THE INFLUENCE OF CONSUMERS' PERCEPTION AND DEMOGRAPHIC PROFILE ON ATTITUDE TOWARDS GREEN FOOD AND GREEN FOOD PURCHASE INTENTION

PERPUSTAKAAN
UNIVERSITI MALAYSIA SABAH

YVONNE CHONG HUI KIM

SCHOOL OF BUSINESS AND ECONOMICS
UNIVERSITI MALAYSIA SABAH
2013

UMS
UNIVERSITI MALAYSIA SABAH

THE INFLUENCE OF CONSUMERS' PERCEPTION AND DEMOGRAPHIC PROFILE ON ATTITUDE TOWARDS GREEN FOOD AND GREEN FOOD PURCHASE INTENTION

YVONNE CHONG HUI KIM

THESIS SUBMITTED IN FULFILLMENT FOR THE DEGREE OF MASTER IN BUSINESS ADMINISTRATION

SCHOOL OF BUSINESS AND ECONOMICS
UNIVERSITI MALAYSIA SABAH
2013

UMS
UNIVERSITI MALAYSIA SABAH

UNIVERSITI MALAYSIA SABAH

BORANG PENGESAHAN TESIS

JUDUL KAJIAN: THE INFLUENCE OF CONSUMERS' PERCEPTION AND DEMOGRAPHIC PROFILE ON ATTITUDE TOWARDS GREEN FOOD AND GREEN FOOD PURCHASE INTENTION

IJAZAH: SARJANA PENTADBIRAN PERNIAGAAN

SAYA YVONNE CHONG HUI KIM SESI PENGAJIAN 2012/2013

MENGAKU MEMBENARKAN TESIS INI DISIMPAN DI PERPUSTAKAAN UNIVERSITI MALAYSIA SABAH DENGAN SYARAT-SYARAT KEGUNAAN SEPERTI BERIKUT;

1. Tesis adalah hak milik universiti malaysia sabah.
2. Perpustakaan universiti malaysia sabah dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. Sila tandakan [√]

[ ]	SULIT	(Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub dalam AKTA RAHSIA RASMI 1972)
[ ]	TERHAD	(Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/ badan di mana penyelidikan dijalankan
[/]	TIDAK TERHAD	

Disahkan Oleh

(TANDATANGAN PENULIS)

(TANDATANGAN PERPUSTAKAAN)

Alamat Tetap : 23, LORONG KUMPANG 4

JALAN ONG TIANG SWEE, 93200

KUCHING, SARAWAK

TARIKH: 05 SEPTEMBER 2013

DR. HJ. AMRAN HJ. HARUN

(NAMA PENYELIA)

Catatan:

- Jika tesis ini SULIT dan TERHAD, sila lampirkan surat daripada pihak berkuasa/ organisasi berkenaan dengan menyatakan sekali dan tempoh tesis ini perlu dikelaskan sebagai SULIT dan TERHAD.
- Tesis dimaksudkan sebagai tesis bagi Ijazah Doktor Falsafah dan Sarjana Secara Penyelidikan atau Disertasi bagi pengajian secara kerja kursus dan Laporan Projek Sarjana Muda (LPSM).

UMS
UNIVERSITI MALAYSIA SABAH

DECLARATION

I hereby declare that the material in this thesis is my own except for quotations, excerpts, equations, summaries and references, which have been duly acknowledged.

11th September 2013

YVONNE CHONG HUI KIM

ME1212040T

UMS
UNIVERSITI MALAYSIA SABAH

CERTIFICATION

NAME	:	**YVONNE CHONG HUI KIM**
MATRIC NO.	:	**ME1212040T**
TITLE	:	**THE INFLUENCE OF CONSUMERS' PERCEPTION AND DEMOGRAPHIC PROFILE ON ATTITUDE TOWARDS GREEN FOOD AND GREEN FOOD PURCHASE INTENTION**
DEGREE	:	**MASTER OF BUSINESS ADMINISTRATION (MBA)**
VIVA DATE	:	**29 AUGUST 2013**

DECLARED BY

1. SUPERVISOR
Dr. Haji Amran bin Haji Harun

UMS
UNIVERSITI MALAYSIA SABAH

ACKNOWLEDGEMENT

I wish to express my deepest gratitude and appreciation to my supervisor, Dr. Haji Amran bin Haji Harun, of the Centre For Postgraduate Studies, Universiti Malaysia Sabah, who has been patient enough to advise, guide and supervise me throughout the past year. His continuous encouragement provided me the necessary impetus to complete the study and publish this thesis.

My special sense of gratitude also to all lecturers of the School of Business and Economics for the knowledge and information that they have taught us throughout our course.

I owe my deepest gratitude to my parents and family who support me in terms of financial expenses throughout the course of conducting this study. Lastly, a very big thank you to all my friends who have helped me one way or another in this study.

UMS
UNIVERSITI MALAYSIA SABAH

ABSTRACT

THE INFLUENCE OF CONSUMERS' PERCEPTION AND DEMOGRAPHIC PROFILE ON ATTITUDE TOWARDS GREEN FOOD AND GREEN FOOD PURCHASE INTENTION

Food is the most basic necessity in our human life. However, of lately, consumers' consumption pattern is experiencing a change. Consumers are more aware and more concern about the types of foods they consume. They are more likely to look for food which are nutritious, natural, healthy, safe, and are environmental and animal friendly. Thus, the green concept is steadily and gradually being exposed to consumers all around the globe. However, in Malaysia, this green food concept is still at a developing stage. Green foods refer to foods that are safe to be consumed by humans, fine quality, nutritious, and that are produced under the principle of sustainable development. This study aims to look at the influence of consumers' perception and demographic profile on the green food purchase intention mediated by attitude towards green food among the consumers in Kota Kinabalu. This study utilizes the Theory of Planned Behaviour (TPB). The study design of this study is by using structured questionnaires as a tool to gather information on the green food consumer behaviour. A survey was conducted using 200 respondents in four major supermarkets around Kota Kinabalu. Analyses such as factor analysis, reliability analysis, descriptive analysis, correlation analysis, multiple regression analysis, and hierarchical regression analysis were conducted using SPSS software version 21. The findings from this study indicated that only education level had a significant influence on the green food purchase intention of consumers. At the end of this study, it also discusses the theoretical and managerial implications of these results for marketers and educators. It also considers the limitations of the study and the recommendations for future researches.

UMS
UNIVERSITI MALAYSIA SABAH

ABSTRAK

Makanan adalah keperluan yang paling asas dalam kehidupan manusia. Walau bagaimanapun, di akhir-akhir ini, pola penggunaan pengguna sedang mengalami perubahan. Pengguna lebih sedar dan lebih prihatin terhadap jenis makanan yang diambil. Mereka lebih cenderung untuk mencari makanan yang berkhasiat, semula jadi, sihat, selamat, dan mesra alam sekitar dan haiwan. Oleh itu, konsep hijau adalah mantap dan secara beransur-ansur terdedah kepada pengguna di seluruh dunia. Walau bagaimanapun, di Malaysia, konsep makanan hijau masih di peringkat membangun. Makanan hijau merujuk kepada makanan yang selamat untuk dimakan oleh manusia, kualiti halus, berkhasiat, dan yang dihasilkan di bawah prinsip pembangunan mapan. Kajian ini bertujuan untuk melihat pengaruh persepsi pengguna dan profil demografi pada niat pembelian makanan hijau diselesaikan oleh sikap terhadap makanan hijau di kalangan pengguna di Kota Kinabalu. Kajian ini menggunakan Teori Tingkahlaku Dirancang (TTD). Reka bentuk kajian ini adalah dengan menggunakan soal selidik berstruktur sebagai alat untuk mengumpul maklumat mengenai tingkah laku pengguna makanan hijau. Satu kajian telah dijalankan menggunakan 200 responden dalam empat pasar raya utama di sekitar Kota Kinabalu. Analisis seperti analisis faktor, analisis kebolehpercayaan, analisis deskriptif, analisis korelasi, analisis regresi berganda, dan analisis regresi hierarki telah dijalankan dengan menggunakan perisian SPSS versi 21. Hasil kajian ini menunjukkan bahawa hanya tahap pendidikan sahaja yang mempunyai pengaruh yang besar ke atas niat pembelian makanan hijau pengguna. Pada akhir kajian ini, ia juga membincangkan implikasi teori dan implikasi pengurusan untuk pemasar dan pendidik. Ia juga mengambil kira batasan kajian dan cadangan-cadangan untuk kajian masa depan.

UMS
UNIVERSITI MALAYSIA SABAH

TABLE OF CONTENTS

	Page
TITLE	i
DECLARATION	ii
CERTIFICATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
ABSTRAK	vi
LIST OF CONTENTS	vii
LIST OF TABLES	x
LIST OF FIGURES	xii
LIST OF ABBREVIATIONS	xiii
LIST OF SYMBOLS	xiv
LIST OF APPENDIX	xv
CHAPTER 1: INTRODUCTION	1
1.1 Background	1
1.2 Problem Statement	3
1.3 Research Questions	5
1.4 Research Objectives	6
1.5 Scope of Study	6
1.6 Rationale/Significance of Study	7
1.7 Definition of Terms	7
1.7.1 Green Foods	7
1.7.2 Perception	8
1.7.3 Attitude	8
1.7.4 Purchase Intention	9
1.8 Organization of the Study	9
1.9 Summary	10
CHAPTER 2: LITERATURE REVIEW	11
2.1 Introduction	11
2.2 Theory of Planned Behaviour (TPB)	11
2.3 Green Food Concept	13
2.4 Demographic Characteristics	15
2.5 Consumers' Perception on Green Foods	17

UMS
UNIVERSITI MALAYSIA SABAH

2.6 Attitude Towards Green Food 18
2.7 Green Food Purchase Intention 20
2.8 Mediation Effect of Attitude Towards Green Food on Green Food Purchase Intention 22
2.9 Summary 23

CHAPTER 3: RESEARCH FRAMEWORK AND METHODOLOGY 24
3.1 Introduction 24
3.2 Theoretical Framework 24
3.3 Operationalization of Variables 25
3.3.1 Consumers' Perception 26
3.3.2 Demographic Profile 26
3.3.3 Attitude Towards Green Food 26
3.3.4 Green Food Purchase Intention 27
3.4 Hypothesis 28
3.5 Sampling Method 30
3.6 Questionnaire 31
3.7 Data Collection Methods 32
3.8 Validity Testing Methods 33
3.9 Reliability Testing Method 33
3.10 Data Analysis 34
3.11 Statistical Methods 35
3.12 Summary 35

CHAPTER 4: DATA ANALYSIS AND RESULTS 36
4.1 Introduction 36
4.2 Profile of Respondents 36
4.3 Factor Analysis 38
4.3.1 Factor Analysis of Consumers' Perception 39
4.3.2 Factor Analysis of Attitude Towards Green Food 41
4.3.3 Factor Analysis of Green Food Purchase Intention 42
4.4 Reliability Analysis 43
4.5 Descriptive Analysis 44
4.6 Correlation Analysis 45
4.7 Multiple Regression Analysis 48
4.7.1 The Relationship Between Consumers' Perception (Knowledge and Green Food Attributes) and Attitude Towards Green Food 48
4.7.2 The Relationship Between Demographic Profile (Age, Education Level, Gender, and Income) and Attitude Towards Green Food 49
4.7.3 The Relationship Between Consumers' Perception (Knowledge and Green Food Attributes) and Green Food Purchase Intention 49
4.7.4 The Relationship Between Demographic Profile (Age, Education Level, Gender, and Income) and Green Food Purchase Intention 50
4.7.5 The Relationship Between Attitude Towards Green Food and Green Food Purchase Intention 51

UMS
UNIVERSITI MALAYSIA SABAH

4.8 Hierarchical Regression Analysis 52
4.8.1 The Mediating Effect of Attitude Towards Green Food on the Relationship Between Demographic Profile (Education Level) and Green Food Purchase Intention 54

CHAPTER 5: DISCUSSIONS AND CONCLUSION 59
5.1 Introduction 59
5.2 Recapitulation of the Study 59
5.3 Relationship Between Consumers' Perception (Knowledge) and Consumers' Attitude Towards Green Food 63
5.4 Relationship Between Consumers' Perception (Green Food Attributes) and Consumers' Attitude Towards Green Food 64
5.5 Relationship Between Demographic Profile (Age) and Consumers' Attitude Towards Green Food 65
5.6 Relationship Between Demographic Profile (Education level) and Consumers' Attitude Towards Green Food 65
5.7 Relationship Between Demographic Profile (Gender) and Consumers' Attitude Towards Green Food 66
5.8 Relationship Between Demographic Profile (Income) and Consumers' Attitude Towards Green Food 67
5.9 Relationship Between Consumers' Perception (Knowledge) and Green Food Purchase Intention 67
5.10 Relationship Between Consumers' Perception (Green Food Attributes) and Green Food Purchase Intention 69
5.11 Relationship Between Demographic Profile (Age) and Green Food Purchase Intention 69
5.12 Relationship Between Demographic Profile (Education level) and Green Food Purchase Intention 70
5.13 Relationship Between Demographic Profile (Gender) and Green Food Purchase Intention 71
5.14 Relationship Between Demographic Profile (Income) and Green Food Purchase Intention 71
5.15 Mediation Effects 72
5.16 Relationship Between Attitude towards Green Food and Green Food Purchase Intention 72
5.17 Conclusion 73
5.18 Managerial Implications 74
5.19 Theoretical Implications 74
5.20 Limitations 75
5.21 Future Research 76

REFERENCES 78

APPENDIX 88

UMS
UNIVERSITI MALAYSIA SABAH

LIST OF TABLES

		Page
Table 3.1	Items and Their Sources	32
Table 3.2	Rules of Thumb About Cronbach's Alpha (*a*) Coefficient Size	34
Table 4.1	Profile of Respondents	38
Table 4.2	Factor Analysis of Consumers' Perception	41
Table 4.3	Factor Analysis of Attitude Towards Green Food	42
Table 4.4	Factor Analysis of Green Food Purchase Intention	43
Table 4.5	Reliability Analysis on Variables of the Study	44
Table 4.6	Mean and Standard Deviation for Variables in the Study	45
Table 4.7	Pearson Correlations Matrix of Study Variables (N=200)	47
Table 4.8	Regression Analysis of Consumers' Perception (Knowledge and Green Food Attributes) and Attitude Towards Green Food	48
Table 4.9	Regression Analysis of Demographic Profile (Age, Education Level, Gender, and Income) and Attitude Towards Green Food	49
Table 4.10	Regression Analysis of Consumers' Perception (Knowledge and Green Food Attributes) and Green Food Purchase Intention	50
Table 4.11	Regression Analysis of Demographic Profile (Age, Education Level, Gender, and Income) and Green Food Purchase Intention	51
Table 4.12	Regression Analysis of Attitude Towards Green Food and Green Food Purchase Intention	52
Table 4.13	Mediating Effect of Attitude Towards Green Food on the Relationship Between Education Level and Green Food Purchase Intention	55
Table 4.14	Results of Hypothesis Testing	55

UMS
UNIVERSITI MALAYSIA SABAH

Table 5.1 Results of Hypothesis Testing 60

UMS
UNIVERSITI MALAYSIA SABAH

LIST OF FIGURES

		Page
Figure 3.1	Conceptual Framework of the Theory of Planned Behaviour Applied to Green Food Purchase Intention Among Consumers in Kota Kinabalu	25

UMS
UNIVERSITI MALAYSIA SABAH

LIST OF ABBREVIATIONS

SPSS	Statistical Programme for Social Science
WTP	Willingness to Pay
KMO	Kaiser-Meyer-Olkin
TPB	Theory of Planned Behaviour

UMS
UNIVERSITI MALAYSIA SABAH

LIST OF SYMBOLS

α	alpha
β	beta
%	percent
$<$	less than
$>$	more than
$=$	equals to

UMS
UNIVERSITI MALAYSIA SABAH

LIST OF APPENDIX

		Page
Appendix A	Questionnaire	88
Appendix B	Profile of Respondents	92
Appendix C	Factor Analysis of Consumers' Perception	94
Appendix D	Factor Analysis of Attitude Towards Green Food	98
Appendix E	Factor Analysis of Green Food Purchase Intention	101
Appendix F	Reliability Analysis	102
Appendix G	Descriptive Analysis	103
Appendix H	Correlation Analysis	104
Appendix I	Regression Analysis	105
Appendix J	Hierarchical Regression Analysis	110

UMS
UNIVERSITI MALAYSIA SABAH

CHAPTER 1

INTRODUCTION

1.1 Background

The food industry in Malaysia has gone through many drastic changes over the past few decades. Malaysia's food industry is as diverse as the multi-cultures of the country itself. Being a melting pot of many nations, Malaysia culture is a mélange of Malay, Chinese, and Indian influences. Thus, to be able to cater to all the different culture's needs and demands, food manufacturers managed to produce a wide variety of processed foods with Asian tastes. Besides the various races, the shift in the structure of demographic and economic also played a role in the Malaysian food indirectly to produce different foods for different market segments. Directly and indirectly, Malaysian food manufacturers need to ponder upon the thought of what types of food to process for different target markets.

In addition to that, the fact that the consumers' lifestyle is changing also contributed to a change in the scenario of Malaysian food industry. This leads to an increase in the demand of convenience food and health food. Other factors including constant changes of consumers' tastes and likings, different lifestyles together with higher purchasing power of consumers and the up-to-date technology in both agriculture and manufacturing sector also caused a surge in the demand of healthy food. Nowadays, consumers are well-educated and well-informed about their health and wellness. This increase in awareness encourage food producers to manufacture more organic food, functional food, natural food, enriched and fortified food, and also green food.

In his study, Fraser (2001) identified the top three most alarming factors concerning food are food safety, environmental issues, and also animal welfare. All these factors are important and compulsory concerns in all aspects of the food manufacturing from sourcing of raw materials, processing, storage, and distribution. This is to ensure that the foods reaching the end consumers' hands are safe,

UMS
UNIVERSITI MALAYSIA SABAH

wholesome, healthy, and nutritious for human consumption. All these three factors correlate with each other according to a consumers' perspective (Blanford *et al.*, 2002).

As the era developed, Malaysians are more educated and are concerned about the environment, food safety, and also animal welfare. Thus, this led to consumers purchasing green foods as green foods are believed to be better, safer, and healthier than the normal conventional produced foods. As a result of this, consumers perceived that their actions will reduce the impact on the natural environment and be able to improve the status of animal welfare (Passille & Rushen, 2005). The change in this trend has put tremendous pressures on food manufacturers to obtain the proper approval and certification from appropriate certification institutions or issuing agencies. Besides that, this also pressured the food producers to oblige by the rules and regulations regarding food.

As the world is gradually putting an emphasis on the aspects of green concept, thus, it is a good timing for firms to embrace green concept in all aspects of their business such as in manufacturing, processing, marketing, and also distribution. This is important for firms who are profit-driven and would like to possess competitive advantages over their competitors. Green marketing is considered one of the top trends in modern agribusiness. Welford (2000) also commented that green marketing can help to preserve the natural environment besides fulfilling customers' needs and wants. It will benefit the society in a sustainable way. Efficient strategies implemented in green marketing can lead to an increase in purchase intention of green products, especially green foods.

The green purchasing behaviours of consumers varies from country to country. In the Malaysian perspective, this green concept is still relatively new to the nation regardless of the numerous green campaigns that have been carried out to inform the public. The progressive efforts by the Malaysian government on the green products and green movement can be seen when the "Ministry of Energy, Green Technology, and Water (KeTTHA)" was established in 2009. The main purpose of this ministry is to provide a conducive environment to support the

UMS
UNIVERSITI MALAYSIA SABAH

advancement of green technology and to create awareness of green technology, environment, and food production, among other related issues. The green products market especially green food is still at the infancy stage in Malaysia. Thus, it is vital for green food producers to fully comprehend and be aware of the needs of their future consumers as well as knowing that Malaysia is a country consisting of multi races. Thus, the aim of the study is to investigate Malaysians' perception, focusing on Kota Kinabalu consumers, regarding green food and their green food purchase intention given the numerous advantages of such food in the area of developing sustainable agriculture, natural resources conservation, and also manufacturing process which is friendly to the environment.

1.2 Problem Statement

The main framework of this study is based on the Theory of Planned Behaviour (TPB) (Azjen, 2002), which was an extension of the Theory of Reasoned Action, which was proposed by Fishbein and Azjen in 1975. A high number of studies had been conducted upon green consumer research based on these two theories (Chan & Lau, 2001; Oreg & Katz-Gerro, 2006). Particularly, most studies adapted the Theory of Planned Behaviour in studies such as assessing consumers' behaviours towards food products, for instance, the purchase of organic food (Chen, 2007), intention to purchase genetically modified food products (Townsend & Campbell, 2004), and intention to purchase organic food (Smith & Paladino, 2010). Food is becoming an important focus nowadays, since food consumption is a negotiation about what someone will and will not, let into his or her own body (Dupuis, 2000). However, the down side to this is that most of these studies have focused more on consumers in United States and European countries and only few has brought the setting of Southeast Asian countries. Thus, Johri and Sahasakmontri (1998) proposed that more researches investigate about the green concept in countries like Malaysia and Indonesia. Phuah, Rezai, Mohamed, and Shamsudin (2011) studied about green food purchase intention particularly in West Malaysia, thus, they suggested similar studies to be conducted in Sabah and Sarawak.

In Robinson and Smith's study (2002), their study concluded that people in the elder group of 61-70 were more likely to buy sustainably produced foods

UMS
UNIVERSITI MALAYSIA SABAH

compared with other age groups. Moreover, research conducted by Brooker, Eastwood and Orr (1987) concluded that the majority of population that is more concern about foods produced locally, such as green foods and organic foods, are the elderly population. However, on the other hand, research evaluating purchasers of both green foods and locally produced organic foods found that they are most likely to be from the younger generation, whilst some researches concluded that age does not influence the purchase intentions of green foods (Misra, Huang & Ott, 1991). Besides that, in their study, Robinson and Smith noted that purchase intentions of foods that have been produced sustainably did not have any differences on demographic profile such as education level, gender, and household annual income. Previous research on the relationships between the education level, gender, and monthly annual income with the purchase intentions of green foods, however, yield mixed results. Thus, more research should be done in the future to enhance the results of the relationships of demographic characteristics with their purchase intention on green foods.

In Liu, Pieniak, and Verbeke's (2013) study, they found out that consumers in China possess a high apprehensiveness regarding green food but insufficient information about the green food concept. There are two reasons why consumers' level of knowledge and awareness play an important part in deciding the growth stages of the green food market in China. The first reason is that there is still a certain population in China that still does not possess any sort of awareness about green food. Most of the consumers did not purchase green food is due to the limited knowledge and information about green food (Yin *et al.*, 2010). Ma and Qin (2009) found that the more knowledge a consumer has about green food, the higher the purchases and expenditure of the consumer. Secondly, consumers are lacking of detailed knowledge to differentiate the characteristics and attributes between green food and those of conventional food. In general, Chinese consumers generally hold positive attitudes towards green food especially with regards to its nutrition, safety, quality, and the taste. However, majority of the Chinese population are not frequent purchasers whom demonstrate a weak consistency between attitudes and their actual behaviour. Thus, the authors suggested further research to be conducted to determine the relationship between consumers'

UMS
UNIVERSITI MALAYSIA SABAH

knowledge about green food and their attitude towards these foods which will lead to their purchase intention. This is important in order to fix the inconsistency of previous results and to compare these results from those obtained in the Malaysian context.

Another limitation of Robinson and Smith's study was that they utilized a single item to measure the attitude variable. This was in accordance to the authors' needs to restrict the length of their study. Therefore, they suggested that multiple-item, scaled variable should be utilized in future researches which might lead to overall increase in predicting variance predicting the purchase intentions of consumers.

Tan and Lau (2010) in their study of consumers' attitude towards the environment and green products commented that their results of their study should be exercised with care because the respondents of their exploratory study consisted of only university undergraduate students. Thus, they recommended that a wider cross section of Malaysian population from different walks of life should be encompassed in future research.

As a concluding remark, the problem statement for this study is to what extent does consumers' perceptions and demographic profile has an influence on consumers' green food purchase intention under the mediation of attitude towards green food.

1.3 Research Questions

The research questions for this study are as follows:

a. Do consumers' perceptions (knowledge and green food attributes) have an influence on consumers' attitude towards green food?
b. Does demographic profile (age, education level, gender, and income) have an influence on consumers' attitude towards green food?
c. Do consumers' perceptions (knowledge and green food attributes) have an influence on consumers' green food purchase intention?

PERPUSTAKAAN UNIVERSITI MALAYSIA SABAH
UMS UNIVERSITI MALAYSIA SABAH

d. Does demographic profile (age, education level, gender, and income) have an influence on consumers' green food purchase intention?
e. What is the effect of consumers' perceptions (knowledge and green food attributes) and demographic profile (age, education level, gender, and income) on consumers' green food purchase intention with attitude towards green foods as a mediator?

1.4 Research Objectives

The research objectives for this study are as follows:

a. To examine the influence of consumers' perceptions (knowledge and green food attributes) on consumers' attitude towards green food.
b. To examine the influence of demographic profile (age, education level, gender, and income) on customers' attitude towards green food.
c. To examine the influence of consumers' perception (knowledge and green food attributes) on consumers' green food purchase intention.
d. To examine the influence of demographic profile (age, education level, gender, and income) on consumers' green food purchase intention.
e. To examine the effect of consumers' perception (knowledge and green food attributes) and demographic profile (age, education level, gender, and income) on consumers' green food purchase intention with attitude towards green foods as a mediator.

1.5 Scope of Study

The scope of this study is essentially a hypothesis testing study in nature. These types of studies usually can be consisted of two types. It can either demonstrate the characteristic of certain relationships, or bring about differences among groups or the independence of two or more variables in a situation (Sekaran, 2003). Besides that, this research is a cross-sectional study whereby it is a form of study in which data are gathered just once, at one specific point in time, perhaps over a certain period, in order to answer a research question (Sekaran, 2003). This is a correlational study whereby the main interest of this study is in delineating the essential variables associated with the problem (Sekaran, 2003). Correlational studies are invariably performed in non-contrived settings.

UMS
UNIVERSITI MALAYSIA SABAH

1.6 Rationale/Significance of Study

Providing satisfaction for customers and developing long-term trustworthy relationships with customers are two of the main goals that companies are trying to reach (Tan & Lau, 2010). This is important for the companies in order for them to maintain their businesses in the ever competitive industry. Nowadays, many food manufacturing firms are embarking on green strategies as a competitive advantage over their competitors. Companies who are driven by profit are basically tempted to adopt the green marketing concept only if consumers possess a high degree of attitude towards the green foods and hence able to translate their attitudes into purchase intentions. However, there are some challenges that are faced by these companies. The challenges are like changes in consumer preferences and the unfavorable consumer perception of green foods. Thus, this study is important to explore how consumers perceive green foods, and their behaviour, especially with regards to their attitudes towards green food.

The results from this study might be able to assist all food producers, food manufacturers, food processors, and also food marketers to further comprehend consumers' attitude and their purchase intention of green foods. This is important for all channels and mediums in the food industry to be able to meet customers' needs and demands by having a deep awareness and understanding of green foods.

Through this study also, it is hoped to also help to promote green foods effectively and efficiently in the future. This can be done by nutrition educators and marketers whereby they could help to create awareness by first understanding the attitudes of consumers.

1.7 Definition of Terms

1.7.1 Green Foods

The definition for green foods in this study is adopted from Liu (2003). According to Liu, green foods refer to foods that are safe to be consumed, are of fine quality, are concerned with humane animal treatment, are nutritious foods, and are produced under the principle of sustainable development. According to Liu also,

UMS
UNIVERSITI MALAYSIA SABAH

References

Abdul, Rahim. H. 2009. *Consumers' intention and factors affecting green food consumption*. Master Dissertation. University Putra Malaysia.

Ajzen, I. 1991. The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*. **50**: 179-211.

Ajzen, I. 2002. Perceived behavioural control, self-efficacy, locus of control, and the Theory of Planned Behaviour. *Journal of Applied Social Psychology*. **32**: 665-683.

Ajzen, I. and Fishbein, M. 1980. *Understanding Attitudes and Predicting Social Behavior*. New Jersey: Prentice Hall.

Allport, G. W. 1935. Attitudes. *In* Murchison, C. (ed.). *Handbook of social psychology*. Worcester: Clark University Press.

Alwitt, L. and Pitts, R. 1996. Predicting purchase intentions for an environmentally sensitive product. *Journal of Consumer Psychology*. **5**(1): 49-64.

AMA. 2009. AMA dictionary, http://www.marketingpower.com/_layouts/Dictionary.aspx. Retrieved 1 April 2013.

Armitage, C. J. and Conner, M. 2001. Efficacy of a minimal intervention to reduce fat intake. *Social Science & Medicine*. **52**: 1517-1524.

Arvola, A., Lähteenmäki, L. and Tuorila, H. 1999. Predicting the Intent to Purchase Unfamiliar and Familiar Cheeses: The Effects of Attitudes, Expected Liking and Food Neophobia. *Appetite*. **32**: 113-126.

Bagozzi, R. and Warshaw, P.R. 1990. Trying to Consume. *Journal of Consumer Research*. **17**(2): 127-140.

Baron, R. M. and Kenny, D. A. 1986. The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*. **51**(6): 1173-1182.

Beale, D. A. and Manstead, A. S. R. 1991. Predicting mothers' intentions to limit frequency of infants' sugar intake: Testing the theory of planned behavior. *Journal of Applied Social Psychology*. **25**: 285-301.

Blackwell, R., Miniard, A. and Engel, A. 2006. *Consumer Behaviour*. (9th edition). Orlando: Harcourt.

UMS
UNIVERSITI MALAYSIA SABAH

Blanford, D., Bureau, J. –C., Fulponi, L. and Henson, S. 2002. Potential Implications of animal welfare concerns and public policies in industrialized countries for international trade. *In* Krissoff, B., Bohman, M. and Caswell, J. (eds.). *Proc. Global Food Trade and Consumer Demand for Quality.* New York: Kluwer Academic Press.

Brooker, J., Eastwood, D. B., and Orr, R. H. 1987. Consumers' perceptions of locally grown produce at retail outlets. *Journal of Food Distribution Research.* **18**:99-107.

Brown, G. and Haris, C. 1992. The US forest service: Toward the new resource management paradigm? *Society and Natural Resources.* **5**: 231-245.

Bunning, M. 2001. Nipah Virus Outbreak in Malaysia, 1998-1999. *Journal of Swine Health and Production.* **9**(6): 295-299.

Chan, R. Y. K. and Lau, L. B. Y. 2001 Explaining green purchasing behavior: A cross-cultural study on American and Chinese consumers. *Journal of International Consumer Marketing.* **14**: 9-40.

Chen, M. -F. 2007. Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits. *Food Quality and Preference.* **18**: 1008-1021.

CHT. 2008. 17th Dec 2008: Malaysia Frozen Food Processors Association (MFFPA) official press release or 'Saving the Malaysia Seafood Export Industry' in relation to EU ban to importing Malaysian Seafood, http://shtnetwork,wordpress.com/category/eu-ban-malaysian-seafood/. Retrieved 18 April 2013.

Coddington, W. 1993. *Environmental marketing: positive strategies for reaching the green consumer.* New York: McGraw-Hill.

Cohen, J. 1998. *Statistical Power Analysis for the Behavioral Sciences.* New Jersey: L. Erlbaum Associates.

Comrey, A. L. and Lee, H. B. 1992. *A first Course in Factor Analysis.* New Jersey: Hillsdale.

Cooper, D. R. and Schindler, P. S. 2008. Business Research Methods. (10th edition). New Jersey: McGraw Hill.

Department of Environment. 2006. *Malaysia Environmental Quality Report 2006.* Ministry of Natural Resources and Environment Malaysia.

Dupuis, E. 2000. Not in my body: rBGH and the rise of organic milk. *Agriculture and Human Values.* **17**: 285-295.

UMS
UNIVERSITI MALAYSIA SABAH

Eagles, P. F. J. and Muffitt, S. 1990. An analysis of children's attitudes towards animals. *Journal of Environmental Education.* **21**(3): 41-44.

Eagly, A. H. 1987. *Sex differences in social behavior: A social-role interpretation.* New Jersey: Lawrence Erlbaum Associates.

Euromonitor International. 2004. *Consumer Foodservice in Malaysia, Global Market Information Database.* Euromonitor.

Field, A. 2005. *Discovering Statistics Using SPSS.* London: Sage.

Fishbein, M. and Ajzen, I. 1975. *Belief, attitude, intention and behavior: An introduction to theory and research.* Reading: Addison-Wesley.

Fraser, D. 2001. The 'new perception' of animal agriculture: legless cows, featherless chickens, and a need for a genuine analysis. *Journal of Animal Science.* **79**(3): 634-641.

Frewer, L. J., Howard, C., Hedderley, D. and Shepherd, R. 1996. What determines trust in information about food-related risks? Underlying psychological constructs. *Risk Analysis.* **16**: 443-600.

Godin, G. and Kok, G. 1996. The theory of planned behavior: A review of its applications to health-related behaviors. *American Journal of Health Promotion.* **11**(2): 87-98.

Gracia, A. and Magistris, T. 2008. The demand for organic foods in the South of Italy: a discrete choice model. *Food Policy.* **33**: 386-396.

Gronhoj, A. and Olander, F. 2007. A Gender Perspective on Environmentally Related Family Consumption. *Journal of Consumer Behavior.* **6**: 218-235.

Grunert, K. G. B. L., Bredahl, L. and Brunso, K. 2004. Consumer perception of meat quality and implications for product development in the meat sector: a review. *Meat Science.* **66**(2): 259-272.

GTP Roadmap. 2010. Government Transformation Programme, www.pemandu.gov.my/GTP/. Retrieved 3 September 2013.

Gustri, A. 2004. The Government must be Totally Transparent in Handling Avian Flu. *Aliran Monthly.* **24**(9): 184-194.

Hair Jr., J. F., Black, W. C., Babin, B. J., Anderson, R. E. and Tatham, R. R. 2006. *Multivariate Data Analysis.* (6th edition). New Jersey: Pearson Prentice Hall.

Hartman Group. 1997. *Food and the Environment: A Consumer's Perspective, Phase 2.* Bellevue: Hartman Group.

UMS
UNIVERSITI MALAYSIA SABAH

Hill, H. and Lynchehaun, F. 2002. Organic milk: attitudes and consumption patterns. *British Food Journal.* **104**(7): 526-542.

Howard, J. A. and Sheth, J. N. 1969. *The Theory of Buyer Behaviour.* London: John Wiley and Sons, Inc.

Hoyer, W. D. and MacInnis, D. J. 2007. *Consumer Behavior.* (4th edition). Boston: Houghton Mifflin.

Hutchins, R. and Greenhalgh, L. 1997. Organic confusion: sustaining competitive advantage. *British Food Journal.* **99**(9): 336-338.

Issanchou, S. 1996. Consumers expectations and perceptions of meat and meat product quality. *Meat Science.* **43**: 5-19.

Jin, M. and Zhao, C. 2008. Consumers' behaviour intention and purchasing behaviour of green agricultural products. *Chinese Rural Economy.* **5**: 44-55.

Johri, L. M. and Sahasakmontri, K. 1998. Green marketing of cosmetics and toiletries in Thailand. *Journal of Consumer Marketing.* **15**: 265-281.

Jolly, D. A. 1991. Determinants of Organic Horticultural Products Consumption based on a sample of California consumers. *Acta Horticulturae.* **6**(4): 141-148.

Kalafatis, S., Pollard, M., East, R. and Tsogas, M. 1999. Green marketing and Ajzen's theory of planned behaviour: a cross-market examination. *Journal of Consumer Marketing.* **16**(5): 441-460.

Kleiner, A. 1991. What Does it Mean to be Green? *Harvard Business Review.* **69**: 38-47.

Laroche, N. and Zhou, L. 1996. Brand familiarity and confidence as determinants of purchase intention: an empirical test in a multiple brand context. *Journal of Business Research.* **37**(10): 115-120.

Laroche, M., Bergeron, J. and Barbaro-Forleo, G. 2001. Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing.* **18**(6): 503-520.

Lea, E. and Worsley, T. 2005. Australians' organic food beliefs, demographics and values. *British Food Journal.* **107**(11): 855-869.

Li, X. 2007. *Purchasing behaviour of urban consumers to green food - A survey on green milk in Nanjing City.* Master thesis. Nanjing Agricultural University.

Liu, L. J. 2003. Enhancing sustainable development through developing green food: China's option, http://www.unctad.org/trade_env/test1/meetings/bangkok4/chinaPPT.pdf. Retrieved 20 April 2013.

UMS
UNIVERSITI MALAYSIA SABAH

Liu, Z. J. and Qiao, J. 2011. Consumers' cognition of certificated food and its influential factors - A survey in Dalian City. *Consumer Economics.* **27**(4): 11-14.

Liu, R., Pieniak, Z. and Verbeke, W. 2013. Consumers' attitudes and behaviour towards safe food in China: A review. *Food Control.* **33**: 93-104.

Lloyd, H., Paisley, C. and Mela, D. J. 1993. Changing to a low fat diet: Attitudes and beliefs of UK consumers. *European Journal of Clinical Nutrition.* **47**: 361-373.

Lyons, K., Lockie, S. and Lawrence, G. 2001. Consuming 'Green': the symbolic construction of organic foods. *Rural Society.* **11**(3): 197-210.

Ma, J. and Qin, F. 2009. Consumers' cognition of safe agricultural products and its determinants - An empirical study on consumer behaviour to organic food of urban consumers in Beijing. *China Rural Economy.* **5**: 26-34.

MacCallum, R. C., Widaman, K. F., Zhang, S. and Hong, S. 1999. Sample size in factor analysis. *Psychological Methods.* **4**(1): 84-99.

Magnusson, M., Arvola, A., Hursti, U., Aberg, L. and Sjoden, P. 2001. Attitudes towards organic foods among Swedish consumers. *British Food Journal.* **103**(3): 209-226.

Mainieri, T., Barnett, E. G., Valdero, T. R., Unipan, J. B. and Oskamp, S. 1997. Green buying: The influence of environmental concern on consumer behavior. *The Journal of Social Psychology.* **137**: 189-204.

McEachern, M. G. and Willock, J. 2004. Producers and consumers of organic meat: A focus on attitudes and motivations. *British Food Journal.* **106**(7): 534-552.

Meng, F. 2007. Consumption characteristics of food safety. *Consumer Economics.* **23**(1): 85-88.

Messick, S. 1981. Evidence and ethics in the evaluation of tests. *Educational researcher.* **10**(9): 9-20.

Ministry of Health. 2001. *Ministry of health (MOH), Annual Report.* Ministry of Health, Malaysia.

Misra, S., Huang, C. L. and Ott, S. L. 1991. Georgia consumers' preference for organically grown fresh produce. *Journal of Agribusiness.* **9**:53-65.

Moorman, C., Diehl, K., Brinberg, D. and Kidwell, B. 2004. Subjective knowledge, search locations, and consumer choice. *Journal of Consumer Research.* **31**: 673-680.

UMS
UNIVERSITI MALAYSIA SABAH

Mostafa, M. M. 2007. Gender differences in Egyptian consumers' green purchase behavior: The effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies.* **31**: 220-229.

Nunnally, J. C. and Bernstein, I. H. 1994. *Psychometric theory.* (3rd edition). New York: McGraw-Hill.

Ooi, P. A. 1992. Role of Parasitoids in Managing Diamondback Moth in the Cameron Highlands, Malaysia. *In* Talckar, N. S. (ed.). *Diamond back Moth and Other Crucifer Pests.* Proc. Of the 2nd International Workshop. AVRDC. Shanhua. Taiwan. pp. 255-262.

Oreg, S. and Katz-Gerro, T. 2006. Predicting proenvironmental behavior cross-nationally: Values, the theory of planned behavior, and value-belief-norm theory. *Environment and Behavior.* **38**: 462-483.

Ottman, J. 1992. Sometimes consumers will pay more to go green. *Marketing News.* Pg. 16.

Padel, S. and Foster, C. 2005. Exploring the gap between attitudes and behaviour: understanding why consumers buy or do not buy organic food. *British Food Journal.* **107**(8): 606-625.

Pallant, J. 2007. *SPSS Survival Manual: A Step by Step Guide to Data Analysis using SPSS for Windows.* Berkshire: Open University Press.

Passille, A. M. and Rushen, J. 2005. Food safety and environmental issues in animal welfare. *Rev. sci. tech. Off. Int. Epiz.* **24**(2): 757-766.

Perception. (n.d). http://www.businessdictionary.com/definition/perception.html. Retrieved 18 March 2013.

Pett, M. A., Lackey, N. R. and Sullivan, J. J. 2003. *Making sense of factor analysis: The use of factor analysis for instrument development in health care research.* California: Sage Publications.

Phuah, K. T., Rezai, G., Zainalabidin Mohamed and Mad Nasir Shamsudin. 2011. Consumers' Awareness and Consumption Intention Towards Green Foods. *International Conference on Management (ICM 2011) Proceeding.* 917-926.

Phuah, K. T., Rezai, G., Zainalabidin Mohamed and Mad Nasir Shamsudin. 2011. Consumers' Intention to Purchase Green Foods in Malaysia. *International Conference on Innovation, Management and Service.* Singapore. 112-118.

Phuah, K. T., Rezai, G., Zainalabidin Mohamed and Mad Nasir Shamsudin. 2012. Factors Influencing Public Intention Towards Purchasing Green Food In Malaysia. *OIDA International Journal of Sustainable Development.* **4**(2): 51-60.

UMS
UNIVERSITI MALAYSIA SABAH

Piron, F. 2002. Singaporean husbands and grocery shopping: An investigation into claims of changing spousal influence. *Singapore Business Review.* **24**: 51-65.

Qiao, G. H., Guo, T. and Klein, K. K. 2012. Melamine and food safety and health scares in China: comparing households with and without young children. *Food Control.* **26**: 378-386.

Qin, J. C., Li, W. S., and Qin, J. Z. 2003. Differences and relationship among organic food, green food and hazard free agricultural products. *Modernizing Agriculture.* **1**: 38-45.

Rezai, G., Zainalabidin Mohamed, Mad Nasir Shamsudin and Phuah, K. T. 2011. Demographic and Attitudinal Variables Associated with Consumers' Intention to Purchase Green Produced Foods in Malaysia. *International Journal of Innovation Management and Technology.* **2**(5): 401-406.

Rimal, A., Fletcher, S. M. and McWatters, K. H. 1999. Actual Purchase vs. Intended Purchase: Do Consumers Buy What They Say? Tennessee: American Agricultural Economics Association.

Robinson, R. and Smith, C. 2002. Psychosocial and Demographic Variables Associated with Consumer Intention to Purchase Sustainably Produced Foods as Defined by the Midwest Food Alliance. *Journal of Nutrition and Education Behaviour.* **34**: 316-325.

Samdahl, D. and Robertson, R. 1989. Social determinants of environmental concert: Specification and test of the model. *Environment and Behaviour.* **21**(1): 57-81.

Schiffman, L. G. and Kanuk, L. L. 2007. *Consumer Behavior.* (9th edition). New Jersey: Pearson Prentice Hall.

Schwepker Jr., C. H. and Cornwell, T. B. 1991. An Examining of Ecologically Concerned Consumers and Their Intention to Purchase Ecologically Packaged Products. *Journal of Public Policy and Marketing.* **10**: 77-101.

Sekaran, U. 2003. *Research Methods for Business: A Skill Building Approach.* (4th edition). New Jersey: John Wiley & Sons, Inc.

Shaharudin, M. R., Jacqueline, J. P., Suhardi, W. M. and Shamsul, J. E. 2010. Purchase Intention of Organic Food; Perceived Value Overview. *Canadian Social Science.* **6**(1): 70-79.

Shamdasani, P., Chon-Lin, G. and Richmond, D. 1993. Exploring green consumers in an oriental culture: Role of personal and marketing mix. *Advances in consumer research.* **20**: 488-493.

UMS
UNIVERSITI MALAYSIA SABAH

Shi, Y., Cheng, C. W., Lei, P., Wen, T. J. and Merrifield, C. 2011. Safe food, green food, good food: Chinese Community Supported Agriculture and the rising middle class. *International Journal of Agricultural Sustainability.* **9**(4): 551-558.

Smith, S. and Paladino, A. 2010. Eating clean and green? Investigating consumer motivations towards the purchase of organic food. *Australasian Marketing Journal.* **18**: 93-104.

Social Welfare Policies and Services for the Elderly: A Country Report (Malaysia). 2007. *The 5th ASEAN & Japan High Level Officials Meeting on Caring Societies: Collaboration of Social Welfare and Health Services, and Development of Human Resources and Community ~ Community Services for the Elderly~.* Tokyo. Japan. 27-30 August.

Soontonsmai, V. 2001. *Predicting intention and behavior to purchase environmentally sound or green products among Thai consumers: An application of the Theory of Reasoned Action.* Unpublished Doctor of Philosophy. Nova Southeastern University.

Sparks, P. and Shepherd, R. 1992. Self-identity and the theory of planned behavior: Assessing the role of self-identification with "green consumerism". *Social Psychology Quarterly.* **55**(4): 388-399.

Sparks, P., Hedderley, D. and Shepherd, R. 1992. An investigation into the relationship between perceived control, attitude variability and theconsumption of two common foods. *European Journal of Social Psychology.* **22**: 55-71.

Squires, L., Juric, B. and Cornwell, T. 2001. Level of market development and intensity of organic food consumption: cross-cultural study of Danish and New Zealand consumers. *Journal of Consumer Marketing.* 18(5): 392-409.

Straughan, R. D. and Roberts, J. A. 1999. Environmental segmentation alternatives: A look at green consumer behavior in the new millennium. *The Journal of Consumer Marketing.* **16**: 558-575.

Sudiyanti, S. 2009. *Predicting Women Purchase Intention For Green Food Products in Indonesia.* Master Thesis in Business Administration. Gadjah Mada University.

Symonds, P. M. 1924. On the loss of reliability in ratings due to coarseness of the scale. *Journal of Experimental* Psychology. **7**: 456-461.

Tabachnick, B. G. and Fidell, L. S. 2007. *Using Multivariate Statistics.* New York: Pearson Education Limited.

UMS
UNIVERSITI MALAYSIA SABAH

Tan, B. C. and Lau, T. C. 2010. Attitude towards the Environment and Green Products: Consumers' Perspective. *Management Science and Engineering.* **4**(2): 27-39.

Tang, X. Y., Li, S. P. and Jiang, Z. D. 2010. Motivation, intention and behaviour of safe agricultural products - a survey in Nanjing City. *Soft Science.* **24**(11): 53-59.

Tanner, C. and Kast, S. W. 2003. Promoting sustainable consumption: Determinants of green purchases by Swiss consumers. *Psychology and Marketing.* **20**: 883-902.

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

Thompson, G. and Kidwell, J. 1998. Explaining the Choice of Organic Produce: Cosmetic Defects, Prices, and Consumer Preferences. *American Journal of Agricultural Economics.* **80**(2): 277-278.

Tikka, P., Kuitunen, M. and Tynys, S. 2000. Effects of educational background on students' attitudes, activity levels, and knowledge concerning the environment. *Journal of Environmental Education.* **31**: 12-19.

Tong, X. L. 2006. Intention and purchasing behaviour of agricultural products - An empirical study on urban citizens in Wenzhou City. Master thesis. Zhejiang province. Zhejiang University.

Towler, G. and Shepherd, R. 1992. Application of Fishbein and Ajzen's expectancy-value model to understanding fat intake. *Appetite.* **18**: 15-27.

Townsend, E. and Campbell, S. 2004. Psychological Determinants of Willingness to Taste and Purchase Genetically Modified Food. *Risk Analysis.* **24**: 1385-1393.

Waltz, C. F. and Bausell, R. B. 1981. *Nursing research: Design, statistics, and computer analysis.* Philadelphia: F.A. Davis Co.

Wang, H. M., Qiao, J. and Ning, Y. L. 2012. Influential factors on consumers' willingness to purchase safe food - a study on consumption of urban consumers to green certificated pork of in Beijing. *Chinese Journal of Animal Science.* **48**(6): 48-52.

Wang, X., Xiao, X. J., Zhang, A. G. and You, W. P. 2009. Consumers' attitude towards organic food in Nanjing city. *Journal of Anhui Agriculture Science.* **37**(14): 6795-6804.

Webster, C. 2000. Is Spousal Decision Making a Culturally Situated Phenomenon? *Psychology and Marketing.* **17**: 1035-1058.

UMS
UNIVERSITI MALAYSIA SABAH

Welford, R. 2000. *Hijacking environmentalism*. London: Earthscan.

Yin, S. J., Wu, L. H., Du, L. L., and Chen, M. 2010. Consumers' behaviour intention to organic food in China. *Journal of the Science of Food and Agriculture*. **90**: 1361-1367.

Zeithaml, V. A. 1988. Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*. **52**: 2-22.

Zhang, H. Y. 2010. Consumer behaviour to green agricultural products and its influential factors in Guangzhou City. *Journal of Northwest A & F University (Social Science Edition)*. **10**(4): 53-56.

Zhang, X. X. 2007. *Consumer behaviour in green food management - An empirical study in Shanghai City*. Master thesis. Shanghai Jiaotong University.

Zhang, L. X. and Han, L. L. 2009. Consumers' cognition purchasing behaviour to safe food e a survey on fresh food in Shanghai City. *Chinese Agricultural Science Bulletin*. **25**(4): 50-54.

Zhang, H. Y., and Wang, H. J. 2009. Consumers' willingness to pay for green agricultural products in Guangzhou City. *Journal of Agrotechnical Economics*. **6**: 62-69.

Zhang, T. and Wu, X. M. 2010. Consumers' purchasing behaviour to green food. *Commercial Research*. **12**: 118-121.

Zhang, F. D., Zhang, J. Q., Zhao, B. Q., Shi, C. Y., He, X. S., and Zhang, J. 2002. Market access of hazard free agricultural products and its relevant policies. *Plant Nutrition and Fertilizer Science*. **8**(1): 3-7.

Zhu, Q., Li, Y., Geng, Y. and Qi, Y. 2013. Green food consumption intention, behaviors and influencing factors among Chinese consumers. *Food Quality and Preference*. **28**: 279-286.

Zikmund, W. G. 2003. *Business research methods*. (7th edition). California: Thomson South-Western.

UMS
UNIVERSITI MALAYSIA SABAH