# RESEARCH ON CONSUMERS WILLINGNESS TO PAY FOR ORGANIC PRODUCTS

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# DECLARATION

We hereby declare that:

(1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) Equal contribution has been made by each group member in completing the research project.

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TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

# ABSTRACT

This paper presents the consumers' willingness to pay a price premium for organic products in Klang Valley. The survey is based on consumer purchases by 2012 with information on their demographic and social- economic characteristics. Survey had been done on 500 organic products consumers using questionnaires to examine people's perception toward organic product and the willingness to pay as well. Data have been analysed to investigate what determines the presence of organic products. Our main objectives are to identify the determinants in willingness to pay for organic product by organic consumer. Several variables were being tested in our project. The study revealed that all respondents are willing to pay for organic products price premium. Environmental psychology is related to explain consumer willingness to pay as well. Consumers are willing to purchase organic products because these products are pesticides-freed and chemical-freed. A strong health conscious is the one of the main determinants of willingness to pay followed by consumer perception and quality towards the organic products. The result of analysis shows that social demographic and level of knowledge could not explain the willingness to pay of organic product.

# CHAPTER 1

# INTRODUCTION

## 1.1 Introduction

In the past, before farming, people lived by hunting wild animals and gathering wild plants. When supplies ran out, these hunter-gatherers moved on. Therefore, people decide to farm which meant that people did not need to travel to find food. Instead, they began to live in settled communities, and grew crops or raised animals on nearby land. They built stronger, more permanent homes and surrounded their settlements with walls to protect themselves. In the Fertile Crescent, farmers grew tall, wild grasses, including an early type of barley, and primitive varieties of wheat called emmer and einkorn. These naturally produced large grains (seeds) that were tasty and nourishing. In other parts of the world, between 8000 BC and 3000 BC, farmers discovered how to domesticate their own local plants and animals. By around 9000 BC, people were storing grains during the winter, and then sowing them in specially cleared plots. By 8000 BC, the farmers had discovered which grains gave the best yields and selected these for planting. They produced more food than they needed and were able to feed non-farmers such as craft workers and traders. The farmers exchanged their food for various kinds of useful or decorative good and that is the history of early farming. (Kindersley, 2007)

After that, modified genetic crop method was replace the traditional farming which is harvested more beautiful crop and grow faster, it can harvest twice a year which is one times more compare with the past. While the modified genetic crop was practised to the world after two world wars, as it was during that era that knowledge about chemistry greatly increased and it also can helping to solve the problem in lack of food during the war happening and therefore, this method is highly welcome by all group of people. Modified genetic agriculture is based on treating the soil and plants with products that are more likely than not noxious, and more likely than not synthetically produced in a laboratory. These products are used to prevent disease or pests from blighting the plant (Wine The Green Revolution ) and it also improving their ability to survive in particular harsh environments, to provide greater resistance to pests and diseases, to improve nutritional qualities, and to create tolerance to certain herbicides. (The Scottist goverment, 2011)

When something brings the good and it also bringing the bad, one of the biggest problems with modified genetic agriculture is that it kills off life in the topsoil and subsoil. In order to be worth anything, soil needs micro flora (bacteria, fungi and actinobacteria) and micro fauna (protozoa, nematodes and arthropods). Use of powerful chemical products that destroy or inhibit harmful fungi or fungal spores (fungicides), that kill or inhibit harmful insects and other pests (insecticides) and that control unwanted vegetation (herbicides) has ultimately contributed to the reduction in microbial life in the soil, to the point that, in order to yield sufficient crops, it is necessary to use very large amounts of fertilizers. This all, in turn, results in near-barren land unable to generate its own organic matter.

In viticulture, for example, making a wine that expresses its terroir – its sense of place, a reflection of the climate and soil type and location – is thus nonsense, because there is no longer any terroir that can be expressed, not in the grapes on the vine, nor in the finished wine in the glass. Any organic matter present throughout the process came from a factory. (Wine The Green Revoulution) Furthermore, it also can increase the chances of having cancer if someone continuously consuming modified genetic food in his or her daily life. According to a consultant histopathologest at Aberdeen Royal Infirmary, Dr Stanley Ewen, raised the concern that food and water contaminated with genetically engineered material could increase the growth of malignant tumours upon contact with humans. (HubPages Inc.)

## 1.2 Background of study

### 1.2.1 Definitions of Organic Food and Products

Due to that, organic farming is occurred and aims to replace the modified genetic farming and ensure that organic product can bring healthier to the people. . The term ‘organic’ as related to farming was used for the first time in 1939 by Lord Northbourne in his book Look to the Land. He described organic farm as an organism that uses ecologically balanced approach, without the use of chemicals. The so called organic food movement started about the same time the large scale use of agricultural chemicals, in the first half of the 20th century. People were concerned about the effect of chemicals on their health and the health of the soil and started growing food free of non-organic ingredients. The 70s brought great popularity of organic food and organic farming. International Federation of Organic Agriculture Movements was formed in 1972. At the same time, organic food producers started voluntary certification process, in order to standardize the production and establish common rules. The

organic food users of the 70s were few ‘eccentrics’ or “tree huggers” who grew organic food for themselves because of the concern that the conventional food contained too many toxic residues that is affecting their health. Their number rapidly grew to include now all segments of population, regardless of age, ethnicity and income. The first packaged organic food was "Mr. Natural" apple juice, introduced in 1972 by John Battendieri, American farmer and promoter of organic farming. Increased environmental awareness brought renewed popularity of organic farming and increased demand for organic food. The producers reacted by rapid growth of large organic farms. Today, most of large food producers have organic food departments. It is estimated that about 2 percent of entire food production in the world today is organic. The increased demand prompted governments of many countries to start regulating the organic food production and establishing certification systems. In countries like USA, Canada, UK, Japan and many others, food cannot be labeled as organic if it has not been produced on certified organic farm. The first certification of organic food started in 1991 in European Union and covered 12 countries. (BestOrganicFood.SG)

Various types of organic product are available for fulfill the demand of customer, product such as food and beverage, flower and other plants, license organic restaurants, textile, toys, body care product, cosmetic, seed and gardening product, and pet food and pets product are available in the market. For food and beverages, almost all foods and beverages, with few exceptions can be certified organic. Additionally, organic certification guidelines for food are well laid out, so it's easier to deal with organic food and beverage certification than it is to deal with other certifications. Good news; especially since organic food sales are growing at an impressive rate. Food and beverages that can be certified organic include whole fresh produce, alcohol, coffee, tea, edible flowers, wild crops, grains, meat and more. Processors and handlers may also manufacture organic food items, for example pizza or jam.

Besides that, organic baby toys in particular, are becoming very popular as parents and parents-to-be worry more about the chemicals their children are exposed to. Most organic toys fall under the soft toy category and are made with certified organic materials such as cotton and wool. There's also been some expansion into organic crafty toys, such as play dough and paints, but while some of these products use certified organic materials, few craft/toy companies seem to be getting officially certified, and it's no wonder without clear certification standards in place. For toy companies, the best course of action is to discuss certification with a local accredited certifying agent.

Next, organic restaurants are a growing category in the organic industry. On the up side, since organic food is continually gaining in popularity, there's some nice opportunity for growth in the organic restaurant sector. In fact, a recent consumer survey shows that consumers are willing to pay more for organic and eco-friendly dining. On the flip side though, organic restaurant owners may face challenges due to costs and the inconsistency of the organic restaurant certification process. (Chait)

Extensive research conducted over a number of years has proven that organic food not only tastes better than commercial foods, but it is also better for us and our children, as well as our animals, wildlife, and the environment as a whole. Rich nutrition is the main advantage of organic product, care and maintenance of soil, and preventive farming methods like crop rotation create fruits and vegetables that contain up to 50% more vitamins, minerals, and other nutrients than intensively farmed foods. Encouraging natural and organic farming methods and gardening practices, will allow organic soil to rebuild and contribute healthy vitamins and minerals to feed the crops. Organic foods have higher levels of many disease-fighting antioxidants and essential vitamins, including Vitamin C.

Next, organic product also helps to reduce and prevent some allergies and diseases occur on human body. Industrial pesticides and fertilizers used in intensive farming contain synthetic, toxic chemicals, residues of which remain in the food they are involved in producing.

Organic farming uses natural, synthetic-chemical-free methods that produce foods much safer for the humans, as well as the animals, that consume them. And if you grow your own fruits and vegetables, using organic garden fertilizer, natural pesticide methods, and organic soil (along with a good composting bin or barrel), will help you to grow healthy, natural, organic produce.

Such chemicals are responsible for a number of common allergies and have also been linked to serious diseases like cancer and Alzheimer’s Disease. An organic diet significantly lowers these risks. From a health perspective, organic foods and beverages such as organic apple cider vinegar, organic goji berry, and organic acai berry are recognized as having significant health benefits (for circulation, digestion, infection, and more).

Other than that, organic products also help to create healthier environment to the people. The advantages of organic food and farming reach far beyond our own health and

well-being. Organic food is safer for the entire planet. The procedures and methods used in organic farming protect the structure and the nutrient content of the soil and preserve its worth over time. Organic farming practices also conserve valuable natural resources by requiring less water as well as less energy. Read more about Benefits of Organic Farming. The organic system for meat production is safer and more humane for livestock than industrial farming methods. Instead of spending their lives in dirty, cramped cages, animals raised for organic food enjoy fresh air and open space. The routine use of antibiotics is prohibited as a purely preventative measure, the use of growth hormones is prohibited outright, and the animals are fed an organic diet to ensure a happy, healthy life. Slaughtering organic meats is also far more humane. (Organic Food For Everyone)

Higher consumption of organic products is observed across the globe because people are more health conscious nowadays and they more aware of what they consume and things that they are in contact with every day. Figure 1 showed the United States' organic product sales from 2005 till 2010 which marked a constant increase each year. With the advancement of technology system, information about benefits and advantages of organic products are easily obtained through the internet. Besides, people are more educated on the types of organic products available in the market thus the demand for it is increasing at a rapid pace.

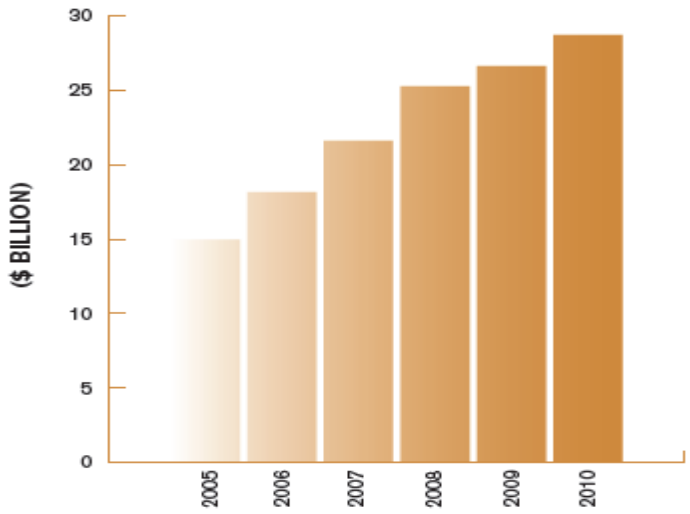


Figure 1.1: US Organic Product Sales

Source: Organic Trade Association

In the 2009 annual reports of the International Federation of Organic Agriculture Movements (IFOAM), a BioFach Global Fair lead by the organization has held 6 leading trade fairs in Germany, USA, Brazil, China and Japan (IFOAM, 2009)

There is a huge potential in the organic products market. Therefore, it is important to find out the factors that motivate consumers to purchase certain organic goods and what will affect their willingness to pay for the product. Some of the study defined the factors are related to the age, education level, income level and gender. For the middle and elder people, they are more willing to purchases organic product to maintain their health. While, some of the study also stated that the more educated the people is more concern about their health and as well to their family members at the very young age and they may transfer the knowledge of organic products to their relatives. Besides that, due to the competitive price, only for those middle or upper income families are able to purchase organic products. In some research also find out that, female are more health conscious compare to male. Therefore, female are the largest consumer group to organic product.

There have two international trustworthy institutions that can verify the certificate and labeling of organic product. One of them is OCIA International; it is one of the world's oldest, largest and most trusted leaders in the organic certification industry. A nonprofit, member-owned, agricultural organization, OCIA is dedicated to providing the highest quality organic certification services and access to global organic markets. (OCIA International)

Besides that, IFOAM also is the worldwide umbrella organization for the organic movement, uniting more than 750 member organizations in 116 countries. Organic trade is a rapidly growing reality all over the world. The growth rates of the organic sector demonstrate that organic products are moving from the "niche" and entering mainstream markets. The total land under certified organic production worldwide has reached over 26 Million hectares. IFOAM is at the center of this development. (IFOAM)

The Research Institute of Organic Agriculture (FiBL) and the International Federation of Organic Agriculture Movements (IFOAM) will present the newest facts and figures (data per end of 2010) about organic agriculture at Room St. Petersburg about largest growth of organic area is in Europe

The largest growth of organic agricultural land was in Europe, where the area increased by 0.8 million hectares and is now at 10 million hectares (+9 percent compared

with 2009). In Asia, organic farmland decreased. Overall, however, global organic agricultural land has not changed compared with the 2009 data. The organic arable and permanent crop area increased worldwide by approximately six percent. Those crops are of particular relevance for the organic market. For arable crops, cereals are the most important crop group (2.5 million hectares). Oilseeds cover 0.5 million hectares, and protein crops and vegetables 0.3 million hectares each. The key permanent crops (almost 3 million hectares) in terms of land under organic management are coffee (0.7 million hectares), olives (0.5 million hectares) and cocoa (0.3 million hectares).

One third of the global organic agricultural land is in Oceania (33 %), followed by Europe (27 %) and Latin America (23 %). Australia is the country with the biggest organic agricultural area (12 million hectares), followed by Argentina (4.2 million hectares) and the USA (1.9 million hectares). The countries with the largest share of organic agricultural land of all farmland are the Falkland Islands (36 %), followed by Liechtenstein (27 %) and Austria (20 %).

Globally 1.6 million producer's farm using organic methods, and approximately 80 percent of these are in developing countries. As in previous years, the countries with the most producers are India, Uganda, Mexico and Ethiopia.

The market research company Organic Monitor estimated the global market for organic products in 2010 at 59.1 billion US dollars (44.5 billion euros). Compared with 2009, the market increased by roughly eight percent in Europe and the United States. The leading market is the United States with 20.2 billion euros. In Europe, where 19.6 billion euros were spent, Germany leads at 6 billion euros, followed by France (3.4 billion euros) and the United Kingdom (2 billion euros). The countries with the highest annual per capita spending were Switzerland and Denmark with more than 140 euros.

According to FiBL, these figures show that in countries where organic agriculture is institutionally well embedded, there is a constant growth of the market and of the area under organic management. This is impressively shown in the case of Europe, where many countries provide a wide range of support measures like direct payments, advisory services, relevant research and marketing measures. In countries where organic agriculture is not yet fully integrated into national agricultural policies, und farmers receive less support through advice and research, the ups and downs of the organic area can be substantial. (Research Institute of Organic Agriculture (FiBL), 2012)

## 1.2.2 Organic Industry in Malaysia

In Malaysia, due to increasing of living standard, yearly income, education level and awareness towards environment and health, therefore, many people starting to aware about their food consuming and daily products used because of that, organic products were came into Malaysia market and gained consumer heart into it. It is because; the prices of organic products are higher than conventional products, therefore it only affordable for those people are rich or get well pay in their job. After that, increasing the education level in Malaysia also brings awareness among the Malaysian, people starting concerning their health, concern about their food consuming and try to minimize the chances of getting allergies and diseases so the demand of organic product are rises over the time. Nearly this few year, the prices of organic product are more affordable by consumers and they also believe on that this is one of the method will make sure their health.

As mentioned earlier, change in lifestyle and increase in awareness resulted in the rising trend of organic products demand. The Malaysian Investment Development Authority (MIDA) reported that increasing consumer awareness in nutrition value and healthcare has created the demand for functional/healthy minimally processed fresh food, organic food and natural food flavors from plants and seafood. Health food produced in Malaysia is mainly in the form of food products that are enriched with nutrients. Thus, organic food and products have the potential for further growth in the country.

In the early years, organic industry in Malaysia consisted mainly of two streams which are the non-government organizations (NGOs) and private sectors. In September 1986, the involvement of NGOs in the organic sectors started with the establishment of the Centre for Environment, Technology and Development, Malaysia (CETDEM) Community Farm in Sungai Buloh, Subang New Village near Kuala Lumpur. It was an experimental farm to grow lowland vegetables and fruits. In the following year, CETDEM farm changed into “organic” with the beginning of organic agriculture in the country initiated by them.

During early 1990s, many pioneering organic production was started across Malaysia. Few of the examples are the Penang Organic Farm in 1992, Sustainable Living Centre in Gopeng, Perak, Kuantan organic farms, Lifestyle Farmhouse in Melaka, Ecofarm in Rompin, Negeri Sembilan in 1991 and Nakim Farm in Seremban, Negeri Sembilan in 1991.

Initially, demand of organic foods is mainly fueled by cancer patients' interest in diet therapies. However, organic products were hard to obtain at that time because majority retailers and supermarkets were not too keen to stock organic products, thus distribution channels were developed through informal home -based dealers, consist of mostly consumers of organic products dedicated in promoting the benefits of organic product.

The major breakthrough in Malaysia organic sectors would be by the work of Mr. Steven Leong with the establishment of the first manufacturing facility specifically for organic compost and fertilizer in Malaysia. The facility is modeled after the Shimamoto Farming Method whereby Steven Leong learnt it in Japan and implemented it in Malaysia. This farming method is able to yield a wide range of organic vegetables and fruits comparable or even better quality than conventionally-produced one.

Table 1.1: Number and Acreage of Organic Producers in the Country, 2011

| **State** | **Number** | **Area (hectars)** |
|---|---|---|
| Selangor | 10 | 10.8 |
| Negeri Sembilan | 10 | 90 |
| Melaka | 2 | 1.1 |
| Johor | 2 | 3.5 |
| Pahang | 6 | 11.6 |
| Sabah | 2 | 12 |
| Sarawak | 1 | 2 |
| Total | 27 | 131 |

Source: National Study: Malaysia

Table 1.1 above showed the number and acreage of organic producers in Malaysia during 2001.

According to a study by the Organic Trade Association on the South East Asian market for organic food and drink in 2006, the market has a big potential in growth and revenue. Revenues are expected to grow due to the increased availabilities of organic products in conventional distribution channels and the growing dedications of organic food retailers. Table 2 below showed the forecasted revenues and growth for these products in South East Asian market from 2003 to 2013.Table 3 below showed the main market drivers for organic food and drinks with rising awareness of consumer ranking number 1.

Table 1.2: The South-East Asian Market for Organic Food & Drink: Revenue Forecasts, 2003-2013

| Year | Revenues ($ millions) | Revenue Growth(%) |
|---|---|---|
| 2003 | 44 | - |
| 2004 | 51 | 15.0 |
| 2005 | 59 | 16.4 |
| 2006 | 71 | 20.3 |
| 2007 | 86 | 21.1 |
| 2008 | 106 | 23.3 |
| 2009 | 128 | 20.8 |
| 2010 | 150 | 17.2 |
| 2011 | 172 | 14.7 |
| 2012 | 193 | 12.2 |
| 2013 | 213 | 10.4 |
| CAGR: | | 17.0% |

Note: All figures are rounded, Source: Organic Monitor

Table 1.3: The South-East Asian for Organic Food & Drink: Market Drivers, 2006

| Rank | Driver |
|---|---|
| 1 | Rising Consumer Awareness of Organic Foods |
| 2 | Increasing Retail Distribution of Organic Foods |
| 3 | Growing Government Support for Organic Agriculture |
| 4 | Increased Investment in Organic Sector |
| 5 | Expanding Number of Organic Food Retailers |
| 6 | Health Scares Raising Awareness of Food Issues |

Source: Organic Monitor

## 1.3 Research Problem

The purpose of conducting this study is to understand the factors that influence consumer behaviour in purchasing organic foods and products and their willingness to pay.

The main purpose to carry out this research is to discuss on the variables which determines consumer behaviour in the buying pattern of organic food. Besides, this paper also aimed to help increase the understanding on consumer's awareness, attitude and perceptions towards organic products.

Since there is a huge potential in the local organics industry, this research will come in handy when marketers decide to offer their organic foods and products to the domestic market. It will help producers to better understand the preferences of consumers when they were to purchase organic goods and to come up with a strategy to attract a bigger population to consume organic foods and products. It is hope that this research will contribute in boosting the sales of organic foods and products in our country.

## 1.4 Research Objective

**1. To increase the understanding of consumers' awareness, attitude and perceptions towards organic products**

It is hope that this research could help farmers and producers to have a better understand of consumers' awareness and their views on organic products that are available in our country. This would help organic producers to satisfy and understand consumers' wants and needs in the consumptions of organic foods and products. By knowing the level of Malaysia consumer awareness, the seller and producer can well-planned in some awareness campaign and promotion, such as add in more detail information.

**2. To identify the factors that influencing consumers' willingness to pay (WTP) for organic products**

Next, this paper would identify the factors that affect consumers' willingness to pay for organic products. It will be focusing on factors such as the prices of organic goods, health conscious of consumers, consumers' level of product knowledge, quality of the organic foods and products, labelling and certifications of the products and last but not least consumers'

behaviour. This research would study in depth on these factors and determine their impacts on consumers' WTP.

**3. To assess consumers' willingness to pay (WTP) for organic products**

Willingness to pay referred to the premium price willing to be paid by consumers to purchase a product or to enjoy a service. It is important to determine consumers' WTP for organic goods because this can be used by marketers as a guideline to set the market price of organic goods. This is also to ensure consumers will not be overcharged or producers will not incur losses.

## 1.5 Research Questions

Research questions will lead to the need for a study on this topic.

1. To study the impact organic product industry due the awareness of health conscious?
2. Do consumer willing to pay extra for organic products?
3. What are the factors that influence consumer's decision to purchase organic products?
4. The perception and understanding about organic products influence consumer buying behaviour?
5. The effect of consumer demographic on purchasing behaviour?
6. Are organic products easily to access by consumer?

# CHAPTER 2

# LITERATURE REVIEW

## 2.1 Introduction

Literature review is a critical synthesis of past research in the content of a thesis. In this chapter, it will be focusing on reviewing the previous studies from different sources in which has been analysed by other researches. It concerns about several variables which has been discussed on consumers' willingness to pay for the organic food information. On the other hand, consumers' perception, certification, behaviour, and intention towards organic food will be discussed later. We evaluate the information that we have to help to propose our studies.

The independent and dependent variables that affect consumers' willingness to pay for the organic food will be discuss. There are some previous studies in organic food investigated out some variables which are gender, age, geographic, and so on will affect the willingness to pay or purchase of the organic food. The present study will start with the explanation of some of the terms and focus on few variables. For example are; knowledge about the product, consumer behaviour, health conscious, and environmental attitudes. In this study, there will some review of all the previous researchers' sources which had a relation to mentioned variable, and also analyse the level of acceptability of organic food towards consumer. This chapter is crucial to support my further analysis and research in the following chapter

## 2.2 Definition of the Terms

### 2.2.1 Willingness to Pay and Price for Organic Food.

The production and marketing strategies are determined by some factor such as: consumer attitudes, loyalty, belief to organically grown products and the willingness to pay a premium price for the organic food. An individuals' attitude towards consuming an organic products is the most important point for predicting and explaining consumers' choices toward the organic foods, (Voon, 2011). Consumer willingness to pay and the intention to purchase organic food may reflect by many motivators such as healthiness, environmentalism, perception, awareness and etc., (Xia and Zeng, 2008). As (Nasution, 2010), factors driving consumers' behaviour towards buying organic food and profiling organic conscious consumer based on demographic factor. Willingness to pay is defined as a ratio of the variable of interest whereas the price is a monetary variable which press the value of the variable of interest for different attributes level (Hensher et al 2005). According to (Saba, 2002), research related to consumer attitudes to organic foods indicated that the consumption of organic foods is related to decreasing confidence in the quality of conventional foods and to an increasing concern for health. This public concern is part of a widespread anxiety among consumers about the quality of food that we eat. Those studies pointed out the findings of factors that affect the behaviour of consumer on decision making towards organic food. Thus, this chapter will investigate the relevant determinants that reflecting the willingness to pay of the consumers.

### 2.2.2 Price

The crucial element in the topic of willingness to pay will be the price. Price is an exchange ratio which price shows consumers very important information in determining their buying behaviour. Once a consumer wants to buy, the next step is to see whether he or she is willing to pay for the organic product. Therefore, high or low price of a product may affect the decision making of a consumer. As we know that organic food always have a premium price comparing with conventional food. Pricing is the important essential factor in marketing which plays an important strategy to gain consumer's attraction. According to (Ariyawardana, 2002), majority of consumers were not willing to sacrifice the cost for their health advantages. Therefore, the price of organic products should be competitive with the conventional products.

## 2.2.3 Organic Product

According to (National Organic Program, 2013) stated thatThe organic standards describe the specific requirements that must be verified by a USDA-accredited certifying agent before products can be labelled USDA organic. Overall, organic operations must demonstrate that they are protecting natural resources, conserving biodiversity, and using only approved substances. For organic crops, the USDA organic seal verifies that irradiation, sewage sludge, synthetic fertilizers, prohibited pesticides, and genetically modified organisms were not used. Whereas organic livestock is verifies by USDA that the producers met animal health and welfare standards which did not use antibiotics and growth hormones. It using 100% organic feed and provided with access to the outdoors. Besides, for organic multi- ingredient foods, USDA seal verifies that the producer has more than 95% certified organic content. If the label claims that it was made with specified organic ingredient, you can be sure that those specific ingredients are certified organic.

Organic product is generally doing not use synthetic pesticides, genetic engineering or radiation. Normally, natural fertilizer and biological pest management will be used to grow organic agriculture. An organic farm doesn't use hormones or antibiotics in livestock and tries to accommodate natural nutritional and behavioural requirement. "Organic" are ethical and labour issues. For example fair trade and animal rights, both addresses by organic movement. Besides, organic farming can be considered as a part of a larger framework for sustainable development, which efficient distribution, waste minimization, energy conservation do take into account, (NBJ'S ORGANIC FOODS REPORT 2004, August 2004).

## 2.2.4 Health conscious

According to (Bonny, 2006)**,** based on different countries, a health safety consideration is found as the highest percentage purchase motivation in European project OMIaRD (Organic Marketing Initiatives and Rural Development, 2001-2004). Result of studies confirmed that consumers have positive attitudes towards organic where one of the most common mentioned reason for purchasing organic products was it is perceived as healthier than conventional alternatives, (Juhdi, February 2010). Additionally, (Saba, 2002), consumer attitudes to organic foods indicated that the consumption of organic foods is related to an increasing concern for health. As organic food is generally regarded as more nutritious and safer than conventionally- produced food, health- conscious individuals are more likely to develop positive attitudes towards the health enhancing attributes of organic food. (Hassan,2008). Additionally, health consciousness is an important psychographic variable in further developing audience segmentation pertaining to health issues, (Hong). Midmore et al (2005) stated that health conscious can be categories into two parts; firstly is the product characteristic towards the freshness, naturalness and etc; secondly is the awareness by themselves due to health problem in which organic food is needed to control and maintain their health.

## 2.2.5 Level of the Product Knowledge

Knowledge about products and their benefits influences their willingness to pay for the products. Study by (Aryal et al, 2009) knowledge about organically produced foods will affect consumer purchase decision. Knowledge has direct and indirect effects on attitudes toward consumer to choose the products, and the willingness to pay a price premium. Thus knowledge is the most important factor that determined the demand of organic food. Other than that, consumer behaviour on organic food is determined by level of knowledge. Product knowledge is an important tool to differentiate the feature and quality of organic food and conventional food, (Magistris, 2007).

According to (Pieniak, 2010), the level of organic product knowledge which affects the organic vegetables consumption can be categories into three sections which are consumer's subjective knowledge, objective knowledge, and also general attitudes. Subjective knowledge can be considered as an important factor as it is a personal knowledge that is interpreted by our personal experiences whereas objective knowledge is referring to the knowledge that gets from the actual information.

## 2.2.6 Quality of Food

Quality can be defined as a measureable and verifiable standard for every product that meets the customers or user requirement. Perceived quality can be also defined as the consumer's judgment about a product's overall excellence or superiority. (A.Zeithaml, 1988). According to (Ariyawardana, 2002), respondents indicated that they will expect a better quality, as the present organic production processes do not produce products with a good external appearance. Majority of the organically produced products should be superior products compare with inorganically produced products. Thus food quality has an indirectly influence on consumers' willingness to pay. According to (Rodrigues, 2006), quality of organic product plays an important role in safety and products liability. Besides, Monroe and Krishnam (1985) point out that quality of product defined as its capability to satisfy the consumer's demand. Midmore et al (2005) stated that consumer will always perceive organic food got a better quality because of the safety processing techniques.

## 2.2.7 Labelling and Certification

Certification schemes are viewed as promises or guarantees of quality, authenticity and proper agriculture practices and producer protection, (Wong). Based on (Aryal et al, 2009)**,** consumers' willingness to purchase is affected by exogenous factors such as certification and labelling of the product. From a consumer marketing perspective, an important area requiring further research is in the impact of organic certification on consumer products perceptions. The analysis revealed organic certification information does impact ultimate consumer product perceptions, (Wong). Besides, a greater percentage of the respondents will buy organic products that at least a local institute should certify organic products to assure the quality of products, (Ariyawardana, 2002). According to the Malaysian Organic Scheme, (SOM), certification must be based on a set of organic standard which concerns about "production, wrapping, transportation, and direct sale of the cultivated organic crop". Product labelling with organic certification logos is a tool for signalling consumers that a product is a certified organic product as stated by (Janssen, 2012)

A study conducted by EJ. Van Loo et al (2011) stated that with a USDA organic certification was more valuable than general organic label. This is because USDA organic products are more trusted by consumer if comparing a general organic label product. Thus, the WTP is higher for USDA certified organic labelled. (Giovanni, 2002) stated that the demand of

organic products will be expand through advertisement, information about the high quality and certification towards the organic products.

### 2.2.8 Consumers' Perception

An organic food information, perception and attitudes will constrain consumers' behaviour. The perception, understanding about organic products varies depending on the type of consumer such as: business people, government officials, and teachers, (Aryal et al, 2009). The previous studies in organic food that investigated consumers' attitude and intention to buy which also described consumers' profile that has positive attitude and intention to buy organic food, (Nasution, 2010). According to (Voon, 2011), individuals' intention to consume organic food is likely to be strengthened if they believe that their loved ones expect them to do so, or they wish to be identified with other individuals who are consuming organic food. (Hong) stated, health motivation is a motivation of setting a goal which direct related to preventive health behaviours.

### 2.2.9 Perceived expensiveness

Price premium is the excess price a customer pays over the fair price and "true" value of a product. There are a sufficient number of customers who are willing to pay a nominally higher price for value products, (Bin Mai, 2010).

Organic food has higher pricing value compare to conventional food. According to (Vlosky, 1999) the price above the "fair" price is justified by the "true" value of the product.

### 2.2.10 Environmental conscious

Green consumerism is referred to the purchasing behaviour of a consumer. Further describe is that green consumerism is a multifaceted concept in which concern about the environmental pollutions, responsible use of non-renewable resources and also species preservation. Therefore, organic agricultural method is the best method to such concerns, (M.G. McEachern et al, 2002). Environmental concern defined as the concept that of feelings towards green issues. The healthier communities are beginning with the environmental concern and the econ- friendly attitudes. This is because consumer choices are make regards to the environment influence the health and quality of life of their future generations (Marla, 2011).

In 1998 United Nation and Agriculture Organization stated that organic farming system creates a favourable impact on environment. The reason behind is organic farming may raise the level of soil fertility and reduce water "contamination'' Chen (2009).

According to (Abdul-Muhmin, 2007) stated that environmental psychology can explain the consumers' willingness to perform environmentally friendly attitudes. An environmental concern of environmentally friendly behaviour by consumer is the main key of determinants of the willingness.

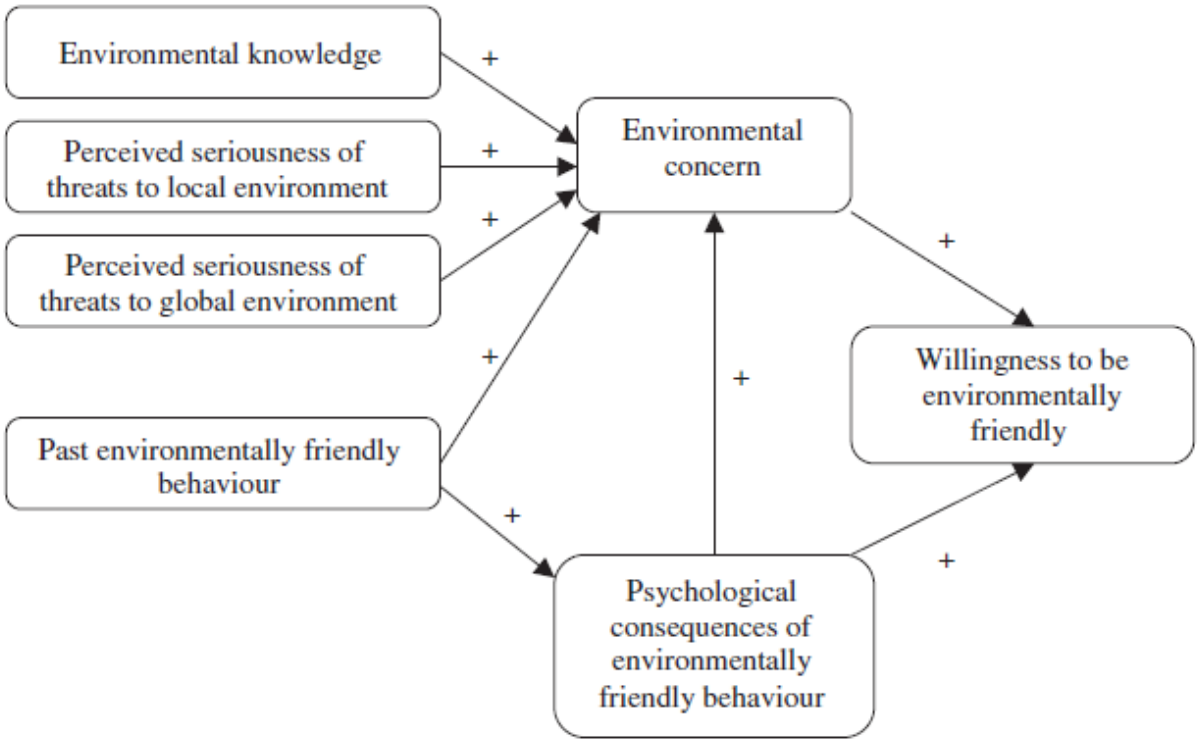


Figure 2.1: Environmental Behaviour by Consumer
Source: A.G. Abdul-Muhmin, 2007

## 2.2.11 Social- demographic

According to the study, the willingness to pay for organic product is affected by social-demographic factor such as: age, education, income, gender, marital status and number of children in the family, (Ariyawardana, 2009). Demographic information always provides a great opportunity for decision makers to grab more market share and better targeted on

potential customers. The variable will be discuss are age, gender, income, educational level and marital status

## 2.3 Willingness to Pay

According to the study by (Ariyawardana, 2002), there are 96.30 % of respondents were aware of organic products revealed that they are willing to buy organic products if organic product are available in the supermarket. However, there are some consumers stated that they are not willing to buy organic products from supermarket. All respondents who were willing to buy organic products are because of health consciousness rather than any other reason such as taste or environmental friendliness. Furthermore, trust of organic food claims is a strong determinant of intention to consume due to the credence nature of organic food. Therefore, there is a positive attitude towards organic food with the willingness to purchase of organic food, (Voon, 2011).

The study signalled that even though the price is expensive, consumer will still willing to buy organic products to reduce the risk to their health. Additionally, the author stated that the analysis revealed organic certification information does give an impact towards consumer product perceptions whether are the impact on the environment or health benefits, (Wong).

Research done by (Kamal, 2009) stated that there are several exogenous factors which affect the consumer willingness to purchase such as the certification, labelling, and consumer's knowledge. After consider the willingness to purchase, and then only consumer will see how much he or she is willing to pay for the organic product. Thus, purchase behaviour directly reflects to the real willingness to pay towards the organic product.

### 2.3.1 Price

In general, current price of organic products is higher than non- organic products. The perception towards organic product is very positive.

As (Aryal et al, 2009) stated that although the price of organic product is higher that inorganic product, many consumer still continue to buy organic product. Consumer reported that the price of organic product are reasonable compared with conventional ones. Besides, (Bonny, 2006) pointed that French willing to pay more for organically grown product even though it is a little bit more expensive compare to non- organic product. Additionally, a high affordability or high purchasing power will influence the willingness to purchase organic

food, (Voon, 2011). The number of purchasing organic food is determined by the different income status of consumers, (Juvancic).

Research done by (F.Napolitano et al 2010), the high production cost organic meat leads to a higher price and affect the purchasing decision of organic meat. This shows that consumer has been influence by the information about the organic production system. Besides, a premium quality of organic food which a reasonable price can attract more potential buyer as there is no pesticide application in organic food.

## 2.4 Health conscious

Research done by (Bonny, 2006), health, and natural raw material use of environmentally friendly techniques and concern for animal welfare are those positive features to consumers. This will bring benefit for individual health level, social and environmental levels, (Voon, 2011). Stated, health and environmental concern trust on organic food claims and perceptions of organic food attributes together form the attitude towards organic food. In a similar line, health consciousness has a positive attitude relation towards organic product, and the purchase intention of organic products. Besides, consumer that opts for organic product is because it contains health benefit. This is because they trust that organic product is healthier that conventional product, (Michaelidou). According to (Doorn, 2010), Health consciousness had no significant effect on either product perceptions or WTP. Furthermore, according to (Rennie, 2009), the increase of interest in organic food is higher than conventional food because of the factor of human health, and food safety. Thus, the perception of consumer towards the organic food is higher than conventional food. Besides, the majority research study stated that 'health' is the main reason which motivates consumers to buy organic product. Consumers prefer to purchase organic product because organic products doesn't contain chemicals which used in conventional food production, (Zanoli and Naspetti, 2002, and Jolly, 1991). More to the point, studies conducted by Botonaki et al (2006) also found that the health conscious is the main concern that motives organic consumers.

According to NBJ's Organic Food Report, 2004 stated that purchase of organic food is desire for a better nutrition in which lesser pesticides. Consumers are sensitive to pesticide, hormones and antibiotics in food. Therefore, they rather than choosing organic food compare with conventional food.

Through the existing research, organic food is perceived as food without any chemicals, and growth hormones. Consumers purchase organic food mainly for health reason which is better

for the children because of the lower pesticides and fertilizer residues, (Soil Association, 2000)

According to report entitled "Healthy Living: Organic and Natural Products", there are 66% of organic consumers that motivated by health and nutrition were the leading reason for organic food. There are 38% by taste and 30% by the food safety. 26% of them are concern about the environmental issues.

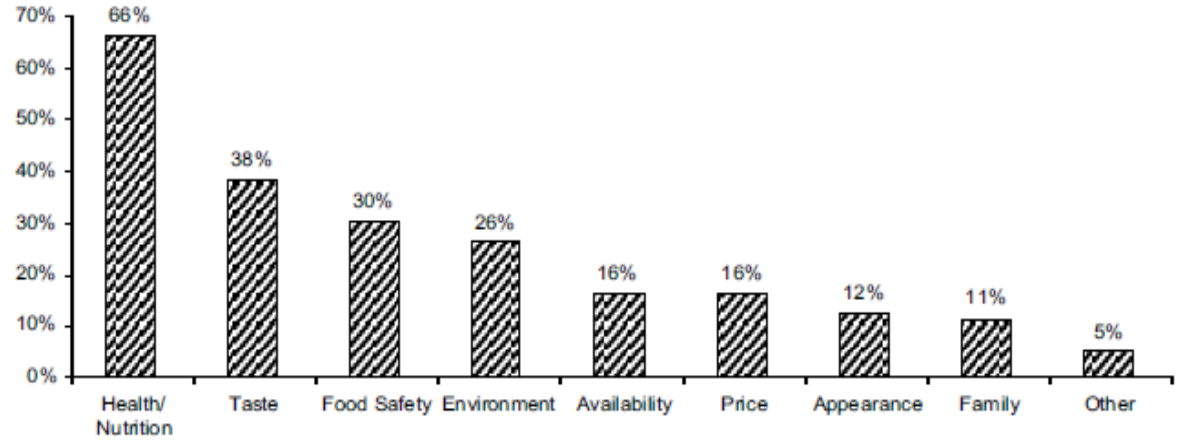


Figure 2.2: Top Motivators for Organic Food & Beverage Purchases

Source: Nutrition Business Journal, 2004

## 2.5 Level of Product Knowledge

Knowledge of people is influenced by the type and quality of information made available to consumers. Several studies have reported that a higher awareness and knowledge about organic food had a positive influence towards the attitude and consumption of organic product. According to (Aryal et al, 2009), the types of consumer may have different types of perception and understanding about organic products. The result shows that the knowledge and awareness level among the surveyed consumers are fairly good but not adequate. Furthermore, consumer are willing to pay for the premium price of 5- 50%of organic products which can viewed as the cost of investment in human health, (Aryal et al, 2009). On the other hand, consumers' education occupation, household size along with the product attributes affects their attitude and preference to buy the organic product, (Aryal et al, 2009). (Napolitano. F, 2010) showed that the complete information about organic information played an important role in the determination of actual liking of organic beef. The actual information will raise the consumer aware about ethical value of organic farming, product safety, animal welfare and environmental pollution. Accordingly, willingness to pay by

consumer is mainly affected by the accuracy of information but not product sensory properties. As the result, reliable information about the organic farming system might increase the consumer willingness to pay for organic products.

A higher knowledge about organic product may increase the probability to buy organic foods as well as the consumption among the loyal customers, (Pieniak, 2010). According to (Aryal et al, 2009), consumers' knowledge towards organic products can affect attitudes and perceptions about the product and also the purchasing decision.

## 2.6 Quality of Organic Food

There is a positive perception and high concern about the safety and the quality of the organic food by consumer. The quality of organic product is engage with consumers' behaviour; therefore, factor of price has no significant impact on purchase of high quality organic food, (Kuhar). The trust from consumer is related to the supply of information about the organic food quality. The consumers' perceived quality is influenced by intrinsic quality such as food nutrition, taste, and colour, (Rodriguez, 2006). Certification shows a quality control process to analyze the effectiveness of implementation of required production conditions and make sure that quality standards of organic products has meet the requirement, (Dimara, 2001). Furthermore, according to (Doorn, 2011) the analysis result showing that there is a positive relationship between the quality of organic product with willingness to pay by consumer. Besides, the article stated that product quality is the main variable through which organic claims affects willingness to pay. (Krystallis and Chryssohoidis, 2005) offer valuable insight regarding criteria that perceived as an important attributes for consumers which include price, taste, certification, nutritional, raw material and country of origin. This mentioned features also supported by (Pellegrini and Farinello, 2009) in their research.

Based on the study by (Nesheim, Jan 2008) various reason why household are willing to pay for organic differ but the quality of organic product being the most important, health concerns come to the next and lastly is the environmental concerns.

## 2.7 Labelling and Certification

Based on the study, organic certification information on label designs would give a positive influence on consumer product perceptions as it is considered as a valuable component of label design. It built up the consumer confidence in labelling in the final product perception, (Wong). Organic labels for organic products are the main trust for consumer to increase their

demand towards organic product, (Wier, 2005). Thus, consumer confidence is being sustained at present by organic labelling schemes that appear to function well.

According to (Vlosky, 2007), product labelling is the function to identify environmental preferable products which based on an environmental impact assessment of the product compared to conventional product. Furthermore, Eco-labelling is a better environmental practices and environmental improvements practices. And thus, this will increase the consumer's concern towards the certification of organic products rather that non labelling organic product.

Besides, (Janssen, 2012) argued that the consumer preferences and the willingness to pay (WTP) are differed from different organic logos. Consumer perception towards organic labelling schemes is high. Labelled organic products with well- known organic certification logos gain consumer trust. Organic producer will view it as a marketing strategy in order to differentiate themselves from competitors, protect themselves and add value for them (Botonaki et al, 2006).

Consumer will not trust and purchase organic products which without certification or labelling (Aryal et al, 2009). In accordance, consumers' perceived quality of organic food should not just depend on its taste or visual characteristic. Consumers also need to depend on certification or organic labelling as well (Midmore, 2005)

## 2.8 Consumers' Perception

Purchase behaviour reflects the real willingness to pay and the consumer gains positive or negative experience which will reversely affect consumers' willingness to pay in future, (Aryal, 2009). According to the study from (Voon, 2011), cost and convenience form perception of affordability toward the organic food. Moreover, subjective norms will positively influence the willingness to purchase of the organic product.

On the other hand, consumers' preference on organic products could be because of educated people are more conscious about health problem caused by chemical substances in conventional product, (Aryal et al, 2009). In addition, according to (Michaelidou), ethical motives were cause the level of demand in organic products such as the concern over the environment and the threat to animal. Based on the study, environmental friendly consumer behaviour will affect the willingness to purchase environmentally friendly goods, (Ahmad, 2010). Research done by (Magistris, 2007), consumers' behaviour is determined by attitudes towards the organic products is not only because of health conscious only but is also by the

product perception. Moreover, consumer perceptions are explained by motivation of organic food purchaser towards the freshness, taste and health benefits of organic product that they consume, (Wier, 2005)

## 2.9 Perceived expensiveness

Research done by (Aryal et al, 2009), all consumers are willing to pay a higher prices for organic product. For the range of price premium is from 5% to 50% in which depend on the products and consumer's willingness to buy. In other word, consumers are willing to pay premium if they confident that the food they consume is safe enough.

According to (Hill et al, 2002) suggest that there is a mixed opinion in which organic milk tasted differently compared to conventional produced milk was because of the perceptions of higher price meant better quality. This shows that they believe that price premium leads to a difference in taste for organic milk and conventional milk. Previous research stated that premium price can affect the organic food consumption. However it is hard to determine the premium because health benefits of organic product are hard to quantify (Rennie, 2009)

(Dana, Feb2009) discussed that, as the evidenced by many studies, consumers are willing to pay for a premium prices which is up to 10% for organic products in certain countries such as USA and India. Research also found that price premium has become the most decisive factors in determining when consumers actually purchase apparel products. Consumers were willing to pay premium prices for organic foods, even those with less than 100% organic ingredients, (Hae Jin Gam)

## 2.10 Environmental conscious

All mentioned studies noticed that, environmental issues become one of the most important motives to push consumer to purchase organic food.

According to (Gaetano chinnici, 2002), there is an increasing of consumer demand for organic produce because it has the less impact on the environment. This has leads to the increase of interest in quality obtained by the processes. The number of organic consumption consumer has been increasing. These consumers are concern about the chemical presence in the organic product and also the impact on environment which caused by intensive production methods (Maurizio, Kent). According to (Squires et al, 2001) stated that the environmental concern is the reason of consumers' behaviour towards organic foods. Other

than that, organic consumers noticed about the present of chemicals and pesticides in conventional food products which are harmful towards our environment. Whereas, the organic foods are perceived as being environmentally friendly because the absent of pesticides.

(Davies et al, 1995) indicated in their research, environmental concern has raised the interest of organic food. Organic agriculture is referring to the way of producing organic food and other products without synthetic fertilizer and pesticides. This can reduce the environment damage, in which enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity

## 2.11 Social- Demographic

### 2.11.1 Gender

According to (Lea, 2005), in gender section, a higher percentage of women have a positive attitude towards organic foods than men. Moreover, females are likely than males to pay a premium for organic product and age to be inversely correlated with willingness to par for organic product, (Urutyan, 2007). In accordance, the studies conducted by (Doorn, 2010) supported that women attribute a higher quality towards organic product compare to men. Female have play more attention towards organic product and more concerned about the environmental friendly topics which may leads to a higher quality associations. However, there are some demographic variables such as age, income and education can define organic consumers however the Correlation is not very significant towards the willingness to pay for organic product, (Rennie, 2009)

### 2.11.2 Educational level

In educational level, organic food consumers tend to be more highly educated than conventional food consumers, (Lea, 2005). Besides, upper class people and well educated consumer will have a highly demand in nutrition and freshness on organic products, (Ariyawardana, 2009). As (Urutyan, 2007) observed, education plays an important role in the demand of organic product among the consumers. (F.Napolitano, 2010) also pointed that a higher education level consumers are more attribute in ethical issues and information which related to the organic production system. (Rennie, 2009) stated that demographic variables define the organic consumer profile. Majority of consumer, which consuming organic food, are tend to be more educated, affluent and higher social class.

### 2.11.3 Income

Other than that, the proportion of consumer that purchase organic product has been found to rise with an increase in income. A high annual income and female consumer are willing to pay more to buy organic product compare to other group. In accordance, the studies conducted by (Urutyan, 2007) also supported that a high earning individuals were the most likely to pay a premium for a certified organic product.

(Gaetano Chinnici, 2002) discovered that the increase of income per household will leads to a greater change in their food habits from conventional food to organic food. A progressive transfer of demand towards organic product is characterized by precise nutritional and health guarantees.

Organic consumption has becoming more popular. High income level consumer consumes more organic products. This shows that people's income is the one of the reason why they buy organic product. In Baroda and Ahmedabad, there are about 70% of the consumers with the income above Rs. 5,000 per month were willing to pay 15%-20% premium for organic food items, (Dana, Feb2009)

### 2.11.4 Age

Older consumer is more likely to pay a higher price for a good quality organic product. Furthermore, the young generation which is under 18 years old, was willing to purchase organic product compared to older people and lower income earners, (Urutyan, 2007). According to (Wier, 2008) stated that younger consumer under 45 years old have a higher propensity to purchase organic products than older consumer which are more than 45 years old.

## 2.12 Relationship between Dependent Variable and Independent Variables

After reviewed from several studies which conducted by researches, minority of the researchers had argued that there is no significant result show between a few independent variable for organic food. However, majority of the researches support that independent variable have a positive relationship with the consumer willingness to pay for organic product. Table 2 (health conscious, level of product knowledge, quality of organic food, certification and labelling, consumers' perception, environmental conscious, and social demographic) shows the example of few studies in which the researchers pointed out there is significant result between the variables.

Table 2.1: Relationship between Dependent and Independent Variables

| Independent Variables | Authors | Research Title | Result |
|---|---|---|---|
| **Health Conscious** | Nutrition Business Journal | NBJ's Organic Food Report, 2004 | There is positive relationship between health conscious and organic purchase. |
| | Botonaki et al, 2006 | The role of food quality and certification on consumers' food choices | There is significant result between willingness to pay and health issues |
| | Zanoli and et al 2002 | Consumer Motivations in the Purchase of Organic Food | There is significant result between organic product and pesticide free |
| | Harper et al, 2002 | Consumer perception of organic food production animal welfare. | A higher health conscious, the more they willing to pay a premium |
| | Rennie, 2009 | Consumer Perceptions towards Organic Food | Positive result between organic food with the factor of human health |
| **Level of product knowledge** | Napolitano, 2010 | Effect of information about organic production on beef liking and consumer willingness to pay | There is a significant between reliable information of organic farming system and consumer willingness to pay for organic products. |

| | | | |
|---|---|---|---|
| | Aryal et al, 2009 | Consumers' willingness to pay for organic products: A case from Kathmandu Valley. | There is a positive relationship between knowledge and willingness to pay. |
| | Botonaki et al, 2006 | The role of food quality and certification on consumers' food choices. | Consumers who have information are willing to pay premium price. |
| | Pieniak, 2010 | Subjective and objective knowledge as determinants of organic vegetables consumption | A higher knowledge about organic product increased the probability to buy organic foods. |
| **Quality of organic food** | Nesheim, Jan 2008 | Household willingness to pay for organic products | Quality of organic food has the positive relationship with willingness to pay |
| | Gracia and de Magistris, 2007 | Organic food product purchase behaviour: a pilot study for urban consumers in the South of Italy. | There is a significant result for quality and organic consumption. |
| | Krystallis and Chryssohoidis, 2005 | Consumers' willingness to pay for organic food. Factors that affect it and variation per organic product type | Positive relationship between quality and willingness to pay. |
| **Certification and Labelling** | Botonaki et al, 2006 | The role of food quality and certification on consumers' food choices | There is significant result between certification and organic consumption. |
| | Aryal et al, | Consumers' willingness to pay for organic products: A | Certification has positive relationship |

| | | | |
|---|---|---|---|
| | 2009 | case from Kathmandu Valley. | with consumers' willingness to pay. |
| | Krystallis and Chryssohoidis, 2005 | Consumers' willingness to pay for organic food. Factors that affect it and variation per organic product type | There has positive relationship between certification and organic purchase. |
| | Janssen, 2011 | Product labelling in the market for organic food | There is a significant of organic labeling schemes and willingness to pay |
| | Vlosky, 2007 | Consumer willingness to pay price premiums for environmentally certified wood products in the U.S | Positive relationship between certification of organic products and willingness to pay |
| **Consumers' perception** | Magistris, 2007 | Organic food product purchase behavior: a pilot study for urban consumers in the South of Italy. | Consumers' behavior is determined by product perception |
| | Aryal et al, 2009 | Consumers' willingness to pay for organic products: A case from Kathmandu Valley. | When consumers have positive attitudes towards organic food then they are willing to pay a premium. |
| | Wier, 2005 | The character of demand in mature organic food markets: Great Britain and Denmark compared | There is positive relationship between perception and willingness to pay. |

| | | | |
|---|---|---|---|
| **Perceived Expensiveness** | Aryal et al (2009) | Consumers' willingness to pay for organic products: A case from Kathmandu Valley | There is significant of consumer willingness to pay premium for organic product they consume |
| | Dana, Feb2009 | Willingness to Pay Premium | High income level consumer consumes more organic products |
| | Rennie, 2009 | Consumer Perceptions towards Organic Food | Positive relationship between price premium and organic consumption |
| **Environmental conscious** | Gracia and de Magistris, 2007 | Organic food product purchase behaviour: a pilot study for urban consumers in the South of Italy. | Concerning about environmental protections, consumers are more willing to pay for organic food. |
| | Gaetano chinnici, 2002 | A multivariate statistical analysis on the consumers of organic products | Environmental attitude has positive effect on organic purchase. |
| | Davies et al, 1995 | Who buy organic food? | A greater environmental concern, the more likely consumer pay for organic. |
| **Social** | Rennie, 2009 | Consumer Perceptions | There is not significant result |

| | | | |
|---|---|---|---|
| **demographic** | | towards Organic Food | between social demographic and organic food consumption. |
| • **Gender** | Lea, 2005 | Australians' organic Food Beliefs, Demographics and Values | Women are more willing to pay for organic food. |
| • **Income** | Gaetano Chinnici, 2002 | A multivariate statistical analysis on the consumers of organic products | Higher income they are more willing to purchase organic food. |
| • **Educational level** | F.Napolitano (2010) | Effect of information about organic production on beef liking and consumer | Higher educational level has positive relationship on organic purchase. |
| • **Age** | Wier, M. (2005) | The character of demand in mature organic food markets: Great Britain and Denmark compared | There is positive relationship between age and organic consumption. |

# CHAPTER 3

# RESEARCH METHODOLOGY

## 3.1 Introduction

In the Advanced Learner's Dictionary of Current English lays down the meaning of research as "a careful investigation or inquiry specially through search for new facts in any branch of knowledge." Redman and Mory define research as a "systematized effort to gain new knowledge. While, research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them. It is necessary for the researcher to know not only the research methods or techniques but also the methodology.

In the previous chapter we had discussed the literature review that conducted by other researchers. We know that the demand for organic products has increased considerably during the past decade, though organic consumption still only constitutes a few per cent of total products consumption in most countries. This growth has been high especially in Denmark, which is estimated to have the highest per capita consumption in the world (Wier and Calverley, 2002). In this chapter we would like to study about the process and methods that used to conduct this research. We will be deeply looking into the research framework, sampling procedures, hypothesis, sources of research data and statistical test on the data.

The research process continues with hypothesis development which is a suggested explanation of phenomenon in nature. Continuously, the research procedures basically state the procedures that been gone through to collect the data until the conclusion of the research. Sources of research data sampling will also be discussed. The method that is used to collect the data is primary sources.

In general, the sample size is depending on the characteristics of the population, the sampling techniques and selection of variables and statistical confidence levels.

The development of research instrument respondents is from the primary sources of data where combined by few sections. First of all, respondents will be asked to rate the questionnaires on five-point scale, ranging from 1(strongly agree) to 5(strongly disagree).

Secondly, we will choose the related journals and article for the secondary data. These journals and articles will be strongly related and support our research. The analysis of data and measurement will be done to test the quality of data, the relationship of the hypothesis which developed for this research and make a conclusion for it.

## 3.2 Research Design

Generally, research design is a framework that explains the procedures of research project. It shows the necessary steps and procedures that obtain the information needed in order to solve the research problem. According to David J. Luck and Ronald S. Rubin, "A research design is the determination and statement of the general research approach or strategy adopted or the particular project. It is the heart of planning. If the design adheres to the research objective, it will ensure that the client's needs will be served." It shows the necessary steps and procedures to obtain the information needed in order to solve the research problem. A good research design will ensures and guide us to conduct useful and relevant information. It also help to conduct the research effectively and efficiency. A survey will be carried out by interviewing a sample of consumers with the face-to-face method, using an ad hoc questionnaire in order to collect both quantitative and qualitative information on various socio-economic and cultural aspects regarding the interviewees, as well as their behaviour when purchasing and their perception towards the quality and price of organic products.

Continuously, we would clearly define our dependent variable and independent variables where the illusion of the framework will be shown.

### 3.2.1 Definition of variables

Table 3.1 Definition of Variables

| Variables | | Definition | Source |
|---|---|---|---|
| **Dependent** | Willingness to pay | Consumer behaviours presented by a ratio of variable of interest by using price which press the value of the product for different attributes level. | Nasution, 2010 |
| **Independent** | Health conscious | When people have the concern about product naturalness and aware by themselves due to others or their own health problem. | Midmore et al, 2005 |
| | Level of Knowledge | Categories into three sections which are consumer's subjective knowledge, objective knowledge, and also general attitudes. | Pieniak , 2010 |
| | Quality of food | A measureable and verifiable standard for every product that meets the customers or user requirement. | A.Zeithaml, 1988 |
| | Labelling and certification | A tool for signalling consumers that a product is a certified organic product. | Janssen, 2012 |
| | Consumer Perception | A motivation of setting a goal which direct related to preventive health behaviours. | Hong |
| | Perceived Expensivness | The price above the "fair" price is justified by the "true" value of the product. | Vlosky, 1999 |

| | | | |
|---|---|---|---|
| | Environmental consious | The concept that of feelings towards green issues and leads to environmentally friendly behavior | Abdul-Muhmin, 2007 |
| | Social demographic | The relationship between cultural factors and social factors which influence population characteristic. The main indicator are age, gender, income, educational level and marital status | Ariyawardana, 2009 |

### 3.2.2 Development of Research Framework

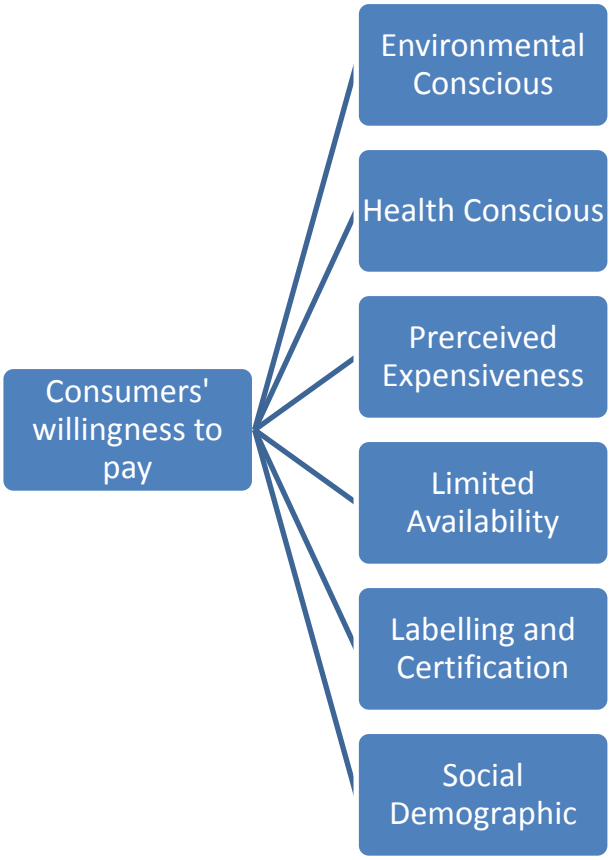


Figure 3.1: Theoretical Framework

The research framework use to explain the relationship of the independent variables and dependent variables which shows in figure 3.1. The independent variables are environmental conscious, health conscious, perceived expensiveness, limited availability, labelling and certification, and social demographic. Whereas consumers' willingness to pay for organic products is dependent variable.

## 3.3 Hypothesis Development

"Hypothesis is a formal statement that presents the expected relationship between an independent and dependent variable."(Creswell, 1994). They are two types of hypothesis which are null hypothesis and alternative hypothesis. The null hypothesis represents a theory that has been put forward, either because it is believed to be true or because it is to be used as a basis for argument, but has not been proved. While, the alternative hypothesis is a statement of what a hypothesis test is set up to establish.

The theoretical framework in figure 3.1 is to illustrate the relationship between the independent variables and dependent variable. Hypothesis is a testable statement which will be tested in order to find its relationship and solve the problems.

The following is the hypothesis that is formulated to help to test the relationships between the perceptions of willingness to pay by consumers for organic food. There are twelve hypotheses in this research:

Hypothesis 1: Positive perception towards environment consciousness will have positive effect on the willingness to pay.
Hypothesis 2: Positive perception towards health consciousness will have positive effect on the willingness to pay.
Hypothesis 3: Perceived expensiveness on the price of organic products will have negative effect upon the willingness to pay.
Hypothesis 4: Limit availability of organic product will have effect on the willingness to pay.
Hypothesis 5: Labelling and certification on organic products will have positive effect on the willingness to pay.
Hypothesis 6: Positive perception towards social demographic will have positive effect on the willingness to pay.
Hypothesis 6a: Gender will affect the willingness to pay of the respondents.
Hypothesis 6b: Ethnicity will affect the willingness to pay of respondents.
Hypothesis 6c: Age group will affect the willingness to pay of respondents.
Hypothesis 6d: Educational level will affect the willingness to pay of respondents.
Hypothesis 6e: Income level will affect the willingness to pay of respondents.
Hypothesis 6f: Marital status will affect the willingness to pay of respondents.

## 3.4 Source of Data

There are two ways to obtain the data which is primary data and secondary data. Basically, primary data is the information that acquired first hand from the researched for a specific purpose to conduct the survey. The method that used to examine the primary data is survey based. The questionnaire will be distributed to the target sample size. There are also a few methods used to collect the data such as survey, interview, and observation method for the research.

Whereas, secondary data used the data collected by others researched who are also interested on the particular topic. Secondary data also include the previous study which done by the others researchers, publications, journalists or articles. Secondary data can be obtained by literature review of journals, books, articles, newspaper and magazine. In this research, we are mainly collected the secondary data through journal and articles. Furthermore, there are also part of the information collected through media, websites and internet.

## 3.5 Data Collection

The purpose for us to conduct this research is to examine the determinants of consumers' willingness to pay for organic products or foods. The primary data that we will be collected is through distributing the questionnaires to the specific organic stores and target sample.

Questionnaires form had been completed and distributed to 500 organic consumers in order to obtain demographic profile of consumers and the view of respondents. In this research, questionnaires have distributed to organic consumers in Klang Valley area. There are more than 100 organic stores located in Klang Valley area. Moreover, organic consumers are targeted as we could obtain more accurate data and better understanding on the determinants of green consumers to choose organic products or foods. Interviewer will be asked face to face or self-administered questionnaires. Self-administered means that consumers are asked to complete the questionnaires by themselves. The purpose of using questionnaires is due to the potential of collect data from large pool of respondents and responses are gathered in standardized way. In addition, this method is inexpensive and require less effort if compared. It is different like telephone interview which enquire high cost and the higher rejection rate. The data obtained from the survey able to help in determine customer's willingness to pay for organic food.

## 3.6 Sampling Technique

Research techniques referred to the behaviour and instruments that we use in performing research operations such as making observations, recording data, techniques of processing data and the like.

In order to collect data and make this research more meaningful to decision maker, the target sample of this research is the existing organic consumers instead of potential customers. There are two type of sampling technique which is probability sampling and non-probability sampling.

Probability sampling is the most common associated with survey-based research and it is based on the concept of random selection. As this kind of sampling every element in this population will have an equal chance of being selected. Researchers have to make presumption from the sample about a population in order to achieve research objectives (Saunders, Lewis and Thornhill, 2000). One of the advantages on using this sampling is it provides estimates which are essentially unbiased and have measurable precision. On the other hands, authors added non-probability sampling which is non-random sampling and it provides a range of alternative technique based on researcher subjective judgment and own decision (Saunders et al, 2000).

In this research, non-probability sampling has been employed since it is more convenience for research. Research will select the element in the sample based on own decision and judgment. The advantage of using non probability sampling due to it incur less cost, convenience and least time consuming. The important of non-probability sampling techniques are convenience sampling, judgmental sampling, critical cases sampling, typical cases sampling, quota sampling and snowball sampling.

In order to easy manage for the particular characteristic of sample, convenience sampling will be used in this study. Convenience sampling has been chosen since target respondents can select based on own judgment and this kind of sampling method is more convenience for researcher but to ensure that the elements selected must meet the requirement.

## 3.7 Questionnaire Design

Questionnaire design is an important part to ensure internally consistent and coherent data for analysis. The questionnaire must be straightforward in order to ensure that the respondents are able to answer, and understand. The researcher should also minimize the boredom and fatigue. The aim of the clear and concise of the questionnaire is to ensure the data collected is the best from respondents.

The main language for the questionnaire is English since the target sample for this study is public and from different races. In generally, the questionnaire has divided into three parts. The first part is focus on consumers' demographic profile such as age, income level, education level and etc. The second part of the questionnaire is to investigate the preference of customers when purchasing organic food and their buying decision. The third part is mainly focus on the independent variables consists of health conscious, environmental conscious, price expensiveness, consumer behaviour, and labelling and certification. The questions regarding dependent variable have been asked in this part as well. Consumers' willingness to pay will be the dependent variable for this study.

Classification questions will be designed to collect and classify consumers' demographic profile. This includes consumers' age group, marital status, education level, income level, ethnic group and etc.

These questionnaires have been distributed to understand consumers' willingness to pay for organic product. Respondents are asked to rate the questionnaire on a five-point scale, ranging from 1(strongly disagree) to 5(strongly agree).

Additionally, a pilot study must conduct before the questionnaires distribute to questionnaire design. Pilot study can help researcher to make sure the questionnaire is well designed and avoid any problem or difficulty during the respondents answering the question. Feedback or respond get from pilot study is crucial for researcher to correct the error immediately. Furthermore, this action can help in minimizing the questionnaire's mistake in order to avoid bias during the actual study.

## 3.8 Measurement

This survey questionnaire will be using socio-demographic characteristic for the first section. Which are questions about age group, gender, ethnic group, income level, education level and marital status. Then, in the second part will be consist of questions related to the consumption of organic products (consumption level and frequency of purchase). Finally, in the last part of the questionnaire will be using Likert Scale, which is a measurement scale that consists of five response categories (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree) with the closed questions. Likert scale is used in order to indicate respondents' satisfaction level of consuming organic products. This type of measurement scale brings advantage to both researcher and respondent. It is easy for researcher to administer and respondent can easily understand it. (Malhotra, 2009). This is one of the selling and measurement method that commonly used by researcher. (For example, Stobblaar, 2006; Radman, 2005)

## 3.9 Unit of Analysis

This research was all focused on consumers rather than retailers or potential customers because organic consumer is the individual who consume the organic products. Consumers' perception is vital to be a sign of their willingness to pay and their experience on using organic products may also influence their willingness to pay in the future. On the other hand, the outcome and results of this study may not valuable for marketers and it may not reflect precise opinion of the consumers if unit focused is customers.

## 3.10 Data Preparation

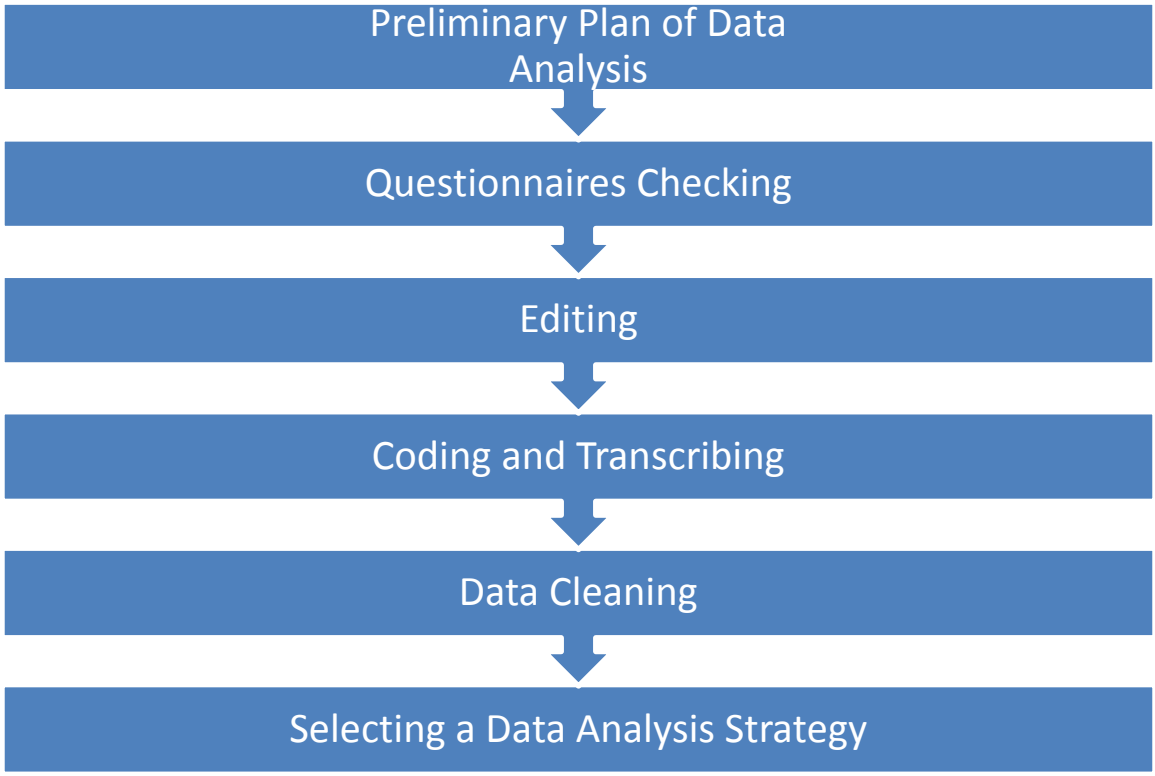


Figure 3.2: Data Preparation Process

Sources: Malhotra, 2009

The data preparation is in order to ensure the quality of finding. On the other word, this part is to avoid the mistake, biased finding and others result will affect final result. First, steps of data preparation is doing questionnaire checking which include the completeness and quality. The questions that contrast with the sampling techniques will be corrected immediately. After the identified and correction of questionnaires will be taken to make sure the accuracy and quality of results as some of the questions may be illegal or inconsistent. Next, the steps of coding and transcribing must be taken. Data cleaning will be done by Microsoft Excel and SPSS(The Statistical Packages for Social Science) which incur checking the consistency and treatment of missing responses. Lastly, data analysis will be conducted.

## 3.11 Data Analysis

After a pool of data has been conducted from representative sample of population, the data will be analysed by using SPSS (The Statistical Packages for Social Science) to accomplish the intention of this research and the hypothesis will be tested.

Factor analysis has been used in this study before undergoing descriptive analysis and regression test. Factor analysis is frequently used to develop questionnaires or included in SPSS as a 'data reduction' technique. This works by taking a large set of variables and looks for a way the data may be summarized or 'reduced' into similar group of smaller set of variables. In this study, factor analysis were used to group different numbers of questions into representing one variable which includes the dependent and independent variables. This is done by referring to the output of the Principal Component Analysis.

After the respective questions were summarized into an individual variable, reliability test will be done to examine the reliability of each variable. Statistical tools used to analyse this data vary from general descriptive analysis such as Mean, Standard Deviation, and Coefficient of Variance.

# CHAPTER 4

# RESULTS AND DISCUSSIONS

## 4.1 Introduction

According to Business Dictionary, data analysis is the process of evaluating data by using analytical and logical reasoning to examine each component of the data provided. This form of analysis is one of the steps that must be carried out during a research project. First and foremost, data from various sources is collected, reviewed and then analyzed to form some sort of conclusion.

The previous chapter discussed about the research methodology, preparation of research framework, formation of hypotheses, the process of data collection and the methods used to analyze the data. In this chapter, the outcome of the data will be discussed based on the results and findings obtained through data analysis.

There are a total of 500 questionnaires were collected. 400 questionnaires were distributed throughout organic shops around Klang Valley area which includes Cheras, Damansara, Kepong, and etc. Remaining 100 were carried out by conducting face-to-face interviews with organic product consumers across Klang Valley area as well. Time consumed for data collection took approximately one and a half month. Statistical Package for the Social Sciences (SPSS) is used to analyse the data collected.

A series of graphs, charts and tables will be presented in this chapter in order to illustrate the result of descriptive analysis. Furthermore, hypotheses are tested by using Pearson's correlation coefficient to determine the relationship between dependent variable and independent variables.

## 4.2 Descriptive Analysis

Descriptive analysis is a set of Statistical tools that used to analyse this data which includes measurement such as mean, standard deviation, and coefficient of variance. It looks at the range of value, as well as the central tendency of the data. This helped to better understand the pattern of the respondents' data. The descriptive statistics in this chapter consists of respondents' demographic characteristics such as gender, age group, marital status, ethnic group, education level and employment status.

### 4.2.1 Demographic profile

The result shows that most of the respondents fall in the age group of 21-25, which is 17.3 percent and the lowest proportion of age group is below 21, which only has 5.6 percent. Most of the respondents are female, which are 70 percent. Among the different ethnicity group, Chinese is the highest proportion, which is 87.9 percent. Additionally, more than half of the respondents are single, which is 52 percent. Whereas, there are 44 percent of respondents are current married. Based on the table below, we can observe that respondents with income level from RM2001-RM3000 have the highest proportion, which is 21.7 percent. Moreover, there is 36.33 percent of respondents are degree holder which hold the highest percentage if compared with education level. Lastly, there is 50 percent of the respondents who have contribute to this research are currently employed.

#### 4.2.1.1 Gender

The pie chart below (Figure 4.1) shows the percentage of different gender who had contributed to this research.

The chart showed on the above is part of the results obtained. According to the chart, the minor part of the whole chart was all male where in terms of percentage and the exact frequency is 30 percent and 144 accordingly. As for the contrary, the major contribution portion of the chart was all covered by the female which is the remaining 70 percent and in terms of frequency would be 335 out of 479.

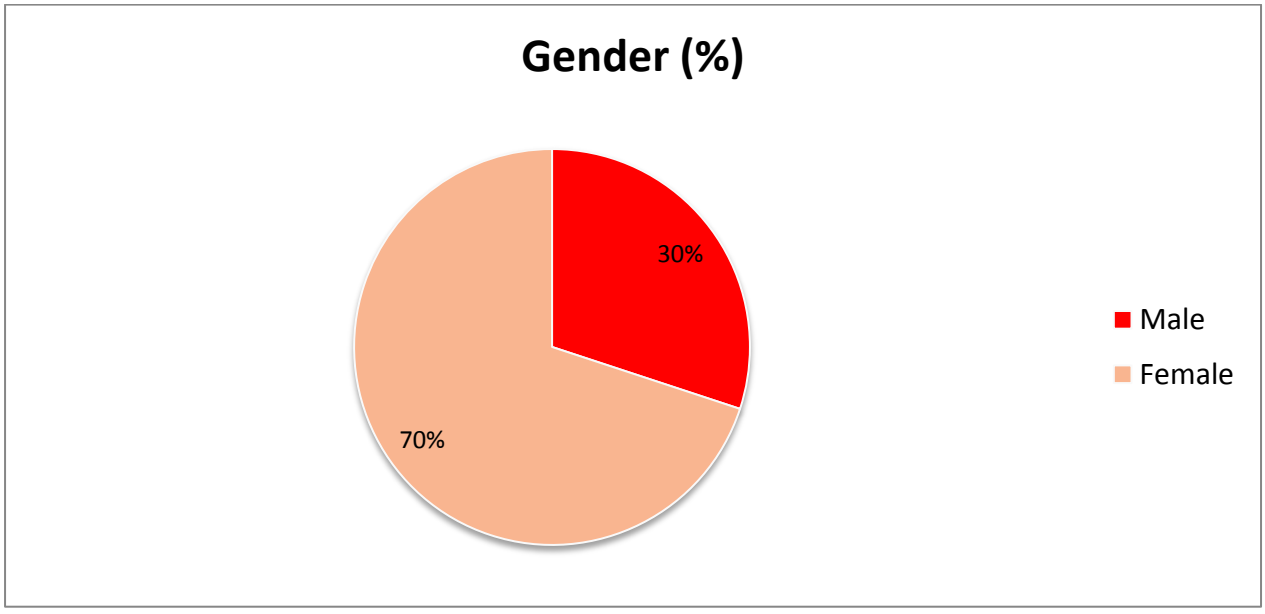


Figure 4.1: Respondents' Gender

### 4.2.1.2 Ethic group

The following pie chart (Figure 4.2) shows the percentage for different ethnicity group who had contributed in this study.

Obviously, majority of all the people that give a hand in this survey were most of the Chinese as the results shows 88 percent and 421 in terms of the exact frequency. On the following there will be 7 percent contributed by the Malays. Lastly, it would be the Indians who gave the least proportion among all of the three major ethnicity groups where the physical results in percentage are only 5 percent.

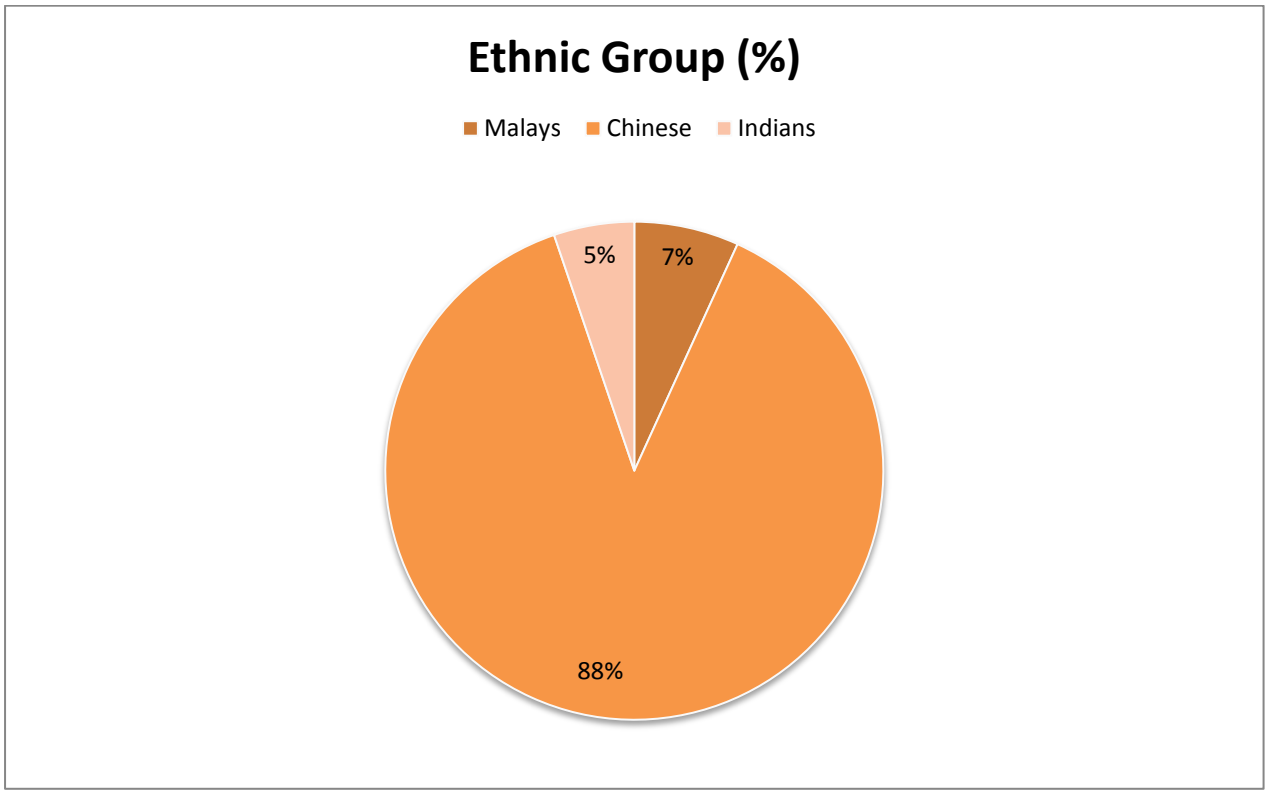


Figure 4.2: Respondents' Ethnicity Group

### 4.2.1.3 Age group

The graph below (Figure 4.3) shows the frequencies of the respondents' age group. The respondents have been categorized into eight groups as shown below.

According to the results provided most of the respondent falls in the age of group from 21-25 years old, which consist of 83 consumers out of 476 consumers (17.3 percent). On the other hand, consumers who are below 21 only have 5.6 percent and this group of

consumers holds the lowest proportion. In addition, the graph shows that the age of group with second highest of proportion is consumers with age higher than 50 years old, which are 17.1 percent. Consumer who falls in the group from 41 to 45 years old has 9.8 percent. Lastly, there are 11.3 percent of respondents fall in the age group from 41 to 45 years old.

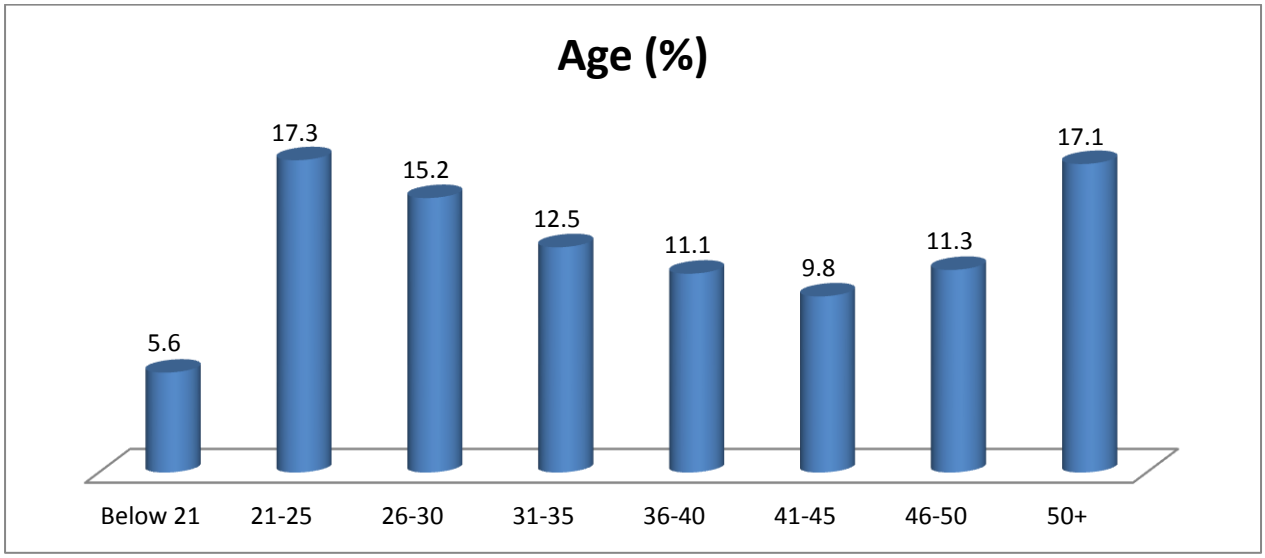


Figure 4.3: Respondents' Age Group

### 4.2.1.4 Education Background

The following bar chart shows the demography of respondents' education level which categorized into nine categories.

From the chart above, there more than a quarter of the respondents are currently pursuing a degree program or a degree holder where the results show 36.33 percent. Where the second highest category would be those with education level of Diploma/Vocational/Technical level where it shows 21.71 percent. The next four categories are all having almost the same percentage of the entire respondent which is 8.35 percent, 6.26 percent, 5.64 percent and 4.80 percent for the category of lower secondary, master/PHD, From six/ Pre-university and Primary level respectively. The last two categories were only the minor part of the respondents which is 0.84 percent and 0.42 percent for the category of others and non-schooling respectively.

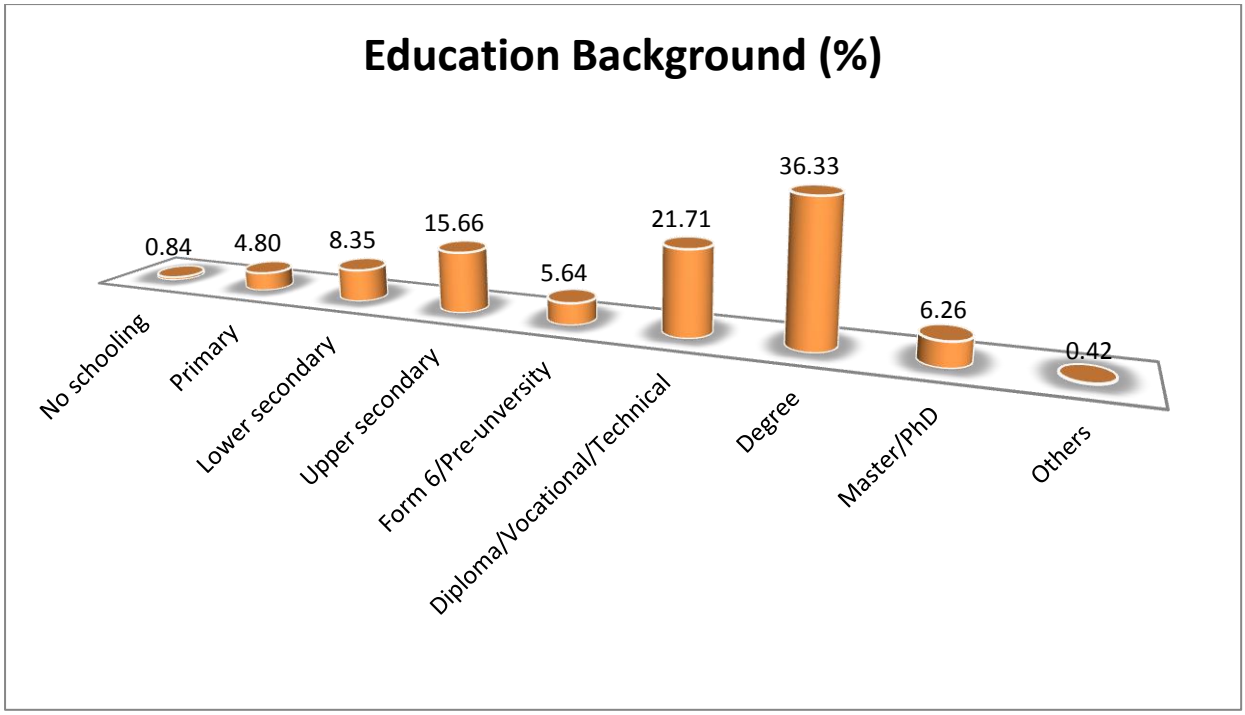


Figure 4.4 Respondent's Education Level

## 4.2.1.5 Income level

The bar chart below obtained the results of respondents' income level where it consists of six categories.

As what it is shown in the chart below, from left to the right of the whole chart. The first one will be 19.8 percent of the respondents were having income below RM1000, it is the third highest percentage. Next, 14.4 percent of the respondents fall on the income categorized from RM1001-RM2000. While for income level between RM3001-RM4000, it contains 21.7 percent which is also the highest percentage among the six categories. The forth category contains 13.6 percent where they are earning between RM3001-RM4000. For the fifth category which is fall in RM4001-RM5000, it contains 10.0 percent of all the respondents which is the least percentage of all in this chart. In addition, the last category which is the second highest in this chart contains 20.5 percent of the entire respondent and they are paid RM5001 and above.

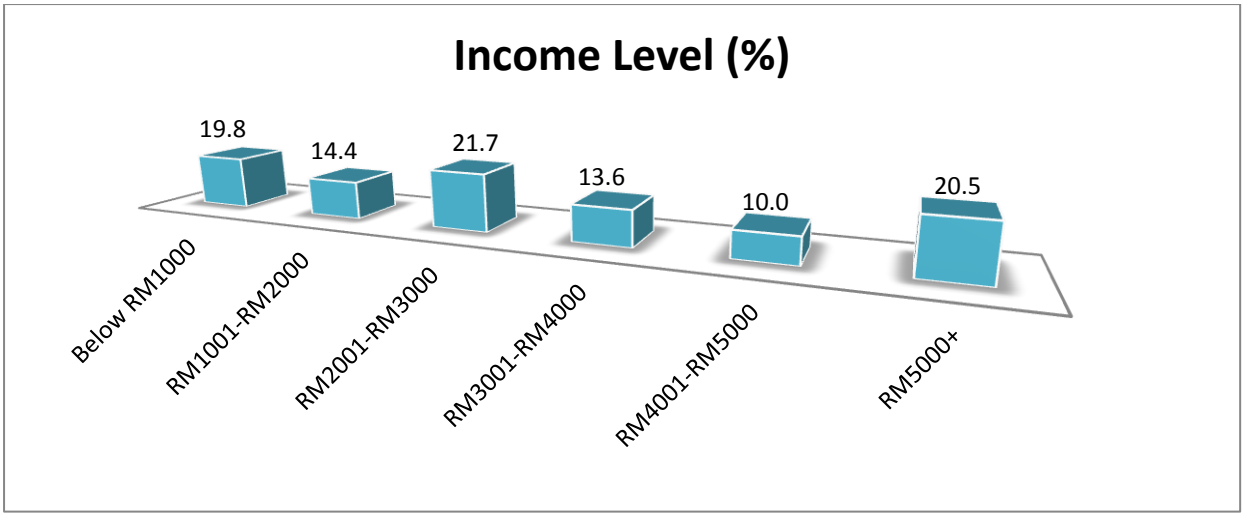


Figure 4.5: Respondent's Income Level

## 4.2.1.6 Marital status

Below is the pie chart of all the respondents' marital status in terms of percentage values.

This fraction would be as equally important as other demography where it shows the marital status of the entire respondent. Observably, the major piece of the whole chart was covered by the color of red which is the 'currently married' category where it shows 52 percent in numerical values. In advanced, the color in blue showed the 'single' category and it consists of 44 percent. Last of all, only 4 percent of all the entire respondent falls into the color of green or 'others' category.

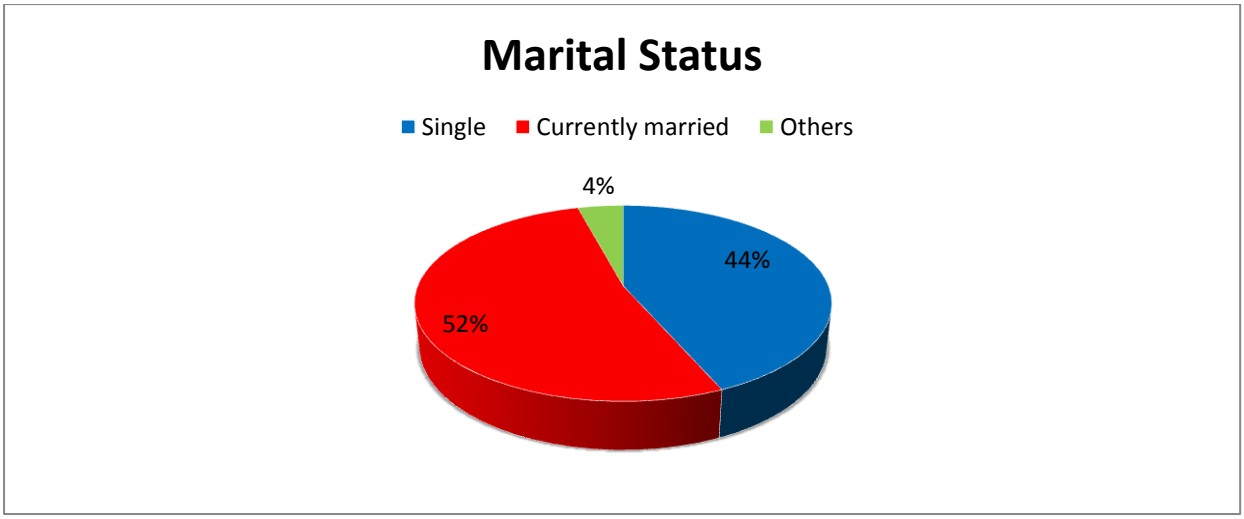


Figure 4.6: Respondents' Marital Status

### 4.2.2 Mean and Standard Deviation for Variables

In this section, mean and standard deviation for each variable are tested to provide a better understanding from the consumers' point of view. Five variables include willingness to pay (8 questions), environment attitude (5 questions), health conscious (4 questions), perceived expensiveness (3 questions), availability of organic stores (3 questions) and last but not least labeling and certification (3 questions).

#### 4.2.2.1 Willingness to Pay (WTP)

Table 4.1: Mean Values for Questions about Willingness to Pay

| Questions | Mean | Standard Deviation |
|---|---|---|
| I will continue to consume organic products without affect by the price changes. | 3.18 | 0.887 |
| I am willing to pay a higher price for organic products. | 3.18 | 0.898 |
| I don't mind spending more time sourcing for organic food. | 3.39 | 0.898 |
| Buying organic food is the right thing to do even if they cost more. | 3.56 | 0.818 |
| I'm willing to buy organic food even though choices are limited. | 3.55 | 0.854 |
| I will continue to purchase organic products. | 3.83 | 0.814 |
| I would still buy organic food even though conventional alternatives are in sale. | 3.44 | 0.887 |
| I'm willing to buy organic food because the benefits outweigh the cost. | 3.57 | 0.841 |

Results showed that highest mean value (3.83) comes from the questions "*I will continue to purchase organic products*." which indicates that consumers' willingness to purchase organic products continuously. Second highest mean value indicated that consumers' willingness to pay associated with the perception of organic products' benefits outweighed the cost. The lowest mean values both stemmed from the statement "*I will continue to consume organic products without affect by the price changes.*" and "*I am willing to pay a higher price for organic products*." whereby consumers willing to purchase organic products based on the change in prices. The second lowest mean value (3.39) proved that consumers would go further extend to source for organic foods even if it means spending more time on it.

### 4.2.2.2 Environment Attitude

Table 4.2: Mean Values for Questions about Environment Conscious

| Questions | Mean | Standard Deviation |
|---|---|---|
| Environmental pollution is a serious issue | 4.22 | 0.879 |
| I am greatly concerned about the harm being done to plant and animal life by pollution. | 4.00 | 0.841 |
| The government should pay more attention to environmental issues. | 4.28 | 0.784 |
| I feel I am more environmentally conscious than most people. | 3.63 | 0.778 |
| Organic food is more environmentally friendly | 3.85 | 0.835 |

As for environmental consciousness, the highest mean value (4.28) was from the statement "*The government should pay more attention to environmental issues.*" indicated that majority of the respondents think that government should take initiatives towards issues regarding of the environment. Second highest mean value (4.22) showed that respondents were aware of the seriousness of pollution which might prompt them to purchase organic products instead of conventional products.

### 4.2.2.3 Health Conscious

Table 4.3: Mean Values for Questions about Health Conscious

| Questions | Mean | Standard Deviation |
|---|---|---|
| Organic products are more nutritional than conventional food | 3.94 | 0.86 |
| Organic products are healthier than conventionally grown food. | 4.04 | 0.796 |
| Organic products are more safety to consume and contain less health risk. | 4.03 | 0.794 |
| Organic food tastes better | 3.55 | 1.003 |

By analyzing mean of health conscious, the highest mean value (4.04) indicated consumers' perceived that organic products are generally healthier compared to conventionally grown food. This value showed that this statement was the most influential statement among other questions. On the other hand, the least mean (3.55) was from the statement "*Organic food tastes better*" which might meant that the taste of organic food was not the main concern when it comes to purchasing organic products based on the health prospect.

### 4.2.2.4 Perceived Expensiveness

Table 4.4: Mean Values for Questions about Consumers' Perceived Expensiveness

| Questions | Mean | Standard Deviation |
|---|---|---|
| Only consumers with higher income can afford organic food. | 3.51 | 1.014 |
| Organic food is too expensive. | 3.76 | 0.969 |
| Organic food is beyond my budget. | 3.13 | 0.946 |

On the aspect of consumers perceived expensiveness, "*Organic food is too expensive.*" Has the highest mean (3.76). This indicated that the high price of organic products is the reason that deterred consumers from purchasing them. The second highest mean value (3.51) showed that consumers' perception of only people with higher income has the ability to afford organic products. The least mean value was on the statement of "*Organic food is beyond my budget*." which meant it has the least influence on consumers' decision to purchase organic products.

### 4.2.2.5 Limited Availability of Organic Stores

Table 4.5: Mean Values for Questions about Limited availability of Organic Stores

| Questions | Mean | Standard Deviation |
|---|---|---|
| Organic food is only available in limited stores/ markets. | 3.32 | 0.984 |
| Buying organic food is highly inconvenient. | 2.91 | 0.936 |
| The stores that I frequently shop do not sell a variety of organic food. | 3.13 | 0.951 |

Table 4.6: Result of Place to Purchase Organic Products

| Place to purchase | Results | | Total | Sample Size |
|---|---|---|---|---|
| | Yes | No | | |
| Supermarket/Hypermarket | 52.60% | 47.40% | 100% | 479 |
| Direct-consumer sale(Internet/MLM) | 13.60% | 86.40% | 100% | 479 |

| | | | | |
|---|---|---|---|---|
| **Specialty store** | **69.10%** | **30.90%** | **100%** | **479** |
| Beauty and health store | 7.30% | 92.70% | 100% | 479 |
| Pharmacy | 11.90% | 88.10% | 100% | 479 |

Next analysis would be on the availability of organic products. The statement "*Organic food is only available in limited stores/ markets.*" has the highest mean of 3.32 followed by the statement "*The stores that I frequently shop do not sell a variety of organic food.*" with mean of 3.13. These results determined that the limited availability of organic products might be a factor for consideration when it comes to buying organic products. It was also observed that specialty stores and supermarket or hypermarket are the places that consumers frequented to purchase organic products. Beauty and health stores were places that consumer least frequent to purchase organic products.

### 4.2.2.6 Labeling and Certification

Table 4.7: Mean Values for Questions about Labeling and Certification

| Questions | Mean | Standard Deviation |
|---|---|---|
| I will only purchase organic products with organic certification or organic labeling. | 3.7 | 0.854 |
| Organic labeling and certification is important for me to recognize organic products. | 3.84 | 0.827 |
| Organic label is affecting my willingness to pay for organic products. | 3.41 | 0.882 |

The largest mean value for labeling and certification is the statement of "*Organic labeling and certification is important for me to recognize organic products.*" This indicates that consumers relied very much on the labeling and certification of organic product when deciding purchasing decision. This is followed by the statement that consumers will only buy organic products with certification and labeling with mean value of 3.7 which further implied the importance of labeling and certification on the organic products.

## 4.3 Factor Analysis

Factor analysis is to tell that whether the group of variables is significantly different from each other and refer to the group of related variables. It used a large set of data and may summarize into a set of components or factors. In this study, we had chosen the principal components analysis (PCA) to categorize the related questions into the variables that we needed to study. PCA able to come out with a simple empirical summary of data set.

The result shown below had categorized the questions into six factors which is dependent variable of willingness to pay, independent variables of environment conscious, health conscious, perceived expensiveness, limited availability, and labeling and certifications.

Table 4.8: Result of Principal Component Analysis (PCA)

| Items | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| **WTP 1: I will continue to consume organic products without affect by the price changes.** | 0.721 | | | | | |
| **WTP 2: I am willing to pay a higher price for organic products.** | 0.711 | | | | | |
| **WTP 3: I don't mind spending more time sourcing for organic food.** | 0.664 | | | | | |
| **WTP 4: Buying organic food is the right thing to do even if they cost more.** | 0.649 | | | | | |
| **WTP 5: I'm willing to buy organic food even though choices are limited.** | 0.645 | | | | | |
| **WTP 6: I will continue to purchase organic products.** | 0.594 | | | | | |
| **WTP 7: I would still buy organic food even though conventional alternatives are in sale.** | 0.584 | | | | | |
| **WTP 8: I'm willing to buy organic food because the benefits outweigh the cost.** | 0.572 | | | | | |
| **EC1: Environmental pollution is a serious issue** | | 0.807 | | | | |
| **EC2: I am greatly concerned about the harm being done to plant and animal life by pollution.** | | 0.763 | | | | |
| **EC3: The government should pay more attention to environmental issues.** | | 0.713 | | | | |
| **EC4: I feel I am more environmentally conscious than most people.** | | 0.584 | | | | |
| **EC5: Organic food is more environmentally friendly** | | 0.514 | | | | |
| **HC1: Organic products are more nutritional than conventional food** | | | 0.788 | | | |
| **HC2: Organic products are healthier than conventionally grown food.** | | | 0.779 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **HC3: Organic products are more safety to consume and contain less health risk.** | | | 0.654 | | | |
| **HC4: Organic food tastes better** | | | 0.525 | | | |
| **LA1: Organic food is only available in limited stores/ markets.** | | | | 0.830 | | |
| **LA2: Buying organic food is highly inconvenient.** | | | | 0.774 | | |
| **LA3: The stores that I frequently shop do not sell a variety of organic food.** | | | | 0.711 | | |
| **PE1: Only consumers with higher income can afford organic food.** | | | | | 0.754 | |
| **PE3: Organic food is too expensive.** | | | | | 0.748 | |
| **PE2: Organic food is beyond my budget.** | | | | | 0.740 | |
| **LC1: I will only purchase organic products with organic certification or organic labelling.** | | | | | | 0.819 |
| **LC2: Organic labelling and certification is important for me to recognize organic products.** | | | | | | 0.773 |
| **LC3: Organic label is affecting my willingness to pay for organic products.** | | | | | | 0.603 |
| **Total** | **6.725** | **2.976** | **2.037** | **1.637** | **1.431** | **1.106** |
| **% of Variance** | **25.865** | **11.446** | **7.835** | **6.296** | **5.506** | **4.254** |
| **Cumulative %** | **25.865** | **37.311** | **45.146** | **51.442** | **56.948** | **61.202** |

Extraction Method: Principal Component Analysis
Rotation Method: Varimex with Kaiser Normalization
(WTP: Willingness To Pay, EC, Environment Conscious, HC: Health Conscious, PE: Perceived Expensiveness, LA: Limited Availability, LC: Labelling and Certification)

## 4.4 Reliability Analysis

Reliability test is to discuss the reliability of each variable as it is important to determine the consistency of the measurement. All the data collected for these six variables will be tested by using Cronbach's Alpha to verify the reliability. It will be used to determine internal consistency or average correlation of each item in a survey instrument to gauge its reliability.

One of the most accepted reliability statistic that is being used today is Cronbach's Alpha (Cronbach, 1951). The alpha coefficient would be range from value of 0 to 10 and will be used to describe the reliability. According to Cronbach (1951), the number that higher than 0.60 is a satisfaction level of good internal consistency and it is sufficient to describe that the variable have acceptable internal consistency.

Therefore, the result of the Cronbach's Alpha shows that all of this variances are at the satisfaction level of good interval and it is sufficient to describe there are at the acceptable interval.

Table 4.9: Cronbach's Alpha coefficients for Total Scale

| Variables | No. of Item | Cronbach's Alpha |
|---|---|---|
| **Willingness To Pay (WTP)** | 8 | 0.883 |
| **Environmental Conscious** | 5 | 0.791 |
| **Health conscious** | 4 | 0.787 |
| **Perceived Expensiveness** | 3 | 0.716 |
| **Limited Availability** | 3 | 0.725 |
| **Labeling and Certification** | 3 | 0.682 |

## 4.5 Regression Analysis

Multiple regression is a principles use to test the relationship which more than two variables at the same time. The hypothesis test was being conducted between five independent variables and demographic information deriving from the willingness to pay (WTP) for organic foods, which is dependent variable. Multiple linear regressions were being used to assess the variables.

According to the Table 4.10, column labelled R is the value of the multiple correlation coefficients between the predictors and the outcome. When the predictors are environment, health, perceived expensiveness, limited availability, labeling and certification, gender, ethnic group, age level1, age level2, education level, income level and marital status, this is a multiple correlation between those predictors and WTP (0.646). Basically, the value of $R^2$ is 0.418, which means that all the independent variables accounts for 41.8 percent of the variation in willingness to pay. On the others word, we can indicates that 41.8 percent of the variance in the dependent variable is explained by the independent variable in the model.

Moreover, value of adjusted $R^2$ tells us about how well the model in this research generalizes. Normally, it is better when the value of adjusted $R^2$ is closer to the value of $R^2$. In this research, value of adjusted $R^2$ is 0.403 and the difference for this model is 0.015. This

reduction means that if the model were derived from the population rather than a sample it would account for approximately 1percent less variance in the outcome.

Durbin-Watson informs us about the tenability for the assumption of the independent errors. The closer the value to two, the assumption is considered definitely been met. In this case, the value of Durbin-Watson is 1.336 which is considering superior results.

Refer to the Table 4.10 shows the F-ratio is 27.868 with significant level (P < 0.000). As a results, we can indicates that the results provided is significantly enhanced our capability to forecast the outcome of variable.

The equation for WTP in this study is as below:

WTP = 1.502 + (0.157EC) + (0.389HC) + (-0.250PE) + (0.013LA) + (0.169LC) + (0.010Gender) + (-0.035Ethnic) + (0.051Age1) + (-0.065Age2) + (0.074Education) + (0.029Income) + (0.020Marital Status)

Table 4.10: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| **1** | 0.646[a] | 0.418 | 0.403 | 0.49434 | 1.336 |

Table 4.11: ANOVA Test[2]

| **Model** | **Sum of Squares** | **df** | **Mean Square** | **F** | **Sig.** |
|---|---|---|---|---|---|
| **Regression** | 81.725 | 12 | 6.810 | 27.868 | 0.000[b] |
| **Residual** | 113.879 | 466 | 0.244 | | |
| **Total** | 195.604 | 478 | | | |

Based on the unstandardized coefficients, we can understand the relationship between the predictor and outcome. The positive coefficient brings a meaning of positive relationship. As a result, we can suggest that when consumers perceive organic food have higher quality,

they are more willing to pay for it. Additionally, unstandardized coefficients provide more understanding about the degree of each predictor influence the outcome while all others predictors being equal.

When the value of *Sig.* is less than 0.05 which mean the predictor is having a significant contribution to the model. Moreover, the smaller the value of *Sig* indicates that the greater the predictor contributes in the model. Environment conscious has unstandardized coefficients of 0.157, t-value = 3.650, $p<0.05$, this value indicates that as environment conscious increase by one unit, willingness to pay of consumer would increase 0.157. Value of *Sig.* is 0.000 ($p<0.05$) suggesting that it is significant.

Health conscious has unstandardized coefficients = 0.389, t-value = 3.650, $p< 0.05$ this value suggests that when consumers perception toward health conscious increase by one unit, their willingness to pay for it increase 0.389 unit. Value of *Sig* is 0.000 ($p< 0.05$), therefore we declared that health conscious is significant. This interpretation is true when other predictors are held constant.

Perceived expensiveness has unstandardized coefficients = -0.250, t-value = -8.162, $p< 0.000$ which indicates that when consumers' perception towards perceived expensiveness increase by one unit, their willingness to pay for organic food would decrease -0.250. The *Sig* value is 0.000 ($p< 0.05$), which is very small and giving the reason on this predictor is most significant while others predictors are held constant.

Limited availability has unstandardized coefficients = 0.013, t-value = 0.415, value of *Sig* = 0.678 ($p> 0.05$) which shows that this predictor is not significant while all other predictors held constant. Through the unstandardized coefficients, we understand that when consumers' perception towards the limited availability stores increases by one unit, their willingness to pay will increase 0.013 units.

Labelling and certification has unstandardized coefficient = 0.169, t-value = 4.597, value of *Sig*= 0.000 ($p<0.05$) which shows the predictor is significant while all other predictors held constant. The unstandardized coefficient suggests that consumers' perception towards labeling and certification increased by one unit, their willingness to pay will increase 0.169.

Gender (Male) has unstandardized coefficients = -0.010, t-value = -0.200, $p< 0.05$ which suggests that male is not significant in this model (0.842). Ethnicity group (non-Chinese) has

unstandardized coefficients -0.035, t-value = -0.499, p>0.05 (0.618) also show that all other ethnic group except Chinese is not significant in influence consumers' willingness to pay. According to Table 4.11, we can see that agelevel1 (31-50) has unstandardized coefficients = 0.051, t-value = 0.784, p> 0.05 (0.434) and agelevel2 (50+) has unstandardized coefficients = -0.065, t-value= -0.823, p> 0.05 (0.411), therefore we can concluded that both ageleve1 and agelevel2 are not significant. Additionally, education level has unstandardized coefficients = 0.074, t-value = -1.482, p> 0.05 (0.139) which suggests that this predictors is not significant. For income level has unstandardized coefficients = 0.029, t-value 0.529, its p> 0.05(0.597). As a result, we declare that these predictors are not significant in this study. Lastly, marital status is not significant in this research as its unstandardized coefficients = -0.020, t-value = 0.351, p> 0.05(0.726).

Table 4.12: Coefficients Test

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | **1.502** | **0.240** | | **6.256** | **0.000** |
| EC | **0.157** | **0.043** | **0.150** | **3.650** | **0.000** |
| HC | **0.389** | **0.038** | **0.412** | **10.125** | **0.000** |
| PE | **-0.250** | **0.031** | **-0.304** | **-8.162** | **0.000** |
| LA | 0.013 | 0.031 | 0.016 | 0.415 | 0.678 |
| LC | **0.169** | **0.037** | **0.177** | **4.597** | **0.000** |
| Gender | -0.010 | 0.052 | -0.007 | -0.200 | 0.842 |
| Ethnic Group | -0.035 | 0.071 | -0.018 | -0.499 | 0.618 |
| Age Level1 | 0.051 | 0.065 | 0.040 | 0.784 | 0.434 |
| Age Level2 | -0.065 | 0.078 | -0.038 | -0.823 | 0.411 |
| Education level | 0.074 | 0.050 | 0.058 | 1.482 | 0.139 |
| Income Level | 0.029 | 0.054 | 0.021 | 0.529 | 0.597 |
| Marital Status | 0.020 | 0.058 | 0.016 | 0.351 | 0.726 |

## 4.6 Discussion of the Findings

In this research, we can clearly said that majority of the respondents are in the age from 21-25 where the results show 17.3 percent. Then, majority of the respondents (70percent) were all female. Not only that, as high as 88 percent of all were Chinese and 52 percent are in the range of currently married. Another important demographic component which is the respondents' income level, empirical results illustrate 21.7percent of the entire respondent is with an income range of RM2001-RM3000.

Besides, quite a number of the respondents purchase those necessary organic products at supermarket or hypermarket and specialty store where empirical results are 52.60percent and 69.10percent respectively.

Table 4.13 proposed the results of the hypothesis that we had mention in chapter 3. Based on the table below, we can indicate that there are only four hypothesis supported (H1, H2, H3, H5) and eight hypothesis are not supported (H4, H6, H6a, H6b, H6c, H6d, H6e, H6f).

Table 4.13: Results of Hypothesis Test

| Hypothesis | Variables | Remarks |
|---|---|---|
| **H1** | **Environment Conscious** | **Supported** |
| **H2** | **Health Conscious** | **Supported** |
| **H3** | **Perceived Expensiveness** | **Supported** |
| H4 | Limited Availability | Not Supported |
| **H5** | **Labeling and Certification** | **Supported** |
| H6 | Social demographic | Not Supported |
| H6a | Gender | Not Supported |
| H6b | Ethnicity | Not Supported |
| H6c | Age group | Not Supported |
| H6d | Educational level | Not Supported |
| H6e | Income level | Not supported |
| H6f | Marital status | Not supported |

**H1:** Positive perception towards environment consciousness will have positive effect on the willingness to pay.

Environment conscious have unstandardized coefficients = 0.157, t = 3.650, p-value = 0.000 < 0.01which means H1 is significant and supported. As a result, we concluded that there is positive relationship between environment conscious and consumers' willingness to pay for organic products. Additionally, when consumers are aware of environmental issues, they will willing to pay for organic products.

**H2:** Positive perception towards health consciousness will have positive effect on the willingness to pay.

Health conscious have unstandardized coefficients = 0.389, t-value = 10.125, p-value = 0.000<0.01 which shows H2 is significant and supported. Based on the result, we conclude that there is positive relationship between health conscious and consumers' willingness to pay and the health awareness of consumers will affect the consumers to pay for organic products.

The standardized coefficients = 0.412 is the highest beta within the eleven variables. Additionally, it means health conscious is the main factor that could highly affect consumers' willingness to pay.

**H3:** Perceived expensiveness on the price of organic products will have negative effect upon the willingness to pay.

Perceived expensiveness have unstandardized coefficients = -0.250, t-value = -8.162, p-value = 0.000<0.01 shows the significant of perceived expensiveness and it is supported. We concluded that there is negative relationship between perceived expensiveness and consumers' willingness to pay for organic products. Instead, the result shows that the increase of price for organic products will lead to consumers decrease their willingness to pay for it.

**H4:** Limit availability of organic product will have effect on the willingness to pay.

Limited availability have unstandardized coefficients = 0.013, t-value = 0.415, p-value = 0.678>0.10 shows it is not significant and not supported. As a result, we conclude that there is no significant position relationship between limited availability of organic stores and consumers' willingness to pay for organic products. The limited availability of stores will not affect or increase the consumers' willingness to pay for it.

**H5:** Labeling and certification on organic products will have positive effect on the willingness to pay.

The result of unstandardized coefficient = 0.169, t-value = 4.597, p-value = 0.000<0.01 shows the significant and supported for variables of labeling and certification. We can to conclude that there is positive relationship between labeling and certification, and consumers' willingness to pay for organic products. Instead, the awareness of consumers for labeling and certification on organic products able to increase their willingness to pay for organic products.

**H6:** Positive perception towards social demographic will have positive effect on the willingness to pay.

In this research, there are six areas of social demographic been tested and all have no significant relationship towards consumers' willingness to pay for organic products. Apart from that, we could conclude that six areas of these social demographic where gender, ethnic group, age group, education level, income level and marital status are not supported.

**H6a:** Gender will affect the willingness to pay of the respondents.

Based on table 4.11 gender (male) has unstandardized coefficients = -0.010, t-value = -0.200, p-value = 0.842>0.10 which shows not significant and not supported. Instead, male have no significant effect on the willingness to pay for organic products. Supported by figure 4.1, 70% of female are the major contribution portion on the organic products.

**H6b:** Ethnicity will affect the willingness to pay of respondents.

Ethnic group (non-Chinese) has unstandardized coefficients = -0.035, t-value = -0.499, p-value = 0.618>0.10 shows the insignificant and not supported result. As a result, we conclude that non-Chinese will not affect the willingness to pay on organic products. This result also supported in figure 4.2 where the majority consumer who willing to pay for organic products are Chinese.

**H6c:** Age group will affect the willingness to pay of respondents.

Age level1 is compare between consumers who are at the range of 31-50 years old (recode=1) and all others recode as 0. Age level2 is compare between consumers who are 50 years old and above (recode=1) and all others recode as 0. Age level1 has unstandardized coefficients = 0.051, t-value = 0.784, p-value=0.434>0.10, this value shows that age level1 is not significant as well as age level2 has unstandardized coefficients = -0.065, t-value = -0.823, p-value = 0.411>0.10. Both age level1 and age level 2 have not significant and not supported. Additionally, the negative sign on unstandardized coefficient inform us who are below 30 years old are more willing to pay for organic products. We can conclude that young consumers have positive attitude towards organic products as well as more willing to pay for organic products.

**H6d:** Educational level will affect the willingness to pay of respondents.

The unstandardized coefficients of educational level = 0.074, t-value = 1.482, p-value = 0.139>0.10 is not significant and not supported. This result represent that the higher educational level will not affect the consumers' willingness to pay. Refer to figure 4.4, the highest contribution fall on degree level with 21.71%.

**H6e:** Income level will affect the willingness to pay of respondents.

Income level have the unstandardized coefficients = 0.029, t-value = 0.529, p-value0.597>0.10, which shows insignificant and not supported. As a result, we conclude that income level have positive relationship with consumers' willingness to pay for organic products. In addition, the increase of income level will not affect consumer's willingness to pay as it p-value is larger than 0.10(10% confidence level).

**H6f:** Marital status will affect the willingness to pay of respondents.

The unstandardized coefficients of marital status = 0.020, t-value = 0.351, p-value = 0.726 > 0.10 shows the insignificant level and not supported. This represent that marital status have positive relationship with willingness to pay for organic products but it have no significant to affect consumers' willingness to pay for organic products. This supported by the figure 4.5, the graph shows that the larger portion of contribution falls in consumers with income level of RM2001 to RM3000 (21.7%).

# CHAPTER 5

# CONCLUSIONS AND IMPLICATIONS

## 5.1 Introduction

In this research, we chose to study the determinants that affect consumers' willingness to pay in purchasing of organic products. Several variables were taken into accounts which are environmental consciousness, health consciousness, consumers' perceived expensiveness, availability, labeling and certification and a range of social demographic which included gender, ethnicity, age, education level, income level and marital status.

In Chapter 2, we've explored research papers and previous studies from different sources on this topic. Different point of views were gathered and reviewed on dependent and independent variables. It is crucial to support further analysis on this research. In Chapter 3, research methodology was laid down with introduction of research framework, sampling procedures and sources of data. Hypotheses were developed in order to test the significant relationships between the variables. Types of statistical test on data were also introduced. As for the previous chapter, Chapter 4, results and findings from data analysis were discussed with illustration of graphs, tables and coefficients tables.

In this final chapter, a summary of statistical analysis and major findings will be presented. Besides, implications of this study will be discussed followed by limitations and recommendations.

## 5.2 Summary of Statistical Analysis and Hypotheses

In this study, various methods were used to test the variables. First and foremost, descriptive analysis were done on demographic profile of respondents to better understand the pattern of respondents according to age, gender, ethnic, education level, marital status and income level. From the outcome of the analysis, it was found out that majority of the respondents were from the age of 21 to 25 years old with female respondents dominating. 88% of our respondents consist of Chinese ethnicity. More than half of the respondents (52%) were married. Majority of respondents' income ranged from RM2001 to RM3000.

Next, mean and standard deviation for each variable were tested to determine the level of influence in each category to provide a better understanding from respondents' point of view.

Reliability test was carried out to determine the consistency of measurement for each variable as well.

A large set of data would be difficult to interpret, factor analysis was done to summarize into a set of components or factors such as willingness to pay, environmental health conscious, perceived expensiveness, availability and labeling and certification.

Last but not least, multiple regression analysis was carried out to determine the relationships between the dependent variable and independent variables. There were either positive or negative relationships among the variables. Significance of each variable was also determined based on the analysis outcome at significant level of 1%, 5% and 10%. Based on the results, eight variables were found to have a positive relationship with the dependent variable while the other four variables have a negative relationship. However, only four out of the twelve variables were significant in this study.

Since only four variables out of twelve were significant, thus it can be concluded that four out of the total hypotheses were supported, stated as below:

**H1:** Positive perception towards environment consciousness will have positive effect on the willingness to pay. Theoretical stated by (Gaetano chinnici, 2002), Environmental attitude has positive effect on organic purchase.

**H2:** Positive perception towards health consciousness will have positive effect on the willingness to pay. Positive result between organic foods with the factor of human health as supported by (Rennie, 2009)

**H3:** Perceived expensiveness on the price of organic products will have negative effect upon the willingness to pay. Research done by (Dana, 2009) higher income level consumer consumes more organic products.

**H5:** Labelling and certification on organic products will have positive effect on the willingness to pay. As supported by (Vlosky, 2007), positive relationship between certification of organic products and willingness to pay

## 5.3 Implications of Study

The main purpose of this study is to investigate the determinants that affect consumers' willingness to purchase organic products. Since this study is conducted from the perspectives of buyers, thus this study has contributed to the supply and demand side of organic products.

Results confirmed that purchasing decisions on organic products relies on few factors namely environmental consciousness, health consciousness, perceived expensiveness, labelling and certification.

Sales of organic products had seen a rise in recent years due to demand by consumers. Studies showed that worldwide sales of organic products reached US$28 billion in 2004 (IFOAM, 2006). In developed countries such as United States, there were statistics which shows that majority of U.S. consumers eat organic products at least occasionally and organic products are available at more than 70% of their traditional supermarket such as Kroger and Safeway (The Hartman Group, 2008). In the South East Asian market for organic products, Singapore, Thailand and Malaysia accounted for the three countries with considerably large organic market in the region. The market is expanding by over 15 per cent annually with revenues predicted to reach $71 million in 2006. (Organic Trade Association, 2006) There are studies that indicate retailers hope to increase total store revenues by promoting organic products, in addition to enhance the store's image, equity and differentiated positioning (Chain Store Age, 2009). We hope through this research paper, we were able to help promote organic products. Thus, it is important to determine the factors that influence consumers' purchasing decision and buying behaviour towards organic products.

Health conscious constituted a significant importance in this study as it has the highest beta (0.412) among all other variables. This signified consumers with strong health consciousness inclined towards purchasing organic products. Krisoff (1998) reported that consumers perceived organic products to be more environmental friendly, healthier and safer to consume compared to conventionally produced food products. It is also observed that environmental friendly is an important factor that encouraged consumers to purchase organic products. With this information in mind, organic products retailers could benefits by focusing on these target market which will help to increase the demand for organic products.

Labelling and certifications come after health conscious and environmental consciousness. For organic products that were sold in supermarkets or hypermarkets, standardized

information is the only way consumers can identify the authenticity of the products. Easily identifiable and trustworthy labelling is necessary to increase consumers' trustworthiness of the products because it may affect consumers' buying decision. (M. Wier, K. Jensen, L. Anderson and K. Millock, 2008). This would also help retailers in attracting a wider market base by including detailed labelling and certifications on the packaging of the organic products. Besides, stricter law should be implemented to monitor organic producers. This can be done through Malaysian Organic Scheme Certification (SOM) under the Department of Agriculture Malaysia.

However, on the other hand, perceived expensiveness was found to be negatively related to the dependent variable. Although consumers are willing to pay for a premium prices which is up to 10% for organic products in certain countries such as USA and India (Dana, 2009) to determine what will be the premium price to pay is a difficult task. This is because nobody likes to pay more if they can get a product at a cheaper price. Retailers can pinpoint on this subject and try to increase consumers demand for organic products. This can be done by reducing the price or offering promotions.

## 5.4 Limitation of Study

After examine the relationship between the independent and dependent variable in our study A limitation was found, social demographic factors which are gender, age, income level, educational level and marital status as well. None of the factors is been considered as a control variable. In other words, we found that there all these variable doesn't support as the willingness to pay variable. Furthermore, we also found an interesting result that the medium income level consumer (RM 2001 to RM 3000), have larger expenditure shares on organic product than the high income consumer (RM5000). These results are shown as 21.7% of medium income level consumer and 20.5% of high income level consumer respectively.

The outcome of the result might be due to the limitation in sampling of respondents. Since majority of the respondents consist of Chinese, the results might not represent the whole populations of Klang Valley well. Therefore, to make our data more accurate, as we should also distribute our questionnaires to different races separately. The inaccurate of data collection had leads to result in social demographic insignificant and not supported.

Besides, another limitation is due to restricted time period and financial sources, we can only collect data from Klang Valley areas rather than the whole Malaysia. Thus, number of

respondents should be increase and ethnic group should be more evenly spread among Chinese, Malay, Indian and other races.

## 5.5 Recommendation for Future Research

Since not much research on organic products was done in Malaysia, we hope that this study would contribute a little for future researchers. There are several recommendations that could be made for reference of future research.

First and foremost, new independent variables could be included to further explain the determinants of consumers' willingness to pay for organic products. Relationships between independent variables can be explored since they might carry significant influences to each other. Besides, social demographic profile can be enhanced to improve the study results. For example, the ethnic group among Chinese, Indian, Malay and other races should be more equally distributed as the ethnic group in this study consists of mainly Chinese.

Respondents group should include both organic and non-organic consumers to avoid bias in the outcome. This is to compare the different point of views between organic and non-organic consumers. In addition, the area of sampling can be more wide spread and not limited to Klang Valley area only. If data could be collected from different states all over Malaysia, the results might better represent the population of Malaysians.

Besides, for future research, it will be better to take a longer time period to understand the preferences of organic product consumers in detailed. This is because it helps organic product distributor and seller have more understanding about their customer and it also helps organic product price setter to set a more competitive pricing to attract more consumer and retain the loyalty of existing consumer.

## 5.6 Conclusion

The objective of this study is to investigate the effect of social demographic, environment conscious, health conscious, perceived expensiveness, availability, labelling and certification of organic products on consumers' willingness to pay. It was found that environment conscious, health conscious, perceived expensiveness, labelling and certification have a significant relationship with consumers' willingness to pay. Thus, it can be inferred that Malaysians are more concern about their surrounding environment condition and their health condition. Next, labelling and certification are also an important element in helping

Malaysian to define safe and qualified organic product in a shop. This study also found that Malaysian organic consumers has significant negative relationship between consumer willingness to pay and perceived expensiveness, they claimed that organic products are overvalued and this may lead to unwillingness to pay when the price increased. Besides, female also defined that they have high degree of willingness to pay for organic product compared to male and this correspond with past researches.

While for limited availability and social demographic such as gender, ethnicity, age group, education level, income level and marital status, they have insignificant relationship with consumer willingness to pay. Although age group is not significant, it was found that the largest purchasers of organic product are those from 21-25 years old and we believed that they will be the future loyal organic users and this leads to the income level factor, which is different from past research (high income level will lead to high degree of willingness to pay for organic product). This might be due to the impact of younger user which is in the range of RM2001-RM3000, therefore, it causes the income level insignificant. When it comes to deciding to purchase organic products, education level might not be an important factor in Malaysian organic market. This may be due to the effort of government and organic supplier in promoting organic product and raising awareness among Malaysian and these efforts were paid off. This study also concluded that single people may be more willing to pay for organic product.

In conclusion, this study found out that factors such as education level and income level are no longer significant in determining consumer willingness to pay for organic product and this is against past researches. The one demographic factor that is consistent with past researches is female are more likely to pay for organic product.

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