentage was Bachelor degree with 56.8 percent. In addition, 29.8 percent of the respondents have their monthly income between 15,001-25,000 THB.

### 6.1.2 Summary of Descriptive Analysis

The results of descriptive analysis are exhibited as follows:

Organic food purchase behavior: the average mean score was equal to 4.00 which means that the respondents in Bangkok area affirm their purchase behavior of organic food. The highest mean was 4.21 in statement “I agree to buy product that contain no or fewer chemical ingredients” showing that the respondents pay attention to the product that contains no or fewer chemical ingredients and it is the major force to push the consumers to buy organic food, whereas the lowest mean is 3.85 in statement “I often buy organic food” which means that the respondents are perceived in the benefit of organic food product but they still have some barriers in decision-making process such as price, and product availability that effect them to consume organic food in some situation.

Attitude towards buying organic food: obtained an average mean score is equal to 4.03, which mean that the consumers generate a positive attitude for buying organic food. The highest mean score is 4.15 for the statement “My attitude towards buying organic food is positive” showing that the consumers have a very positive attitude for purchasing or consuming organic food product.

Health consciousness: got an average mean score is 3.96 which mean that the consumers who purchasing organic food are take care and aware in their health. The highest mean score is equal to 4.39 for the item “I study how to eat healthy” indicating that consumers who buy organic food products have a good health awareness and try to get the knowledge by studying about how to consume or eat food that is beneficial for their health.

Environmental attitude: received the average mean score of 3.93, which indicates that consumers generate a positive attitude about environment. The highest mean score is 3.98 for the statement “I have knowledge and practice in the environmental protection” exhibiting that consumers who buy organic food products have a very positive environmental attitude and have knowledge in environmental protection and transfer the knowledge to do something that can protect the environment.

Subjective norm: got the average mean score is 3.87, which show that the consumers tend to be influenced by their reference group. The highest mean score is 3.93 for the statement “People, who influence my behavior, think that my purchase of organic food is a wise choice”. It can be interpreted that the consumers are strongly influence by those who they perceived as influence to them.

Ecological affect: received the average mean score of 4.07, which can be interpreted that the consumers’ ecological issue strongly influenced the consumers to participated into green or organic consumption. The highest mean score is 4.11 for the statement “When I think of the ways industries are causing pollution, I get frustrated and angry” can interpreted that the consumers have a frustrated and very angry when they think about the pollution is came from the industries that it effect to the environment and directly effect to their health.

Perception of availability: obtained an average mean score of 3.93, which means that the consumers acknowledge the availability of organic food product. The highest mean score was 4.03 from the statement “I consider purchasing organic food if it is available at my regular place of good purchase” can be interpreted that the consumers are willing to purchase organic food if it was available at their shopping place.

Perceived value: received an average mean score of 3.87, which means that the respondents will perceive organic food product in term of product value such quality and nutrition of food. The highest mean score is 4.11 from the statement “Organic food was better quality than conventionally produced food” can interpreted that the consumers who purchase organic food because they perceive the product value and they perceive that organic food was better quality than conventional food products.

### 6.1.3 Summary of Hypothesis Testing

In this study, there were ten hypotheses generated from the research objectives and research questions for testing. The statistical technique that used for analyzing the data in this research was Pearson Correlation Coefficient and the findings of hypothesis testing are summarized as follows:

Hypothesis one: There is a statistically significant relationship between attitude toward buying organic food and organic food purchase behavior

Hypothesis two: There is a statistically significant relationship between health consciousness and attitude toward buying organic food

Hypothesis three: There is a statistically significant relationship between health consciousness and organic food purchase behavior

Hypothesis four: There is a statistically significant relationship between health consciousness and environmental attitude

Hypothesis five: There is a statistically significant relationship between environmental attitude and organic food purchase behavior

Hypothesis six: There is a statistically significant relationship between subjective norm and attitude toward buying organic food

Hypothesis seven: There is no statistically significant relationship between subjective norm and organic food purchase behavior

Hypothesis eight: There is a statistically significant relationship between ecological effect and organic food purchase behavior

Hypothesis nine: There is a statistically significant relationship between perception of availability and organic food purchase behavior

Hypothesis ten: There is a statistically significant relationship between perceived value and organic food purchase behavior

## 6.2 Discussions and Implications of the Research

Based on the research result in the previous section, each hypothesis was analyzed by using Pearson Correlation Coefficient to define the statistical significant relationship between each variable. After testing found that all of the null hypotheses are rejected. The findings show that all independent variables (attitude toward buying organic food, health consciousness, environmental attitude, subjective norm, ecological affect, perception of availability, and perceived value) have a positive relationship with the organic food purchase behavior. The discussion and implications of all ten hypotheses are shown as follows:

**Hypothesis one (H1):** The results of the analysis indicated that there is a statistically significant relationship between attitude toward buying organic food and organic food purchase behavior.

The researcher can conclude that correlation value of 0.474 indicates that attitude towards buying organic food has an impact on organic food purchase behavior, which is supported by the findings of Tarkiainen and Sundqvist (2005), who studied on a significant relationship between attitude toward buying organic food and purchase intention. Choo et al., (2004) studied the purchase behavior of new food product and indicated that attitude had a positive impact on behavioral intention among Indian consumers. De Magistris and Gracia (2008), who proved about the strong relationship between attitude toward organic food and the purchase intention found that attitude toward organic food product have a great influence on the intention to purchase organic food product. Thus, the results of this study are similar with those previous studies. It means that consumers' attitude toward buying organic food are simplified by the attitudes of consumers. When consumers have a positive attitude toward products it can lead them to more favorable decisions to buy the product (Moye and Kincade, 1999).



**Hypothesis two (H2):** The results of the analysis show that there is a statistically significant relationship between health consciousness and attitude toward buying organic food.

The researcher can imply that the correlation value of 0.428 means that there is a medium correlation between health consciousness and attitude toward buying of organic food product. The result is related with some previous researches, Chen (2009), who studied the relationship between health consciousness and attitude toward organic food of Taiwanese consumers. De Magistris and Gracia (2008), who studied on the factor the affect to organic food purchase decision and found that health consciousness has a medium relationship with attitude toward organic food. Besides that, Tarkiainen and Sundqvist (2005) found that the relationship between health consciousness and attitude toward buying organic food is not significant. The findings of this study show that health consciousness influences the consumers' attitude toward organic food through their healthy lifestyle, which means that the positive attitude of consumers toward organic food can be determined by health consciousness if they are enthusiastic about undertaking healthy activities such as natural food consumption or health care (Gil et al., 2000). Furthermore, consumers' attitude toward organic food is strongly related to consumers' readiness to take healthy actions. In other words, the consumers' health consciousness influences their attitude toward organic food. As a result, health-conscious consumers are more likely to develop positive attitudes towards the health enhancing attributes of organic food (Michaelidou and Hasson 2008).

**Hypothesis three (H3):** The results of the analysis show that there is a statistically significant relationship between health consciousness and organic food purchase behavior

The findings indicated that the correlation value of 0.618 shows that there is a medium correlation between health consciousness and organic food purchase behavior, which is in line with the finding of O' Donovan and McCarthy (2002), who studied on consumer preference for organic food products and their results found that there is a relationship between health consciousness and purchase intention. Beside that health is an important factor to understanding the buying decision process of organic food consumers because one of their motivation to consuming organic food are their health concern (Magnusson et al., 2001). A person who has strong health conscious is likely to accept the importance of exercise, maintain a healthy diet, consuming the good food such organic (Bephage, 2000). In addition, organic food contains no harmful additives, more nutrients than conventional food

and is safer for human's health. Therefore, choosing organic food seems to be a good decision for health conscious consumers.

**Hypothesis four (H4):** The results of the analysis show that there is a statistical significant relationship between health consciousness and environmental attitude.

Correlation value of 0.729 shows that consumers' health consciousness have a strong impact on environmental attitude, which supported with the findings of De Magistris and Gracia (2008), who studied on the factor the affect to organic food purchase decision and found that health consciousness has a medium relationship with the environmental attitude. The finding of this study indicate that health consciousness of organic food consumers strongly impact to the environmental attitude of those consumers, or it can state that people who have high health awareness may get high attitude for the environment also because when they beware in their health and careful in the environmental problem so they try to find ways that can help to extend the environment base on their attitude.

**Hypothesis five (H5):** The result of the analysis shows that there is a statistically significant relationship between environmental attitude and organic food purchase behavior.

The respondents' organic food purchase behavior is positively correlated with environmental attitude with correlation value of 0.59 which indicates that environmental attitude has an impact on organic food purchase behavior. It can be interpreted that environmental attitude has a positive impact on environmental behavior. As the consumers' attitude toward environmental issues are moderate and positive, or can mention that the consumers who express higher concern about the environment will be most likely to change their thought into environmental behavior. The result of this study is in line with the findings of Lee (2008), Kotchen and Reiling (2000) and De Magistris and Gracia (2008), who stated that the consumers who have a higher involvement with environmental practice will be more willing to buy organic food products.

**Hypothesis six (H6):** The results of the analysis shows that there is a statistically significant relationship between subjective norm and attitude towards buying organic food.

The attitude towards buying organic food and the subjective norm was positively correlated at low level with correlation value of 0.24, which was similar with the finding of Tarkiainen and Sundqvist (2005), which found that there was a weak correlation between subjective norm and attitude toward buying organic food. Sparks and Shepherd (1992) consider subjective norm but the finding is not strong correlated. Choo et al., (2002), found that subjective norm has a positive impact on attitude toward buying. Thus, some previous researchers did not consider the subjective norm in their studies such as Magnusson et al., (2001) did not include subjective norm in their research. From the findings, the researcher can conclude that subjective norm will have a greater impact when consumers are more familiar with organic food products and it will lead to the positive attitude toward buying organic food.

**Hypothesis seven (H7):** the result of the analysis shows that there is a statistically significant relationship between subjective norm and organic food purchase behavior

The respondents' organic food purchase behavior has a low positively correlation with subjective norm with correlation value of 0.258. The findings indicated that the purchase behavior is not strongly influenced by the people who surround them such as friends, family members or living culture but consumers' purchase behaviors depends on their judgments. Beside that Lee (2008) mentioned about subjective norm that the social influence had an impact on the purchasing behavior of consumers.

**Hypothesis eight (H8):** The results of the analysis shows that there is a statistically significant relationship between ecological effect and organic food purchase behavior.

Correlation value of 0.538 shows that consumers' organic food purchase behavior has a moderate correlation with ecological affect, which is similar with the finding of Chan and Lau (2000), who studied about the influence of ecological affect the leading to the green purchasing behavior and found that Chinese consumers have shown their favor for ecological impacts. The research findings indicated that the respondents seem to express a strong response to the ecological issues. In addition, when the researcher segmented the ecological

affect by education level it was found that the higher education level of respondents will lead to a stronger response towards ecological issues.

**Hypothesis nine (H9):** The results of the analysis shows that there is a statistically significant relationship between perception of availability and organic food purchase behavior.

The researcher found that the correlation value of 0.217 indicated that the respondents' organic food purchase behavior has a low correlation with perception of availability, which is in line by the finding of Tarkiainen and Sundqvist (2005), who studied on a significant relationship between perception of availability and purchase intention found that there is no relationship between perception of availability and purchase intention. The researcher can conclude that product availability has a great influence on consumer purchase behavior like buying organic food, which is supported by finding of Davies et al., (2005) who mentioned that the available of product has an impact on consumers purchase behavior. If the organic food products are hard to find and unavailable in the regular shopping place it may affect the purchase decisions to obtain the product of organic consumers (Tanner and Kast, 2003).

**Hypothesis ten (H10):** The results of the analysis shows that there is a statistically significant relationship between perceived value and organic food purchase behavior.

Correlation value of 0.412 shows that the respondents' organic food purchases behavior has a moderate correlation with the perceived value. The research findings can implies that the organic food consumers will be more acceptable to the product when they perceived that the product price are not expensive when compared to the conventional food products and they will be more acceptable and willing to pay when they perceived that organic food is higher value than the conventional food in term of quality, nutrition or freshness. They are willing to pay more money if they want to get more higher product value. Supporting with the finding of Tarkiainen and Sundqvist (2005), who studied the relationship of price and purchase intention found that there is no relationship between price and buying intention. The researcher can conclude that the relative high price of organic food products when compared with the conventional food is one of the barriers for purchase decisions of

organic food consumers. Supporting with Peter and Olson (1990), which mentioned that price is a key factor in buying decision-making process.

### 6.3 Conclusions

This research aimed to study the relationship between all independent variable (attitude toward buying organic food, health consciousness, environmental attitude, subjective norm, ecological affect, perception of availability, perceived value) and dependent variable as organic food purchase behavior. Data collected from 400 respondents of people who had experienced purchasing organic food from Lemon farm shop in Bangkok area by distributing the questionnaire.

The research result found that the majority of the respondents were female, aged between 26-35 years old, private sector employees, highest education level was bachelor degree, and monthly income between 15,001-25,000 THB.

For hypothesis testing, all of the ten hypotheses analyzed the correlation between each variable by using SPSS. Health consciousness has the strongest relationship with the respondents' environmental attitude (0.729), followed by the relationship between health consciousness and organic food purchase behavior (0.618), relationship between environmental attitude and organic food purchase behavior (0.590), relationship between ecological affect and organic food purchase behavior (0.538), relationship between attitude toward buying organic food and organic food purchase behavior (0.474), relationship between health consciousness and attitude toward buying organic food (0.428), relationship between perceived value and organic food purchase behavior (0.412), relationship between subjective norm and organic food purchase behavior (0.258), relationship between subjective norm and attitude toward buying organic food (0.240), and relationship between perception of availability and organic food purchase behavior (0.217), respectively.

The respondents in this study have a strong influence on their health consciousness and followed by environmental attitude and found that health issue is the supreme motive for the respondents' decision-making for organic food purchase behavior because it has the strongest influence on the respondents' organic food purchase behavior. Based on the findings, the researcher can conclude that the organic food marketers and policy makers



should generate marketing campaign by focusing on consumers' healthy trends and environmental issues because nowadays people pay more attention to the environmental situation and it generate more health concern for people who are willing to consume the food and products that contain less or non toxic, come from nature, not use chemical ingredient in the production process, etc. The organic food has become the best choices for respond a health consciousness and environmental concern for consumers. In addition, the product availability is a factor that gets the lowest correlation value to the purchase behavior of organic food therefore, the marketer should be aware of this issue by improving the distribution channel, or expand more branches in order to find the organic food products easily. The findings of this study can provide the useful information to the organic food producers and the organic product marketers in order to developing the marketing plan for organic food into the market in the near future.

Due to the limitations of resources, this research is conducted only in the Bangkok area, so the results do not perfectly represent the whole organic consumer population. Thus the findings of this study should be considered as a foundation for further studies in the future.

#### **6.4 Recommendations**

Based on the findings of this research, the researcher has some recommendations, which may useful for organic food marketers in order to develop successful organic food in the market and improve the needs of consumers to make them satisfied. The details of recommendations are as follows:

Based on the results of hypothesis one of attitude towards buying organic food, the researcher found that it has a significant impact of attitude toward buying organic food on organic food purchase behavior. It means that consumers' attitude towards buying organic food products are facilitated by the attitude of consumers. Once consumers feel favorable or have a positive attitude for organic food, it will lead them to develop an optimistic attitude towards organic food products and affect their purchase decision. This finding is useful for better understanding the process and antecedents of organic food purchase and can provide organic food marketers with some useful insight in order to improve the communication effectiveness of their educational and promotional campaigns.

Secondly, based on the findings of hypothesis two, three, and four about health consciousness, the researcher found that health awareness of organic food consumers are an important factor which significantly impacts other factors such as environmental attitude, attitude toward buying and purchase behavior. Health consciousness and environmental attitude of organic consumers have strong relationships, therefore if people have a high health concern they may get high environmental attitude also. Thus, a positive attitude towards the products not only affects the buying decision of customers and an individual's health, it also influences the success or failure of food products in the food marketplace (Beharrel and MacFie, 1991; Tregear et al., 1994). The organic food marketers should understand the relationship of health consciousness and create marketing campaigns that focus on health and food safety to respond to their wants and needs. Organic food certification symbol on organic food products can make consumers' think/perceive the quality, safety of products when compared to conventional food. Providing the information/knowledge on how to eat healthy food is one method for successful increasing the number of health conscious consumers because this study found that the question of "I study how to eat healthy" got the highest mean score of 4.3925 and the researcher can conclude that consumers who decide to consume organic food because they have knowledge on health and staying healthy and can state that if the marketers provide knowledge or information about organic food to them it can make them become more health conscious consumers.

From the results of hypothesis five about environmental attitude, the researcher found that consumers who have positive environmental attitude or environmentally conscious are more probably to purchase organic food product and they expect to consume the product that is environmentally safe. Based on the health conscious recommendation in the previous hypotheses, which mentions that health consciousness has a relationship with environmental attitude, the researcher recommends in terms of knowledge providing that it will affect the increase of health conscious people. On the whole, more consumers must be urged to develop a positive attitude towards the environment and consume more organic food and marketers should distribute or provide information on the differences between organic and conventional food in terms of environmental impact such as residue contamination in soil, or the environmental protection knowledge as the degradation of environment to the people that can make them have a positive environment protection attitude and perceiving a benefit of the organic product and leading to their buying decision.

Based on the findings of hypothesis six and seven on subjective norms, the researcher found that subjective norm has a weak correlation on both attitude and purchase behavior of organic food. If marketers want to increase the correlation for this factor, they should use word-of-mouth as a platform to deliver a positive message to customers and therefore, a firm's reputation for organic food products will be established. In addition, the marketer should develop a membership program for those customers who purchase organic food product, so the marketer will be able to conduct positive word-of-mouth feedback for consuming organic food products among customers.

Based on the findings of hypothesis eight on ecological affects, the researcher found that the question of "When I think of the ways industries are causing pollution, I got frustrated and angry" got the highest mean score of 4.105 from which the researcher can indicate that people worry about and feel disturbed about the effects of pollution. Therefore, marketers should provide information about the organic food planting process in terms of pollution emission. Supported by the information of England soil association that mentioned about organic farming which it can reduces pollution from almost all pesticides and chemical fertilizers because chemical pesticides and fertilizers are not used in their growing process, it not only are organic foods healthier for the environment, they are also healthier for consumers. When consumer perceived in benefit of organic food in terms of ecological affect it could make a good image of organic food to the consumers view.

From the findings of hypothesis nine on perception of availability, the researcher found that product availability got the lowest correlation value therefore organic food marketers should improve supply, increase the distribution channel, and arrange for proper allocation of products because of the rising demand for organic food products will directly affect the available of products. The researcher got the feedback from respondents on this issue as they suggested that organic food products should be distributed more to various convenience stores rather than focus on some specific organic shops because it will be hard to find the products in some areas and that lack of availability directly affects their purchase decision. In addition, the operating hours of organic stores should be considered to match with the consumers' purchase behavior because it will be easy and convenient for them to buy the product and it may increase the sales volume of products.

The findings of hypothesis ten on perceived value, show the researcher that the question “Organic food is better quality than conventionally produced food” got the highest mean score of 4.1075, so the researcher can conclude that consumers’ perception of organic food in terms of good quality was quite high and they were found to be satisfied. The marketers should make sure that their products are of high quality and competitively price because it is the main factor that consumers perceive. Organic food consumers are willing to pay more money for the products that they perceived as offering greater or higher value such as better quality or reasonable price. The marketers also need to adopt a better marketing mix for their products in order to change consumers’ negative perception towards organic food products. Successful green marketing is not only adding an environmentally relevant attribute to a product but it is important that marketers integrate green marketing strategies carefully into the company’s strategic plan as well.

### **6.5 Further Study**

The researcher conducted the study on organic food purchase behavior of Thai consumers in Bangkok area, which provided them with a lot of useful information as well as for the marketers of organic food products. The following suggestions will be useful for the researcher to study the related fields in the near future.

1. This study focused on Thai consumers in Bangkok area, who had experience in purchasing organic food products only one area which was one of the research limitations in terms of data distribution, so the further studies should be undertaken in other areas for a different population such as in Chiang Mai province because it is the main area for producing organic food products such as fruits and vegetables. Comparative studies should be undertaken to study the different consumers in different geographic areas that affect organic food purchasing behavior. For further research with different geographic variables the researcher may be able to get different results from consumer’s purchase behavior, which arise from different geographic factors. The results of this research will be beneficial for marketers who want to expand their target customers to other provinces.

2. Further studies should add more major variables that may affect purchase behavior of Thai consumers towards organic food products such as knowledge, and awareness on organic food and its price in order to better understand the purchase behavior and it can be

useful for marketers to create a more effective marketing campaign or plan marketing activities that attract new consumers and maintain the existing consumers. For the results further research might be different from this study because of the differences in variables that the researcher considers to study and the researcher will know the basis of this study and can apply this research to be useful for further study.

3. Further study should focus on the study of consumers' satisfaction and repurchase motives towards consumption of organic food products so that the researcher will be able to know and better understand the motivation factors of consumers to repurchase. In order to increase customers' satisfaction, the researcher should design interviews with more open-ended questions to gain a better understanding about what customers expect from organic food products.

4. Further studies should analyze each factor that affects organic food purchase behavior by segmentation such as difference in lifestyle or difference in personality types because a healthy lifestyle for consumers might be a major variable, which affects organic food purchase behavior. Schiffman and Kanuk (2004) mentioned that market segmentation is a process to divide a market into subgroups of consumers based on their common needs that is good and beneficial for marketers to create marketing activities that are more attractive in each segment.

5. Further studies should be conducted using qualitative research to explain the relationship between each variable such as using focus groups or individual interview techniques to obtain data in order to understand how consumers feel and perceive organic food products and why they desire to consume organic food.

6. Further studies should concentrate in other organic food products in order to gain a more specific understanding and to further know how and to improve them in order to offer better products for customers to help them in having a healthier and better life.



## BIBLIOGRAPHY

- Ajzen, I., and Fishbein, M. (1975). *Belief, attitude, intention and behavior*. Reading, MA: Addison Wesley.
- Ajzen, I. and Fishbein, M. (1977). Attitude-behavior relations: a theoretical analysis and review of empirical research, *Psychological Bulletin*, 84(5), 888-918.
- Ajzen, I., and Fishbein, M. (1980). *Understanding attitude and predicting social behavior*. New Jersey: Prentice Hall, Englewood Cliffs.
- Ajzen, I., and Fishbein, M. (2005). The influence of attitudes on behavior, in D. Albarracin, B. T. Johnson., and M. P. Zanna(eds), *The handbook of attitudes*, 173-221. Mahwah, NJ: Erlbaum.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Process*, 50(2), 179-211.
- Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, 52, 27- 58.
- Ajzen, I. (2002). Perceived Behavioral Control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32(4), 1-20.
- Allen, G. J., and Albala, K. (2007). The business of food: encyclopedia of the food and drink industries. 23(1), 16.
- Allport, G. W. (1967). Autobiography, In E.G. Boring and G. Lindzey (Eds.), *A history of psychology in autobiography* (5, 3-25). New York: Appleton-Century-Crofts.
- Anderson, D. R., Sweeney, D. J., and Williams, T. A. (2001). *Statistics for Business and Economics*, Eight Edition, United States: Thomson Learning.

- Assael, H. (1981). *Consumer Behavior and Marketing Action*, Third Edition, PWS-Kent Publishing Company, Boston, M.A.
- Assael, H. (1995). *Consumer Behavior and Marketing Action*, Fifth Edition, Cincinnati, OH: South-Western College Publishing, 266-274.
- Bagozzi, R. P. (1983). A Holistic Methodology for Modelling Consumer Response to Innovation, *Operation Research*, 31, 128-176.
- Bagozzi, R. P., Youjae, Y., and Johann, B. (1990). The level of effort required for behavior as a moderator of the attitude-behavior relation. *European Journal of Social Psychology*, 20, 45-59.
- Bamberg, S. (2003). How does environmental concern influence specific environmentally related behaviors? A new answer to an old question. *Journal of Environmental Psychology*, 23(1), 21-32.
- Beharrel, B., and MacFie, J. H. (1991). Consumer attitudes to organic foods. *British Food Journal*, 93(2), 25-30.
- Beharrel, B., and Crockett, A. (1992). New age food, new age consumers. *British Food Journal*, 94(7), 5-13.
- Belz, F., and Peattie, K. (2009). *Sustainability Marketing, A Global Perspective*. John Wiley & Sons.
- Bentler, P. M., and Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods and Research*, 16(1), 78-117.
- Bephage, G. (2000). *Social and Behavioral Sciences for Nurses, An Integrated Approach*, China:Churchill Livingstone Press, 1-336.
- Berenson, L. M., and Levine, M. D. (1999). *Statistics for Managers Using Microsoft Excel*. Second Edition, Pearson Education: Upper Saddle River.

- Bishop, R. (1984). *Competitive Intelligence*. Progressive Grocer, March, 19-20.
- Boccaletti, S., and Nardella, M. (2000). Consumer willingness to pay for pesticide-free fresh fruit and vegetables in Italy. *The International Food and Agribusiness Management Review*. 3(3), 297-310.
- Bright, A. D. (1993). Application of the theory of reasoned action to the National Park Service's controlled burn policy. *Journal of Leisure Research*, 25(3), 263-281.
- Blythe, J. (1997). *The Essence of Consumer Behavior*, New Jersey: Prentice Hall.
- Carruthers, P. (2000). *Phenomenal consciousness*. Cambridge: Cambridge University Press.
- Chan, R. Y. K. (2001). Determinants of Chinese consumers' green purchase behavior. *Journal of Psychology and Marketing*, 18(4), 389-413.
- Chan, R. Y. K., and Lau L. B. Y. (2000). Antecedents of green purchases: a survey in China. *Journal of consumer marketing*, 17(4), 338-357.
- Chan, R. Y. K., and Yam, E. (1995). Green movement in a newly industrializing area: a survey on the attitudes and behavior of the Hong Kong citizens. *Journal of Community and Applied Social Psychology*, 5, 273-84.
- Chadon, J., Pierre, I., Morwitz, V., and Reinartz, W. (2005). Do Intentions Really Predict Behavior? Self-Generated Validity Effects in Survey Research. *Journal of Marketing*, 69(2), 1-14.
- Chang, M. K. (1998). Predicting unethical behavior: a comparison of the theory of reasoned action and the theory of planned behavior. *Journal of Business Ethics*, 17(16), 1825-33.
- Chase, D. (1991). The green revolution: P&G gets top marks in AA survey, *Advertising Age*, 62(5), 8-10.

- Chen, F. M. (2009). Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle. *British food journal*, 111(2), 165-178.
- Chen, Y. S. (2010). The drivers of green brand equity: green brand image, green satisfaction, and green trust. *Journal of Business Ethics*, 93(2), 307-319.
- Chen, Y. S., and Chang, C. H. (2012). Enhance green purchase intentions: the role of green perceived value, green perceived risk, and green trust. *Management Decision*, 50(3), 502-520.
- Choo, J. H., Chung, E. J, and Pysarchik, T. D (2004). Antecedents to new food product purchasing behavior among innovator groups in India. *European journal of marketing*, 38 (5/6), 608-625.
- Chung, C. C., and Chang, S. C. (2005). Discussion on the behavior intention model of consumer online shopping. *Journal of Business and Management*, 11(1), 41-57.
- Churchill, G. A. (1995) Marketing Research, *Methodological Foundations*, The Dryden Press, G. Edition , New York, USA.
- Coakes, S. J., Steed, L., and Dzidic, P. (2006). SPSS version 13.0 for Windows: Analysis without Anguish. John Wiley and Sons, Australia.
- Cooper, D. R., and Schindler, P. S. (2001) *Business Research Methods*, Seven Edition. McGraw-Hill, Boston.
- Cosenza, R. M., and Davis, F. D. (1988). *Business Research for decision making*, Second Edition. PWS Kent, Boston.
- Crawley, F. E., and Black, C. B. (1992). Causal Modeling of Sociology Science Students' Intention to Enroll in Physic. *Journal of Research in Science Teaching*, 29(6), 585-599.

- Cronin, J. J., Brady, M. K., and Hult, G. T. M. (2000). Assessing the effect of quality, value and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Czaja, R., and Blair, J. (1996). *Decision surveys: a guide to decisions and procedures*. California, Pine Forge Press.
- Davies, A., Titterton, A. J., and Cochrane, C. (1995). Who buys organic food? A profile of the purchases of organic food in Northern Ireland. *British food Journal*, 97(10), 17-23.
- Davis, F. D., Bagozzi, R. P., and Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35, 982-1003.
- Dean, M., Raats, M. M., and Shepherd, R. (2008). Moral concerns and consumer choice of fresh and processed organic foods. *Journal of Applied Social Psychology*, 38, 2088-2107.
- De Magistris, T. and Gracia, A. (2008). The decision to buy organic food products in Southern Italy. *British food journal*, 110(9), 929-947.
- Dispoto, R. G. (1997). Interrelationships among measures of environmental activities, emotionality and knowledge, *Educational and Psychological Measurement*, 37, 451-9.
- Dodds, W. B., Monroe, K. B., and Grewal, D. (1991). Effects of Price, Brand and Store Information of Buyers' Product Evaluations. *Journal of Marketing Research*, 28(3), 307-19.
- Dotson, L. (2004). *10 Ways to Increase the Perceived Value of Your Products*. Simple Joe, Inc.



- Durham, C. A., and Andrade, D. (2005). Health vs. Environmental motivation in organic preferences and purchase. *American Agricultural Economics Association Annual Meeting, Providence, Rhode Island*.
- Dwyer, R. J. (2009). Keen to be green' organizations: a focused rules approach to accountability. *Management Decision*, 47(7), 1200-16.
- East, R. (1999). Consumer Behavior. *Advances and Applications in Marketing*, New Jersey: Prentice-Hall.
- Elkington, J. (1989). Why to pay to be green. *Weekend Financial Times*, October14, p.13.
- Engel, J. F., Blackwell, R. D., and Miniard, P. W. (1993). The Cognitive, Affective and Conative Component of Attitude. *Consumer Behavior*, Seventh Edition, 320-350.
- Endacott, R. W. J. (2004). Consumers and CRM: A national and global perspective. *Journal of Consumer Marketing*, 21(2/3), 183-189.
- Fishbein, M. (1967). Attitude and Perception of Behavior, *Attitude Theory and Measurement*, New York: Wiley.
- Follow, S. B., and Jobber, D. (2000). Environmentally responsible purchase behavior: a test of a consumer model. *European Journal of Marketing*, 34(5/6), 723-46.
- Fotopoulos, C., and Krystallis, A. (2002). Organic product avoidance: Reasons for rejection and potential buyers' identification in a countrywide survey. *British Food Journal*, 104(3/4/5), 233-260.
- Foxall, G. (1996). The BPM research program. *Consumers in Context*: Routledge, London.
- Frank, R. K. (2000). *Consumer Behavior and Managerial Decision Making*, USA: Addison Wesley Education Publisher.

- Gennaro, R. (1995). Consciousness and self-consciousness: A defense of the higher-order thought theory of consciousness. Amsterdam and Philadelphia: John Benjamins.
- Gil, M. J., Gracia, A. and Sanchez, M. (2000). Market segmentation and willingness to pay for organic products in Spain. *International Food and Agribusiness Management Review*, 3, 207- 226.
- Grunert, S. C. (1993). Everybody seems concerned about the environment but is this concern reflected in (Danish) consumers' food choice?. *European Advances in Consumer Research*, 1, 428-33.
- Grunert, S., and Juhl, J. H. (1995). Values, environmental attitudes, and buying of organic foods. *Journal of Economics Psychology*, 16(1), 39-62.
- Haden, S. S. P., Oyler, J. D., Humphreys, J. H. (2009). Historical, practical, and theoretical perspectives on green management: An exploratory analysis. *Management Decision*, 47 (7), 1041-1055.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., and Tatham, R. L. (2006). *Multivariate data analysis*. Sixth Edition. New Jersey: Prentice Hall.
- Hanna, N., and Wozniak, R. (2001). *Consumer Behavior*, New Jersey, Prentice Hall International.
- Hartwick, J., and Barki, H. (1994). Explaining the role of user participation in information system use. *Management science*, 40(4), 440-65.
- Heberlein, A. T. (1981). *Environmental Attitudes*. Madison, Wisconsin, 241-270.
- Henion, E. K., and Wilson, W. H. (1976). The ecologically concerned consumer and locus of control. *Ecological Marketing*, American Marketing Association, Chicago, IL, 131-44.
- Henley, C. (1990). Rising challenge of green. *Marketing*, September 13, p.24.

- Hewette, K., and Bruse, R. (2002). An exploration of the moderating role of buyer corporate culture in industrial buyer-seller relationship. *Academy of Marketing Science Journal*, 229.
- Hill, H., and Lynchehaun, F. (2002). Organic milk: attitudes and consumption patterns. *British Food Journal*, 104, 526-42.
- Hines, J. M., Hungerford, H. R., and Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: a meta-analysis. *Journal of Environmental Education*, 18(2), 1-8.
- Holbrook, M. B. (1999). *Consumer Value: A Framework for Analysis and Research*. London, U.K.: Routledge.
- Huang, J., and Lee, B. (2004). Consumer attitude toward gray market goods, *International Marketing Review*, MCB University Press.
- Hussey, J., and Hussey, R. (1997). *Business Research: A Practical guide for undergraduate and post graduate students*. Macmillan, London.
- Ishaswini (2011). Pro-environmental concern influencing green buying: A study on Indian consumers. *International Journal of Business and Management*, 6(6).
- Jones, P., Clarke-Hill, C., Shears, P., and Hillier, D. (2001). Retailing organic foods. *British Food Journal*, 103(5), 358-365.
- Jolly, D., Schutz, H., Diez-Knauf, K., and Johal, J. (1989). Organic Foods: Consumer Attitudes and Use. *Food Technology*. 43(11), 61-66.
- Juster, F. T. (1996). Consumer Buying Intention and Purchase Probability: An Experiment in Survey Design. *Journal of the American Statistical Association*, 61, 658-696.
- Kalafatis, P. S., Pollard, M., East, R. and Tsogas, H. M. (1999). Green marketing and Ajzen's theory of planned behavior: A cross-market examination. *Journal of Consumer*

*Marketing*, 16 (5), 441-460.

Kinnear, T., and Taylor, J. R. (1996). *Marketing Research: an applied approach*. Fifth Edition. McGraw-Hill.

Kitchens, L. J. (1998). Exploring statistics: A modern introduction to data analysis and inference. Second Edition. Pacific Grove, CA: Duxbury Press.

Koballa, T. R. (1988). Attitude and related concepts in science education. *Science Education*, 72, 115-126.

Kotchen, M. J., and Reiling, S. D. (2000). Environmental attitudes, motivations, and contingent valuation of nonuse values: A case study involving endangered species. *Ecological Economics*, 32, 93-107.

Kyriakopoulos, K., and van Dijk, G. (1997). Post purchase intention for organic foodstuff: a conceptual framework based on the perception of product value. *Journal of International Food & Agri-Business Marketing*, 9(3), 1-19.

Lacobucci, D. (2002). Using network analysis to understand brands. *Association for Consumer Research*, 29, 397-405.

Lee, K. (2008). Opportunities for green marketing: young consumers. *Marketing Intelligence & Planning*, 26(6), 573-86.

Li, L. Y. (1997). Effects of collectivist orientation and ecological attitude on actual environmental commitment: the moderating role of consumer demographics and product involvement. *Journal of International Consumer Marketing*, 9(4), 31-53.

Loudon, D. L. and Della Bitta, A. J. (1988). *Consumer Behaviour-concept and Application*. Third Edition, McGraw Hill, New York,

- Loureiro, M., McCluskey, J., and Mittlehammer, R. (2001). Assessing Consumer Preferences for Organic, Eco-labeled, and Regular Apples. *Journal of Agricultural and Resource Economics*.
- Lucas, H. C., and Spitler, V. K. (1999). Technology use and performance: a field study of broker workstations. *Decision Sciences*, 30(2), 291-311.
- Maga, J. A. (1983). Organically Grown Foods in Sustainable Foods Systems. The AVI Publishing Co., Westport, CT., 305-349.
- Magnusson, M.K., Arvola, A., Hursti, U. K. K., Aberg, L. and Sjoden, P. O. (2001). Attitude towards organic foods among Swedish consumers. *British Food Journal*, 103(3), 209-226.
- Malhotra, N. and Birks, D. (2006). *Marketing Research: An Applied Approach*. Harlow: Pearson Prentice Hall.
- Maloney, M. P., and Ward, M. P. (1973). Ecology: let's hear from the people: an objective scale for the measurement of ecological attitudes and knowledge. *American Psychologist*, July, 583-6.
- Martin, B., and Simintiras, A. C. (1995). The impact of organic food lines on the environment: does what they know affect how they feel?. *Marketing Intelligence and Planning*, 13(4), 16-23.
- Mathieson, K. (1991). Predicting user intentions: comparing the technology acceptance model with the theory of planned behavior. *Information Systems Research*, 2(3), 173-91.
- McDaniel, C., and Gates, R. (1991). *Contemporary Marketing Research*, St. Paul, MN, West Publishing Company.



- McIntosh, A. (1991). The impact of environmental issues on marketing and politics in the 1990s. *Journal of the Market Research Society*, 33(3), 205-17.
- Michaelidou, N. and Hassan, L. M. (2008). The role of health consciousness, food safety concern and ethical identity on attitudes and intentions towards organic food. *International Journal of Consumer Studies*. 32(1), 163-170.
- Mintel (2000). *Organic Food and Drink Retailing*. Mintel International Group, London.
- Monroe, K. B. (1990). *Pricing: Making profitable decisions*. New York, McGraw-Hill.
- Molina-Azorin, J. F., Claver-Cortés, E., López-Gamero, M. D., Tarí, J. J., 2009. Green management and financial performance: a literature review. *Management Decision*, 47 (7), 1080-1100.
- Morgan, G. A., Gliner, J. A., and Harmon, R. J. (2005). *Understanding and evaluating research in applied and clinical settings*. Psychology Press.
- Mostafa, M. M., (2007). Gender differences in Egyptian consumers' green purchase behavior: The effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies*, 31(3), 220-229.
- Mowen, C. J. (1993). *Consumer Behavior*, New York: Macmillan Publishing Company.
- Mowen, C. J., and Minor, M. (1998). *Consumer Behavior*, Fifth Edition: New Jersey, Prentice-Hall International, 256.
- Murry, J. P., and Dacin, P. (1996). Cognitive Moderators of Negative-Emotion Effects: Implications for Understanding Media Context. *Journal of Consumer Research*, 22, 439-447.
- Nobis, G. (1993). Trends and Integration in Food Processing. *International Journal of Contemporary Hospitality Management*, 5(3), 26-31.

- O'Donovan, P. and McCarthy, M. (2002). Irish consumer preference for organic meat. *British food journal*, 104 (3/4/5), 353-370.
- Oppenheim, A. N. (1992). *Questionnaire Design, Interviewing and attitude measurement*, London: Pinter.
- Padel, S., and Foster, C. (2005). Exploring the gap between attitudes and behavior. *British Food Journal*, 107(8), 606-25.
- Paladino, A. (2005) Understanding the green consumers: an empirical analysis. *Journal of Customer Behavior*, 4(1), 69-102.
- Peattie, K., and Crane, A. (2005). Green marketing: legend, myth, farce or prophesy?. *Qualitative Market Research*, 8(4), 357-370.
- Peter, J. P., and Olson, J. C. (1987). *Consumer Behavior*. Homewood, Illinois: Irwin.
- Peter, J. P., and Olson, J. C. (2002). *Consumer Behavior and Marketing Strategy*, Sixth Edition, Boston, Irwin McGraw-Hill.
- Phillips, D., and Baumgartner, H. (2002). The role of consumption emotions in the satisfaction response. *Journal of Consumers Psychology*, 12(3), 243-252.
- Randall, D. M., and Gibson, A. M. (1991). Ethical decision making in the medical profession: An application of the theory of planned behavior. *Journal of Business Ethics*, 10, 111-122.
- Ray, B. D. (1991). The Determinants of grade three to eight students' intentions to engage in laboratory and non laboratory science learning behavior. *Journal of Research in Science Teaching*, 28(2), 147-61.
- Roberts, J. A. (1996). Green consumers in the 1990s: profile and implications for advertising. *Journal of Business Research*, 36(3), 217-31.

- Robert, K. H. (2011). Assessment of eco-labelling criteria development from a strategic sustainability perspective. *Journal of Cleaner Production*, 19, 1631-1638.
- Rosenthal, D. (1986). Two concepts of consciousness. *Philosophical Studies*, 49, 329-359.
- Schechter, L. (1984). A normative conceptual of value. *Progressive Grocer*, 12-14.
- Schifferstein, H. N. J. and Oude Ophuis, P. A. M. (1998). Health related determinants of organic food consumption in The Netherlands. *Food Quality and Preference*, 9(3) 119-33.
- Schiffman, L. G., and Kanuk, L. L. (2000). *Consumer Behavior*, Seventh Edition, Upper Saddle River, New Jersey: Prentice-Hall.
- Schiffman, L. G., and Kanuk, L. L. (2004). *Consumer Behavior*, Eighth Edition, by Pearson Education.
- Schlegelmilch, B. B., Bohlen, G. M., and Diamontopolous, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing*, 30(5), 35-55.
- Sekaran, U. (1992). A Skill-Building Approach. *Research Method for Business*, Second Edition, John Wiley & Son Inc. NY.
- Simon, H. A. (1976). *Administrative behavior; a study of decision-making processes in administrative organization*, Macmillan Co, NY.
- Sirohi, N., McLaughlin, E. W., and Wittink, D. R. (1998). A Model of Consumers Perception and Store Loyalty Intentions for a supermarket retailer. *Journal of Retailing*, 74(2), 223-245.
- Slater, S. F., and Narver, J. C. (2000). Intelligence generation and superior customer value. *Journal of the Academy of Marketing Science*, 28(1), 120-8.

- Smith, A., and Raynolds, N. (2009). Affect and cognition as predictors of behavioral intentions towards services. *International Marketing Review*, 26(6), 580-600.
- Soler, F., and Gil, M. J. (2002). Consumers' acceptability of organic food in Spain: Results from an experimental auction market. *British Food Journal*, 104(8), 670-687.
- Spark, P., and Shepherd, R. (1992). Self-identity and the theory of planned behavior: Assessing the role of identification with green consumerism. *Social Psychology Quarterly*, December, 55(4), 388-399.
- Sunthana, A. (2009). Organic food for sustainable environmental. *Journal of Science*, 57(8), 29-36.
- Tanner, C., and Kast, S. W. (2003). Promoting sustainable consumption: Determinants of green purchases by Swiss Consumers. *Psychology and Marketing*, 20, 883-902.
- Tarkiainen, A and Sundqvist, S (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British Food Journal*, 107(11), 808-822.
- Thogerson, J. (2007). Social Marketing of alternative transportation models. Threats from car traffic to the quality of urban life: Problems, Causes and Solutions. Elsevier, Amsterdam, 367-381.
- Tregear, A., Dent, J. B. and McGregor, M. J. (1994). The demand for organically grown produce. *British Food Journal*, 96(4), 21-5.
- Udell, J. G., (1971). Can Attitude Measurement Predict Consumer Behavior? *Consumer Behavior: Contemporary Research in Action*. Houghton Mifflin Company, Boston 140-148.
- Ulaga, W., and Chacour, S. (2001). Measuring consumer-perceived value in business markets. *Industrial Marketing Management*, 30, 525-40.

- Urdan, T. C. (2005). *Statistics in Plain English*. Second Edition, Mahwah, NJ: Lawrence Erlbaum Associates.
- Vanichbuncha, K. (2003). *Advanced statistic Analysis SPSS for Windows Bangkok* Tammasan.
- Vijayasarathy, L. R. (2004). Predicting consumer intentions to use on-line shopping: the case from an augmented technology acceptance model. *Information and Management*, 41(6), 747-62.
- Wandel, M., and Bugge, A. (1997). Environmental concern in consumer evaluation of food quality. *Food Quality and Preference*, 81(1), 19-26.
- Walsh, J. A., and McGuire, J. R. (1992). An Examination of Environmental Attitudes among college students-proceeding of the 1992 Northeastern Recreational Research Symposium. Northeastern Forest Experiment Station. General Technical Report NE-176.
- Warshaw, P. R. (1980). Predicting Purchase and Other Behavior from General and Contextually Specific Intentions. *Journal of Marketing Research*, 17, 26-33.
- Wilson, K. G. (1975). The renormalization group: critical phenomena and the Kondo problem, *Rev. Mod. Phys.* 47(4), 773.
- Wright, M., and MacRae, M. (2007). Bias and Variability in Purchase Intention Scales. *Journal of the Academy of Marketing Science*, 35, 617-624.
- Wright, M., Sharp, A., and Sharp, B. (2002). Market Statistics for the Dirichlet Model: Using the Juster Scale to Replace Panel Data. *International Journal of Research in Marketing*, 19(1), 81-90.
- Zanoli, R., and Naspetti, S. (2002). Consumer motivations in the purchase of organic food: A means-end approach. *British Food Journal*, 104(8), 643-653.



Zeithaml, A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22.

Zeithaml, A., Valarie, A., Leonard, L., and Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60, 31-46.

Zikmund, W. G. (1997). *Business Research Methods*, Fort Worth, TX: The Dryden Press.

Zikmund, W. G. (2003). *Business Research Methods*, Seven Edition, Thomson South-Western, Ohio.



## Internet

- <http://www.all-recycling-facts.com/soil-pollution.html> (Accessed on August 12<sup>th</sup>, 2012).
- <http://www.doikham.co.th> (Accessed on May 25<sup>th</sup>, 2012)
- Food Marketing Institute: <http://www.fda.gov/ohrms/dockets/06p0094/06p-0094-cp00001-05-tab-04-Food-Marketing-Institute-vol1.pdf> (Access on August 1<sup>st</sup>, 2012).
- Organic Thailand: <http://www.greennet.or.th> (Accessed on May 11<sup>th</sup>, 2012).
- <http://www.land.co.th/images/bkkmap5.jpg> (Accessed on March 8<sup>th</sup>, 2012).
- <http://www.lemonfarm.com> (Accessed on May 25<sup>th</sup>, 2012)
- <http://www.manager.co.th/asp-bin/Image.aspx?ID=554000016498801> (Accessed on May 25<sup>th</sup>, 2012)
- <http://www.organic-world.net/fileadmin/documents/yearbook/2012/fibl-ifoam-2012-summary.pdf> (Access on June 2<sup>nd</sup>, 2012).
- Minnesota Pollution Control Agency: <http://www.pca.state.mn.us/index.php/about-mpca/mpca-events-and-training/road-salt-education-program.html> (Access on June 2<sup>nd</sup>, 2012).
- <http://www.royalprojectthailand.com> (Accessed on May 25<sup>th</sup>, 2012).
- <http://www.soilassociation.org/trade/marketingsupport/advertisingclaims> (Accessed on August 12<sup>th</sup>, 2012).
- <http://www.sba.gov/content/green-business-guide> (Accessed on May 25<sup>th</sup>, 2012).
- <http://www.tei.or.th/greenlabel/about.html> (Accessed on May 11<sup>th</sup>, 2012).
- [http://thailand.ipm-info.org/safe\\_food/logos.html](http://thailand.ipm-info.org/safe_food/logos.html) (Accessed on May 11<sup>th</sup>, 2012).
- <http://www.thailandmeters.mahidol.ac.th> (Accessed on May 25<sup>th</sup>, 2012).
- <http://www.thaismefranchise.com/?p=21670> (Accessed on May 25<sup>th</sup>, 2012).
- <http://www.un.or.th/thailand/index.html> (Accessed on May 11<sup>th</sup>, 2012).
- UNEP, 2002: UNEP in 2002 : Environment for Development : [http://www.unep.org/pdf/annualreport/UNEP\\_Annual\\_Report\\_2002.pdf](http://www.unep.org/pdf/annualreport/UNEP_Annual_Report_2002.pdf) (Accessed on May 25<sup>th</sup>, 2012).
- <http://www.usda.gov/wps/portal/usda/usdahome> (Accessed on May 25<sup>th</sup>, 2012).
- World bank, 2004: [http://siteresources.worldbank.org/DEC/Resources/abstracts\\_current\\_studies\\_2004.pdf](http://siteresources.worldbank.org/DEC/Resources/abstracts_current_studies_2004.pdf) (Accessed on June 9<sup>th</sup>, 2012):



**APPENDIX A**  
**QUESTIONNAIRE IN ENGLISH**











**APPENDIX B**  
**QUESTIONNAIRE IN THAI**











**APPENDIX C**  
**SPSS OUTPUTS**

**Reliability of Variables**

**a. Reliability: Attitude towards buying organic food**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.834	5

**b. Reliability: Health consciousness**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.876	6

**c. Reliability: Environmental attitude**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.670	5

**d. Reliability: Subjective norms**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.827	4

**e. Reliability: Ecological affect**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.830	4

**f. Reliability: Perception of availability**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.695	3

**g. Reliability: Perceived value**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.856	4

**h. Reliability: Organic food purchase behavior**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.692	4

**Descriptive Analysis**

**a. Frequency Table**

**Gender**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	168	42.0	42.0	42.0
Female	232	58.0	58.0	100.0
Total	400	100.0	100.0	

**Age**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 25 Years Old or Less	92	23.0	23.0	23.0
26-35 Years Old	207	51.8	51.8	74.8
26-45 Years Old	51	12.8	12.8	87.5
46-55 Years Old	9	2.3	2.3	89.8
56 Years Old or More	41	10.3	10.3	100.0
Total	400	100.0	100.0	

Occupation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	University students	41	10.3	10.3	10.3
	Government sector employee	39	9.8	9.8	20.0
	Private sector employee	176	44.0	44.0	64.0
	Business owner	89	22.3	22.3	86.3
	Others	55	13.8	13.8	100.0
	Total	400	100.0	100.0	

Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school or less	28	7.0	7.0	7.0
	College graduate	29	7.3	7.3	14.3
	Bachelor degree	227	56.8	56.8	71.0
	Master degree or higher	116	29.0	29.0	100.0
	Total	400	100.0	100.0	

Income					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15,000 THB or Less	51	12.8	12.8	12.8
	15,001-25,000 THB	119	29.8	29.8	42.5
	25,001-35,000 THB	78	19.5	19.5	62.0
	35,001-45,000 THB	46	11.5	11.5	73.5
	45,001 THB or More	106	26.5	26.5	100.0
	Total	400	100.0	100.0	

**b. Mean Score and Standard Deviation**

**Attitude towards buying organic food**

Descriptive Statistics			
	N	Mean	Std. Deviation
I buy organic food because of it is reasonable.	400	3.9750	.68961
Most of organic food have superior quality.	400	3.9300	.71511
I buy organic food because of it can ensure good health.	400	4.0125	.70611
I buy organic food because of it is safety.	400	4.0700	.71860
My attitude toward buying organic food is positive.	400	4.1500	.66604
Valid N (listwise)	400		

Health consciousness

Descriptive Statistics

	N	Mean	Std. Deviation
I have the impression that I seriously protect my health.	400	3.7350	.59638
I consider myself very health conscious.	400	3.8625	.62013
I plan to eat as healthy as possible.	400	3.8775	.63126
I choose food carefully to ensure good health.	400	3.9075	.56987
I study how to eat healthy	400	4.3925	.60362
I think of myself as a health-conscious consumer.	400	4.0000	.52981
Valid N (listwise)	400		

Environmental attitude

Descriptive Statistics

	N	Mean	Std. Deviation
The current development path is destroying the environment.	400	3.8925	.66487
Environmental damage will be reversible if we do something.	400	3.9275	.67704
I have knowledge and practice in the environmental protection.	400	3.9825	.62704
Sometime I consume recycled product.	400	3.8925	.58464
Sometime I dispose of my garbage in different rubbish bins.	400	3.9450	.63481
Valid N (listwise)	400		



Subjective norms

Descriptive Statistics

	N	Mean	Std. Deviation
People, who influence my behavior, think that my purchase of organic food is a wise choice	400	3.9300	.69014
People, who are important to me, think that I should purchase of organic food	400	3.8250	.70043
My family members, who influenced me most, think that my purchase of organic food is a wise choice	400	3.8775	.64306
My family members, who are important to me, think that my purchase of organic food is a wise choice	400	3.8400	.64455
Valid N (listwise)	400		

Ecological affect

Descriptive Statistics

	N	Mean	Std. Deviation
It frightens me to think that much of the food I eat is contaminated with pesticides	400	4.0825	.73624
It genuinely infuriates me to think that the government doesn't do more to help control pollution of the environment	400	4.0975	.74457
I became incensed when I think about the harm being done to plant and animal life by pollution	400	3.9850	.75246
When I think of the ways industries are causing pollution, I get frustrated and angry	400	4.1050	.72822
Valid N (listwise)	400		

Perception of availability

Descriptive Statistics

	N	Mean	Std. Deviation
Organic food is always sufficiency available.	400	3.8625	.72796
I consider purchasing organic food if it is available at my regular place of good purchase	400	4.0250	.70400
I consider making a special trip to a store that sell organic food if organic food is not available at my regular shopping place	400	3.9125	.74244
Valid N (listwise)	400		

Perceived value

Descriptive Statistics

	N	Mean	Std. Deviation
Organic food is better quality than conventionally produced food.	400	4.1075	.71219
Organic food is more nutritious than conventionally produced food.	400	3.7625	.70877
Organic food has more freshness.	400	3.7875	.73396
Organic food is worth the price.	400	3.8250	.74885
Valid N (listwise)	400		

**Organic food purchase behavior**

**Descriptive Statistics**

	N	Mean	Std. Deviation
I often buy organic food.	400	3.8475	.62867
I often buy product that is labeled as environmentally-safe.	400	3.9425	.68217
I agree to buy product that use recycled/recyclable packaging.	400	4.0200	.66762
I agree to buy product that contain no or fewer chemical ingredients.	400	4.2075	.74217
Valid N (listwise)	400		

**Influenced factors affecting organic food purchase behavior**

**Descriptive Statistics**

	N	Mean	Std. Deviation
Attitude toward buying organic food	400	4.0275	.52252
Health consciousness	400	3.9625	.32010
Environmental attitude	400	3.9280	.36269
Subjective norms	400	3.8681	.54722
Ecological affect	400	4.0675	.52339
Perception of availability	400	3.9333	.61495
Perceived value	400	3.8706	.55181
Organic food purchase behavior	400	4.0044	.46944
Valid N (listwise)	400		

### Correlation Coefficient Analysis (Pearson Correlation)

- a. Attitude towards buying organic food and Organic food purchase behavior

**Correlations**

		Attitude toward buying organic food	Organic food purchase behavior
Attitude toward buying organic food	Pearson Correlation	1	.474**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.474**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

- b. Health consciousness and Attitude toward buying organic food

**Correlations**

		Health consciousness	Attitude toward buying organic food
Health consciousness	Pearson Correlation	1	.428**
	Sig. (2-tailed)		.000
	N	400	400
Attitude toward buying organic food	Pearson Correlation	.428**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

- c. Health consciousness and Organic food purchase behavior

**Correlations**

		Health consciousness	Organic food purchase behavior
Health consciousness	Pearson Correlation	1	.618**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.618**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

d. Health consciousness and Environmental attitude

Correlations

		Health consciou sness	Environmen tal attitude
Health consciousness	Pearson Correlation	1	.729**
	Sig. (2-tailed)		.000
	N	400	400
Environmental attitude	Pearson Correlation	.729**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

e. Environmental attitude and Organic food purchase behavior

Correlations

		Environmen tal attitude	Organic food purchase behavior
Environmental attitude	Pearson Correlation	1	.590**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.590**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

f. Subjective norms and Attitude toward buying organic food

Correlations

		Subjective norms	Attitude toward buying organic food
Subjective norms	Pearson Correlation	1	.240**
	Sig. (2-tailed)		.000
	N	400	400
Attitude toward buying organic food	Pearson Correlation	.240**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).



g. Subjective norms and Organic food purchase behavior

Correlations

		Subjective norms	Organic food purchase behavior
Subjective norms	Pearson Correlation	1	.258**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.258**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

h. Ecological affect and Organic food purchase behavior

Correlations

		Ecological affect	Organic food purchase behavior
Ecological affect	Pearson Correlation	1	.538**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.538**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

i. Perception of availability and Organic food purchase behavior

Correlations

		Perception of availability	Organic food purchase behavior
Perception of availability	Pearson Correlation	1	.217**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.217**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

j. Perceived value and Organic food purchase behavior

Correlations

		Perceived value	Organic food purchase behavior
Perceived value	Pearson Correlation	1	.412**
	Sig. (2-tailed)		.000
	N	400	400
Organic food purchase behavior	Pearson Correlation	.412**	1
	Sig. (2-tailed)	.000	
	N	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

