

## **2 CHAPTER 2: LITERATURE REVIEW**

### ***2.1 Introduction***

This chapter will review and assess the findings on previous study and also to identify the consumer behaviour perspective in Malaysia. In this chapter, the definition of Functional Food and market of Functional Food will be discussed. The study also reviews consumer behaviour and purchase decision flows. The research paper further explore on factors that may influence consumers purchase intention and behaviour. Elements of each identified variables have been looked into in detailed; in order to discuss on their significance.

### ***2.2 Definition of Functional Food***

The definition of Functional Foods is still inconclusive. Even in developed country such as United States of America; there yet to have a clear definition on Functional Food; while health related organization such as American Dietetic Association (ADA), The Institute of Food Technologists (IFT) and International Food Information Council (IFIC) have came out with their own definition on the terminology of Functional Food (IFIC,2009). As identified by ADA, food is purposeful for their physiological level and when consumed effectively on regular basis as part of varied diet would benefit to health. IFT defined Functional Food as foods and food components that able to provide extra health benefits for the intended population with necessary nutrients that provides desirable physiological effects. According to IFIC, Functional Foods are believed to improve overall health and well-being, reduce the risk of specific diseases, or minimize the effects of other health concerns.

Due to overwhelming awareness of “Functional Foods” concept, European Union has set up a program called Functional Food Science in Europe (FUFOSE) to coordinate and support development of food products to enhance individual’s state of health and to reduce the risk of illness. As pointed out by FUFOSE, a food is recognised as Functional Food if it demonstrated beneficial effect and target function to the body, either improved state of health or reduce the risk of disease. Functional Foods are not pills or capsules, does not contain medical effect, remain as foods and demonstrate their effects in the diet.

In most of the places, Functional Food is more recognise as nutrition food or health-related food. Functional Food is neither medicine nor drugs. The term was started to be in use in Japan in the 1980s for food products carried with extraordinary element that obtain advantageous physiological effects (Mendrad 2001; Siro, 2008). One significant product successful marketed was fermented milk drink come with the probiotic lactic acid bacteria, *Lactobacillus casei* Shirota by researcher Yakult Honsha (Menrad, 2003).

Sarkar (2007) examined the Functional Foods as self-care and complementary medicine. The findings of the research agreed that any food can be considered as Functional Food if it can progress health and reduce diseases when consumed in balanced diet. Health benefit exhibit on Functional Food created a lot of market opportunities. Functional Foods are believe in ability to improve the general conditions of the body with prebiotics and probiotics reside; may be able to be used as curing and reduce the risk of some diseases and illness. From the study, it is publicized that the demand on

the product has increased due to apperception on preventing is better than curing illness. Moreover, the medical and service cost of the aging population is getting expensive and increasing on a yearly basis (Menrad, 2003; Siro, 2008).

Generally, Functional Foods falls into category in between food, dietary supplements and drugs (Hunt, 1994). . In summary, Bhaskaran and Hardley (2002) highlighted Functional Food as “Foods sold for health benefits” or “processed foods” added with main functional ingredient like oligosassharides, fibres, minerals and etc. Take for instance – Functional Food are foods which contain healthful substances from fruits and vegetables; fiber and whole grains which inherently within certain type of breads; fortified foods with vitamin and mineral, such as fortified milk enriched with vitamin D. Functional Foods can also include dietary supplements (IFIC, 2009).

Table 2.1 below illustrated the examples of Functional Foods with its contents and target function.

<b>FUNCTIONAL FOOD</b>	<b>ACTIVE FOOD COMPONENT</b>	<b>TARGET FUNCTION</b>
Yogurts	<p><u>Probiotics:</u> Foods with beneficial live cultures as a result of fermentation or that have been added to improve intestinal microbial balance, such as Lactobacillus sp. Bifidobacteria sp</p> <p><u>Prebiotics:</u> A non-digestible component that has beneficial affects by stimulating the growth of bacteria in the colon. Examples include inulin and oligofructose.</p>	Optimal intestinal function and intestinal microbial balance
Margarines	Added plant sterols and stanols	Decreased LDL-

	esters	cholesterol (bad cholesterol) Decreased risk of coronary heart disease (CHD)
Omega-3 fatty acids enriched eggs	Omega-3 fatty acids	Control of hypertension, lipids metabolism

Source: <http://www.eufic.org> (2010)

**Table 2.1 The Example Of Functional Food**

### **2.3 Market of Functional Food**

The markets of Functional Food are growing fast. As the consumer awareness of and attitudes toward the health benefits of Functional Food continue to grow and develop, it has created the opportunities for new product development (Smith,2010). Growing consumer interest in optimising personal health, reluctance to rely on pharmaceuticals and preventing diseases encourage consumers to look or take the Functional Food besides the basic nutrition food.

In Malaysia, chronic diseases accounted for 71% of deaths and 69% of the total burden of disease (Hasamnis et al, 2010). As the Malaysian population ages, the possibility of occurrence of chronic diseases like heart disease, cancer and diabetes are getting higher, resultant more resources and medical cost to fight these diseases (WHO,2010). Moreover, the medical services and medical insurance costs are rising in yearly. Looking at the risks, consumers prefer to prevent, rather than cure the disease. According to WHO (2005), at least 80% of premature heart disease, stroke and type 2 diabetes,

and 40% of cancer could be prevented through healthy diet, regular physical activity and avoidance of tobacco products.

Consumer acceptance of the concept and awareness of Functional Foods are determinants of the success factors for product development and market positioning of Functional Food (Menrad, 2003; Verbeke, 2005, 2006). At the same time, there is increasing scientific evidence of efficacy on the benefits of Functional Food. Nutrition and health claims are strong marketing incentives for the food industry (Blandon and Henson, 2007). Based on this, health-related product is an element of product differentiation and new market positioning (Verbeke and Scholderer, 2009).

However, the confidence of consumers towards Functional Foods is still relatively low even though the scientific physiological of nutrient has achieved the improvement (Van Kleef et al, 2005). Not all Functional Foods Products are welcomed by consumers. One of the major reasons of rejection is because the way development and marketing of Functional Foods has different trait comparison with traditional foods (Bhaskaran and Hardley, 2002).

According to Verbeke (2005), consumers doubt and distrust on information and source released by the manufacturer and food industry player. Four major factors that cause low confidence of consumers toward Functional Foods are perceived risks, suspicious attitudes, doubts and sceptics. Sometimes, an outstanding quality product might not result a successful penetration in

market. In order to be welcomed by consumers, the products should be in adequate form (Siro et al, 2008; Van Kleef et al., 2005).

The awareness on Functional Foods often associates with advertisement (Verbeke and Scholderer, 2009). As there is low awareness among consumers towards consumers towards newly develop functional products, should be more activities on bringing correct information and knowledge to the market. Menrad (2003) suggested using opinion leader such as medical doctor or nutritional advisers in opening new market segment to gain consumer trust. With the trust on opinion leader, the market has proved to bring a greater success and returns in the marketing of Functional Food.

## **2.4 Factors influencing buying decisions**

As pointed out by First and Brozina (2009), consumer behaviour is interaction of all things from behaviour and environment that influence thoughts and feelings; and trigger the actions subsequence from that. Kotler and Amstong (2006) stated the buyer's decision process are interrelated with behaviour of consumer. Bennett (1995) explained that consumer behaviour is involve a dynamic reaction of affect and and cognition, behaviour, and the environment which human beings conduct the exchange aspects of their lives.

By studying attitude-related, health-related and religion-related behaviours from within a consumer behaviour framework, the researcher hope to gain a better off understanding of behaviour from the perspective of why people purchase the products they do, and how they act, think, and feel during the process of buying and consuming these products. It's through the act of studying healthy lifestyle decision making along a continuum ranging from goal formulation to purchase and consumption behaviours that distinguishes this form of inquiry from that of investigating health-related behaviour in general.

### **2.4.1 Consumers' attitudes**

Attitudes are sets of beliefs about a certain object or an act which may translate into intention to carry out the act (Schwartz, 1992). Attitude influence an individual's reaction, choice of action, perception and thinking. In recent years, Attitudes towards Functional Foods have been studied

comprehensively by researchers (Ares & Gámbaro, 2009; Gilbert, L, 2000; Tudoran et al, 2009; Urala & Lähteemäki, 2003, 2007 ; Verbeke, W. 2005, 2006; Van Kleef, E., Van Trijp, H. C. M., & Luning, P. ,2005).

Characteristic of consumer affect their choices and evaluation decision making on Functional Food. Bhaskaran and Hardley (2002) observed that factors like quality, taste, price and convenient are prime influencer of most young consumers to make purchase decisions. In IFIC (2009) study revealed that consumers remains high interest to learn more about food with added benefit. However, taste still the number one factor influencing purchases in America.

Verbeke, W. (2005, 2006) found that belief in the health benefits of Functional Food is the main determinant of acceptance. If there is ill family member in a family, it will increase the purchasing rate of Functional Food in a family household expense. Perceived health benefit and perceived rewards showed the reasons on why consumer interested in Functional Food (Urala & Lähteemäki, 2007; Verbeke, W 2005). Four dimension were found on Urala and Lähteemäki's research in year 2005 after they re-do the research on consumer attitude towards Functional Food in Finland. The result of the studied concluded that rewards, necessity, safety and confidence are four major determinants of consumer acceptance.

Verbeke (2005) revealed that consumers with different health condition react differently on food choice. Van Kleef et al (2005) claimed that Functional Food



is best accepted when market the product as healthy product which come with positive health image and health claim history. Examples such as yoghurt and margarine are more easily to be accepted by consumers due to image and history they have in market. Marketing activity play a vital role to educate consumers. However, compared to new product from other product categories, more time and efforts have to be taken to educate consumers that they can be Functional Food platforms.

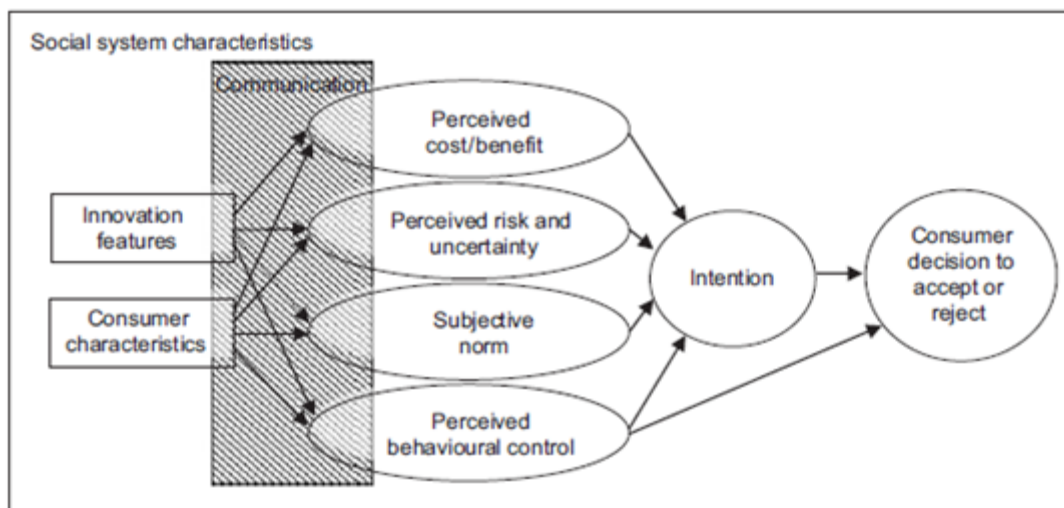
Trust and confidence in the Functional Food technological developments, preparation and control systems; as well as concern on both the diet and health benefits of Functional Food are the essential reasons on consumers who tend to choose Functional Food more often (Barreiro-Hurle et al, 2007). Some consumers feel that manufacturers' claim on the packaging contents and the advertising message are hard to believe in fully (Bhaskaran and Hardley, 2002). Although consumers agreed with the benefit of Functional Food but they are doubt with the reliability of information on Functional Food. This suggests that, manufacturers' claims influenced product assessment and purchase judgment by consumers (Childs and Poryzees, 1997). Manufacturers must be ethical on what they have claimed; which directly affect in the long run on the business purposes to recruit and sustain consumer trust and loyalty.

Knowledge and beliefs play an imperative part in determinations of food expenditure (Ronteltap et al,2007) . Lacking in information and knowledge will cause the Functional Food being ignored. According to research of Worsley

and Lea (2008), they summarized that the personal values of individual has the highest impact toward choice of food and health, followed by age and sex; this personal values includes of beauty and nature, devoutness and tradition has statistically show influencing of food choice, both general and specific level.

Consumer acceptance of Functional Food is determined by the product development and market opportunities (Verbake, 2005; Siro, 2008). As pointed out by Frewer et al (2003), Functional Foods will not automatically be successful without continuously effort to feed consumers with information. Information is important during consumer making selection about purchase and consider in their diets. From their research, aspect like consumers' risk perceptions, technologies on food processing, emerging scientific innovations and consumers' own health status should be considered when developing marketing strategies (Frewer et al, 2003)

Ronteltap et al (2007) identified two factors - 'distal' and 'proximal' as determinants on acceptance of technology-based food innovation. Distal factors (consist of characteristics of the innovation, the consumer and the social system) are mediated by proximal factors (consist of perceived cost/benefit considerations, perceptions of risk and uncertainty, social norm and perceived behavioural control) on consumers' intention to accept technology-base food. Framework in Figure 2.2 illustrated the relationship of distal factors and proximal factors to analyses the intention of consumer decision to accept or reject technology-based food (Ronteltap et al,2007)



Source: Ronteltap, Trijp, Renes and Frewer (2007)

**Figure 2.1 Conceptual framework for research on acceptance of technology-based food innovation**

In overall, the consumer acceptances of Functional Foods are influenced by increasing consciousness and awareness of the health benefits on food ingredient via credible media (Siro, 2008). Health concern is primary determinant of acceptance of Functional Food followed by consumers' familiarity with the "Functional Food" concepts and with the functional ingredients (Siro et al, 2008). Perceptions of Functional Foods are likely influence by the cultural, health effect and product-dependent differences (Urala & Lähteenmäki, 2007).

In Malaysia, the term of "Functional Food" is not widely used. As stated by Siro et al (2008), the acceptance of a specific functional ingredient is very dependent on the consumers' knowledge of the health effects of specific ingredients. Most consumers do not know the health benefits of the specific ingredient effect and therefore are not able to assess the health effect (Siro et

al, 2008). Opinion leaders like medical doctors and nutritional advisers are the crucial success factor for the Functional Food marketing. The targeted information activities like campaigns and promotion should deliver the message of the health effect in a simple and easy way to let consumer adapt (Menrad, 2003). However, the researcher discourages specialist terminology and medical details to involve in such campaigns (Menrad, 2003; Siro et al, 2008).

#### **2.4.2 Consumers' Health Consciousness**

Healthiness has become an important determinant for food purchases and a parameter of quality for many consumers (Chen, 2009). Health is essential to living long and living well. In order to have a healthy life, besides regular exercise and adequate rest, food is the most important element. Eating healthily can be practiced in a balanced diet and getting daily recommended nutrition.

A more recent quantitative study by IFIC (2009) reported that since 2007, there are more Americans believe that they should get more rather than rely on basic nutrition from normal food and beverages; whereby they are actively searching more information on Functional Foods which they believe will benefit them, and pairing specific food with normal diet to gain more. However, they are still struggling to incorporate these foods into their daily routine. Barriers of incorporate are taste, do-ability, familiarity and cost.

The report also indicate that most Americans trust that they have access to own self health status, this is done by identification on food and nutrition that they consumed, which is believe to be the main factor in maintaining and improving their health, and complemented by exercise. The top health topics which concern by American are heart disease, weight, cancer, diabetes, nutrition and exercise.

Past experiences will lead a particular person to be more conscious and concern on health-related matter. Furthermore, it will change the perspective of one to be more receptive on the information pertaining to health. People will be more careful in filtering health information when they are vulnerable – for example, people will be more receptive towards health claims relating to cancer when their family member do have the health diseases or history (Ellen 2005). In general, the more attention spends the more involvement of the person on processing health information that they received (Ellen, 2005, 2006).

According to Bhaskaran and Hardley (2002), golden age group are more conscious on diet-health relationship, and they do show signal that they switched in dietary habits and buying behaviours. Jayanti and Burns (1998) research show that health knowledge, motivation and consciousness are the source toward preventative health behaviour, but it will be useless if those source never turn to action.

Peoples with diverse health motivation will act differently toward health claims (Verbeke and Scholderer, 2009). However, the perception of consumers will change if they are exposed to proper information. The commercial message by various organization and industry bodies do increased health and well-being of community. Function food has been position to be beyond basic function of supplying nutrients which carry health promoting and disease-preventing function. The health campaigns sending out message on the importance of diet, and resulting peoples purchasing Functional Food which has labelled as to bring health to human body (Bhaskaran and Hardley, 2002; Verbeke, 2009).

### **2.4.3 Consumers' Religiosity Effect**

Malaysia is well known for her multi-culture and multi-racial population. The main population in Malaysia are Malays, Chinese and Indian. The multi-racial society has brought major religion (Islam, Buddhist, Christian and Hindu) into the country, as religion always associated with ethnic. According to the Malaysia Population and Housing Census on year 2000, Islam consist of 60.4 percent of the population, followed by Buddhism, 19.2 percent, 9.1 percent Christianity and 6.3 percent Hinduism. The remainder are others religion or reported to has no religion (Demographics of Malaysia, 2010).

Islam is official religion of Malaysia and all ethnic Malays and some other ethnics are practising Islam religion. Muslim can only consume Halal foods – food which is permissible to be taken, according to Islamic law (Sheikh and Thomas, 1994). For Muslim, certain foods like pork, rodents, reptiles and

worms are forbidden to eat. Labelling and information on food is essential for consumers to know the consumable ingredient which allowed by religion. Some labels are often misleading (Ahmed, 2008; HFA, 2002-2003). Therefore marketer has to make sure that the Functional Food that they are promoting has been certified by JAKIM (Jabatan Kemajuan Islam Malaysia) in order to gain the confidence of the Muslims consumers.

Hinduism and Buddhism do not consume beef and some of them are vegetarian which do not consume any meat related food – challenges for marketer is to convince these consumers that the Functional Food does not contain any of prohibited ingredients (element extract from animal and etc). One of the way is to invite independent body to verify the Functional Foods and printed on the label in order to provide reassurance to this group of consumers.

Religion has much influence on society's belief, values, lifestyle, habits, attitudes and behaviour. In general, the religion practised will influence the decision making. Findings from Delener (1994) commented on differential role behaviour varies according to religious influences. Religious orientation is a strong influence on the development of family commitment. With religion, it will affect the value of living purpose, the living need and welfare to family and society.

Religious belief has greater impact to a person' attitudes at United States compare to other country, (Adamczyk and Pitt, 2009). Lindridge (2005)

observed that religion's role is difference between Eastern and Western for both culture and consumer behaviour. In further study on religiosity impact on attitudes and behaviours, Lindridge (2005) emphasis that religion must be considered in broader perspectives on both cultural and societal.

Heiman et al (2004) conclude religious lifestyle and cultural factors is influential on food purchase after prices and income factor – the pattern of behaviour are differ along with different religions followers, which will bring diverse results. Just, Heiman and Zilberman (2007) did a study toward food purchase based on religion within each family member at Israel, which they concluded that it is important to understand cultural and social norms for improving eating habit and encourage healthier diets among families.

According to Swimberghe, Sharma and Flurry (2009), religious commitment of consumer should be taken into consideration for the firm's benefits. Offending or ignoring religious beliefs of consumers will bring a negative impact especially losing customer loyalty. In addition, taking effort to understand the religious commitment level of current customers may reduce the confusion and misunderstanding on product marketing. Religious beliefs may impact food decision directly (Just, Heiman and Zilberman ,2007).

Two factors had been identified out by Sheikh and Thomas (1994) regarding the food behaviour of Asians. Firstly, the original area where they coming from will determines the staple food. Secondly, exposure and belongingness to religious group will determine food practices and consumption. In particular of that, Rahadian (2008) found that consumers with high religiosity tend to more



significantly positive relationship between consumer decision making styles and purchase intention. Consumers with low religiosity level tend to less significant.

In Malaysia, the dietary behaviour is affected by religious and cultural custom. Marketers have to be subtle in marketing especially in food advertisement. Muslim market is believed to be a big market in term of its growing proportion due to in increasing standard of living and earning income power. As the religion restriction, Muslim must take “Halal” food; whereby the food has been processed in accordance with Islam dietary laws. As Malaysia is an Islamic country, “Halal” food is one of the concern especially for Muslim community. According to Lada et al (2009), different consumers have different perception about Halal products. Intentions on the product are formed from attitudes and subjective norm.

### ***2.5 Intention To Purchase Functional Food***

Purchase intention refer to the likelihood of a consumer on acquiring a specific product based on the personal need, desire and perception toward the products (Mitchell, 2007). Analysis of consumer purchase intention helps marketing managers to predict sales. By knowing the consumers’ pattern to acquire a particular good or service in the future enable organization to strategies the effectiveness on marketing or even introducing new products or services to market. (Tudoran et al, 2009).

Carneiro et al (2005) evaluated consumer purchase intention on the effect of soybean oil label within four scopes – brand name (familiarity consumer toward the product), price (cheap & expensive), nutrition information (cholesterol level, Vitamin E) and soybean type (“transgenic” level). They observed that price stand the most influential toward consumer purchasing decision. Low price products will attract more purchase intention.

On the other hand, six dimensions were pointed out by Morwitz et al (2007) in purchase intention. They concluded that intentions are more correlated with purchase in 1) existing product compare to new product; 2) durable goods compare to non-durable goods; 3) short compare to long time horizons; 4) product brands rather than product categories; 5) trial rates compare to total market sales; 6) comparative mode than monadically mode.

Consumers which beliefs in food industry likelihood will be purchasing Functional Food compare to those that are not (Siegrist et al, 2008). Patch et al (2005) highlighted specifically on omega- 3–enriched foods, the research show that most significant factor in consuming Functional Foods is attitude, whereas other subjective norms and controls believes only play less roles. Most significant was that belief in eating Functional Foods would guide to a number of health benefits<sup>193</sup>. Siegrist et al (2008) concluded that the consumers purchase intention toward Functional Foods will more bias toward physiological health claims rather than psychological health claim.

In another perspective, William et al (2008) recognized that food carriers play most significant roles on consumers' perceptions which are not dependant on health claim. The willingness on trying Functional Foods not only brings the claimed health benefit, but also perceptions of the credibility and uniqueness of the product. Krutulyte et al (2010) reported that intentions to purchase different carrier– ingredient combinations are explained by perceived fit of a particular carrier–ingredient combination, as well as respondents' general attitudes towards Functional Foods and their health concerns.

Ares and Ga'mbaro (2007) had done a similar study on influence of gender, age and motives essentially on the effect of different carriers and enrichments on the perceived healthiness and willingness to try Functional Foods. The output of the studies agreed with William et al (2008) that carrier products play a most significant roles influencing consumers' perception toward health and willingness to try of the evaluated Functional Foods concepts. Functional Food with its specific function and target market might not be accepted by every segment of gender and age. Elderly consumers will have more buying intention on Functional Foods compare to younger generation (Siegrist et al, 2008)

## **2.6 Conclusion**

Overall, Functional Food can be concluded as food used to consume as part of the normal diet which contain biologically active components. Functional Food is able to enhanced health and reduced the risk of disease. The similar researches had been actively conducted due to it market potential in

overseas. However, not much survey has been done in Malaysia context. What this research paper designed, is to review the acceptance level of Malaysia society towards this phenomena, as the ethnic structure of the country is diverse; there are various factors which may affect the purchase intention and decision making. Chapter 3 will discuss on the research methodology used to conduct the survey with the entire identified construct.