

Green food consumption in Malaysia: a review of consumers' buying motives

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Abstract

The term 'sustainable' has become a buzz word in today's business world. Consumption of green food is just one facet or 'trip' to the whole journey of sustainable development. This paper explores and synthesizes the findings of research on green food consumption in Malaysia. The already conducted studies in Malaysia have revealed various demographic and psychographic factors contributing to consumers' intension to buy green food. This study revealed that majority of Malaysians consider food safety and health issue to be their prime reason for buying green food. To ensure the long term sustainability, the green food as well as the broad food industry in Malaysia must evidently understand the consumers' buying motives of green food. Although mentionable limitation of the paper is the reliance on only published literature, this can be used as input for further large scale empirical research. The paper concludes with implications and suggestions for further research.

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Introduction

Food safety is important to the food industry operators as consumers look for safe, high quality and wholesome food products. Consumers are gaining more information and knowledge about the pesticide, insecticide, fungicide and herbicide that are used in food production (Teng *et al.*, 2011). They are becoming more concerned about the health and safe aspects of food products (Shawn, 2004). Example of stopping purchasing apple juice by American consumers due to the high amount of pesticides in apple and this led to an economic losses for apple growers and processors in 1999 can be one of the solid evidence to support the idea of increasing the importance of food safety among the consumers (Wagner, 1999; Knight and Warland, 2006). Similarly "Mad Cow Disease" and "Foot and Mouth Disease" have led to the destruction of millions of cattle in Britain which was dramatic economic loss for the beef industry across Europe (CNN, 2000). The phenomenon of food safety and green concept also affect the Malaysian consumers. Malaysian consumers are now looking for wholesomeness, safety, tastiness and healthier foods to have a healthier diet and lifestyle. Many Malaysian consumers are becoming more aware about the food safety while purchasing food products (Radam *et al.*, 2007). Study by Abdul Rahim (2009) also indicates that the consumers are more likely to

have a positive attitude toward green food when they are more concerned about the environmental issues and health consciousness.

On the supply side, there are some green stores in Malaysia that promote green food and technology, environmentally friendly products and services, and which at the same time also make consumers to be aware of the green concept. For example, the Justlife Group Sdn. Bhd. is an organic retail franchise that promotes green products, recycling activities and tries to work with nature in sustainable development. Another example is the Ecogreen Organic Shop which began operating in 1997 and runs an organic product shop, organic café and organic restaurants. They promote organic foods that are good for our health and long term sustainability. The Body Shop is another example of an agro-based beauty shop that sells products which are not tested on animals. They are against animal testing in the cosmetic industry and they use natural materials. The Body Shop also tried to reduce the impact it has on the environment by introducing plastic bottles which are made from 100% recycled materials, by replacing all carrier bags with 100% recycled organically grown cotton and increased the recycled content of gift packaging. In addition, there are other general stores that also sell green product in Malaysia. Apparently the concept of green regarding consumption of food is getting importance to both the consumers and the sellers of

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food products. Comprehensive investigations are needed to shape this new but emerging as well as indispensable issue of food consumption.

Sustainable food consumption: a challenge for sustainable development

Developing countries like Malaysia are facing great challenges in sustainable development. Deforestation, water quality, household waste and industry waste are some of the reasons that cause environmental deterioration. The Malaysian Ministry of Housing and Local Government (2008) reported that solid waste consist of household waste (36.5%), paper (27%), plastic (16.4%), steel (3.9%), glass (3.7%) and others (12.5%). The sources of air pollution come from industries (including power stations), motor vehicles and open burning activities (Department of Environment, 2006). In 2009, the Department of Environment (DOE, 2009) found 20,702 water polluted sites. These include manufacturing industries (47.15%), sewage treatment plants (46.74%), animal farms (3.72%) and agro-based industries (2.39%). Thus this is the peak time for Malaysian consumers to be truly conscious about the environment and accordingly shift their consumption towards green products to back the venture of sustainable development of the country.

Considering the rapid and accelerating growth of the green food market in Malaysia, an evaluation of green food consumers is considered to be vital. First, this assessment can serve as the muscular foundation for further more in-depth research on green food consumption in Malaysia. Secondly, the synthesis of the existing research findings has the latent to guide the present and potential green food marketers in Malaysia by providing consumer insights and recommendations for grabbing this highly potential market.

Purpose of the study

The main purpose of this study is to know the factors that influence Malaysian consumers to buy or intend to buy green food. Accordingly as an exploratory study which is completely based on literature review, the study is anticipated to provide a foundation for more thorough future research. Specifically, the expected prime contribution of the study is to enrich the understanding of consumer behavior regarding green food by integrating the findings from past studies.

Materials and Methods

In selecting research studies for inclusion in

this synthesis, a systematic review of the relevant literature was conducted according to some steps in order. The review process was started in August 2012 with updates occurring till March 2013 in line with suggestions by Franke (2001), Hunter and Schmidt (2004) and Rosenthal (1995) and. For identifying the relevant articles, first a general keyword search was conducted in Google and in databases such as EBSCO, Emerald, ScienceDirect, and SCOPUS. Keywords included “factors affecting green/organic food purchase in Malaysia”, “factors affecting green product purchase in Malaysia”, “factors affecting green/organic food consumption in Malaysia”, “factors affecting the purchase intention of green/organic food in Malaysia”, “factors affecting the purchase intention of green product in Malaysia”, “green/organic food consumption in Malaysia”, “green product consumption in Malaysia”, “sustainable food consumption in Malaysia”, and “determinants of green food consumption in Malaysia”. Finally, as suggested by Randolph (2009), the references of the retrieved articles were repeatedly searched until a point of saturation was reached. After that, the inclusion of the articles was narrowed down to match the focus of this paper following the review guidelines of Hart (1998).

From the sources named above, a total of 17 peer-reviewed journal articles, 5 conference proceedings, and 1 government report were revealed. Out of the total papers, 9 articles were found directly relevant to the topic of interest of this study. The research design applied in the selected papers was mainly survey research.

Green product and food: myths and meanings

Ottman (1998) defines green product as product in which typically nontoxic, made from recycled materials, or minimally packaged. Mishra and Sharma (2010) characterizes green product based on a few features, including original grown, recycle/reusable, contain natural ingredients, contain recycled content, do not pollute environment, contain approved chemical and not test on animals.

Green foods refer to foods that are safe to be consumed, of fine quality, nutritious, concerned with animal welfare and are healthy, and which are produced under the principle of sustainable development (Liu, 2003). Sometimes the terms green food and organic food are used interchangeably which is not correct. Green foods consist of two groups. The first group of green foods allows for the use of a certain limit of chemicals but the second group refers to organic foods (Teng *et al.*, 2011). Therefore, all green foods are not organic foods. Rather the first

group lays a good foundation to develop the second group (Teng *et al.*, 2011). Although the title of this paper is about 'green food', the study will cover both 'green food' and 'organic food'.

At present, the term organic food remains loosely defined along dimensions such as biological, naturally produced, green, environmentally friendly, sustainable and limited use of artificial chemicals (Goldman and Hylton, 1972; Klonsky and Tourte, 1998; Torjusen *et al.*, 1999). Organically produced food is generally regarded as healthier, safer, better tasting and more nutritious than conventionally produced food (Krystallis and Chryssohoidis, 2005; Perrini *et al.*, 2010).

Green food consumers in Malaysia

There is a rising trend of organic food product consumption among consumers all over the world (Mohamad *et al.*, 2014). This rising purchasing pattern is due to the heightened level of consumer awareness on food safety, and health concerns (Mohamad *et al.*, 2014). In Malaysia, organic food still remains a niche market, but one that is growing rapidly. The growing demand can be seen with the increase in the number of organic farming and producers. In 2001, for instance, only 131 hectares (ha) in Malaysia were organic farms (Mohamad *et al.*, 2014). In the next five years, the land area for organic farms rapidly grew by 18 times to 2,367 ha, of which 962 ha are perhaps certified organic, as surveyed by the Swiss Research Institute of Organic Agriculture (FiBL) and the Foundation Ecology & Farming (SOEL), Germany, in 2007 (Mohamad *et al.*, 2014).

People who purchase organic food have been classified into four groups namely (Davies *et al.*, 1995): greens; people who are concerned with the environment, food phobic; those who are concerned about chemical residues in food, humanists; people who are preoccupied with factory farming methods and hedonists; people who believe that a premium products must be better and importantly taste better.

In Malaysia, consumers have a low level of importance on food safety concerns but they have a higher level of health consciousness (Shaharudin *et al.*, 2010). Abdul (2009) found that in Malaysia, consumers who are concerned about their health and the environment will most likely have a positive attitude towards green foods.

The characteristics of the Malaysian culture offer insight into their purchasing behaviors in relation to organic food products. Hofstede (1991) described Malaysia as a collectivist society that is characterized by high uncertainty avoidance and high power distance. Consumers from a high uncertainty

avoidance culture are more likely to be uncomfortable with trying unfamiliar products and deviating from established consumption habits. Due to the credence nature of organic food, Malaysians are likely to be more cautious and skeptical of the genuineness of organic food labels as well as their benefits (Voon *et al.*, 2011).

As a society with high power distance, Malaysians are also very conscious of their social ranks and tend to accord higher regard for individuals with higher social status or possessing expert knowledge in a domain. This implies that they may be more likely to consume organic food if they are advised to do so by experts or significant others (Voon *et al.*, 2011). Likewise, they also tend to place higher trust on the quality of products that are accredited by agencies from more developed countries such as the United States, Australia and Japan (Voon *et al.*, 2011).

The cultural traits of Malaysian consumers suggest that demand for organic food products may be more sustained and predictable (Voon *et al.*, 2011). This is because the bulk of consumption are expected to be by consumers who are already convinced of the benefits and genuineness of organic food and are 'committed' to the organic lifestyle (Voon *et al.*, 2011). They are also less likely to switch products due to their risk avoidance (Voon *et al.*, 2011).

Motives of Malaysian consumers for buying green food

The three factors which are always considered by the consumers are food safety, protection of the environment and animal welfare (Fraser, 2001). From the public's point of view, these three factors link together (Blandford *et al.*, 2002). There is also a tendency to assume that environmental concern and food safety are much more important than animal welfare (Sorensen *et al.*, 2001). However, according to Yiridoe *et al.* (2005), the major concern on buying the food products includes food safety, environment impact, animal welfare, whereas commodity attributes included health, taste, freshness and packaging. According to Ninth Malaysia Plan (2006-2010), there is an increase in using the chemical and hazardous substances in the agricultural sector. In Malaysia there are three main sources of air pollution which come from the agricultural activities (irresponsible open burning activities), motor vehicles and the industries (Department of Environment Malaysia, 2006). Therefore in a country like Malaysia, to reduce the environmental issues and increase the sustainable production and consumption pattern, immediate changes in human behavior and cultural practices are needed (Oskamp, 2000).

Green purchasing behaviors differ from country to country. Although, green products exist in Malaysia, the concept of green is still very new to the Malaysian. The market for green products in Malaysia is at the beginning of its development. Since Malaysia is a multiracial and cultural society, it is inevitable for green producers to understand their potential consumers well. Thus, the objective of the study is to investigate the factors that inspire Malaysian consumers to buy or intend to buy green foods derived from past studies.

The following summary table (Table 1) of the selected papers has been prepared following the headings outlined by Roberts and Taylor (2002) with some modification in line with the focus of this study. A number of premises that integrate the factors influencing the Malaysian consumers' intention to purchase green food can be constructed based on the outcomes reflected in the selected papers. This is shown in Table 2.

Premise 1: Food safety issue

Food safety has been found as one of the primary reasons for purchasing green food in Malaysia. According to the findings of Rezai *et al.* (2012), among other issues consumers are more concerned about food safety. Consumers are aware that green foods are safe to consume (Rezai *et al.*, 2012). Teng *et al.* (2011) found that one of the determinants of consumers' intention to buy green foods is the concern of food safety which is reflected in behavioral control. The study of Ahmad and Juhdi (2010) revealed that the intention to purchase organic products was heavily influenced by, among other factors, the safety aspect of the product. Shaharudin *et al.* (2010) concluded that consumers place relatively low level of importance on food safety concern in their intention to buy organic food products. It appears that the issue of food safety is one of the major concerns for Malaysian consumers in their choice of green food except one study (Shaharudin *et al.*, 2010) so far with little contradictory findings.

Premise 2: Health concern

Several studies have found health consciousness to be among the most important criteria for choosing green food. Voon *et al.*, 2011 suggest that health concern together with other issues form the attitude of Malaysian consumers' attitude towards organic food which in turn influences their willingness to purchase organic food. Most buyers of organic food believed that organic food is healthier compared to conventionally grown food (Ahmad and Juhdi, 2010). The statistical results of Shaharudin *et al.* (2010)

show that Malaysian consumers place relatively high level of importance on health consciousness and perceived value in their intention to purchase organic food products.

Premise 3: Environmental concern

Few studies of the selected papers revealed that environmental concern is one of the important factors in consumers' purchase intention of green food. Aman *et al.* (2012) unveiled that environmental knowledge and environmental concern are significantly important for green purchase intention in general, regardless of green product categories. Environmental concerns together with some other issues were found to be influential in forming consumers' attitude towards organic food (Voon *et al.*, 2011). Teng *et al.* (2011) uncovered that environmental friendliness along with other factors significantly influences Malaysian consumers' green foods purchasing intention. According to Shariff *et al.* (2012), attitudes and knowledge are strong predictors of behavioral intention on sustainable food consumption. In their study attitudes were measured using several items including environmental protection, fair trade, health, food taste etc. The term 'knowledge' was used to indicate the environmental literacy of the consumers particularly related to food consumption.

In addition, in the study of Shariff *et al.* (2012), two types of barriers namely monetary and time barriers as well as personal norms (community and peer pressure) were found to be negatively influential in sustainable food consumption which is perhaps due to the fact that the study was conducted on low income group.

Premise 4: Perceived value

Many consumers especially who are supposed to be very much rational may quite rationally consider the perceived value or benefit of the green food in deciding to buy or not to buy. Shaharudin *et al.* (2010) found that perceived value is one of the top important considerations to the consumers for purchasing organic food. Perception on organic product worth of purchase was elicited to be heavily influential in the purchase intention of organic food (Ahmad and Juhdi, 2010). In addition, desirability of organic food attributes was assumed to form Malaysian consumers' attitude towards organic food which in turn was used to predict actual purchase (Voon *et al.*, 2011).

Premise 5: Consumer demography

Many of the selected studies have come up with some findings reflecting the influence of consumers' demography on their purchase intention or actual

Table 1. Illustrative research concerning consumers of green food in Malaysia

Author	Year and location of study	Type of work	Sample	Design and objective	Data collection approach and analysis tools	Key findings
Rezai <i>et al.</i>	2012, Malaysia	Journal article (full length research paper)	1355	Theory of Planned Behavior (Ajzen, 2002) was used to determine the consumers' awareness and consumption intention towards green foods.	Questionnaire survey. Reliability tests (Cronbach's alpha) and chi-square tests using SPSS 16.0.	Suggested that consumers with higher education levels, higher income, who live in urban areas, are Chinese and age below 35 year old were more likely to be aware of and have a positive perception towards green food consumption. Consumers who were more concerned with food safety issues have higher intention to purchase green foods in Malaysia.
Shariff, Amran, and Goh	2012, Penang, Malaysia	Journal article	196	Theory of planned behavior (Ajzen, 1991) model was used to examine various determinants that influence consumers' behavioural intention on sustainable food consumption among low income group in Penang, Malaysia.	Survey questionnaire, multiple regression analysis.	Attitudes and knowledge towards behavioural intention on sustainable food consumption were found to have positive and significant influence on behavioral intention on sustainable food consumption. In contrast, personal norms and perceived barriers towards sustainable food products were found to negatively influence the behavioral intention on sustainable food consumption.
Zakersaleh i and Zakersaleh i	2012, Klang Valley, Malaysia	Conference paper	134	Intended to explore the role of attitude in Malaysian consumers' purchase intention of green packaged products.	Mall-intercept personal survey. Correlation analysis, multiple regression analysis and ANOVA using SPSS 16.0.	Concluded with significant impact of attitude, gender, age, income, and race on purchase intention having significantly poor statistical evidence and without any clarification of green packaged food.
Aman, Harun, and Hussein	2012, Sabah, Malaysia	Journal article	384	Theory of Reasoned Action (Ajzen and Fishbein, 1980) was used to investigate the influence of environmental knowledge and concern on green purchase intention among consumers, and simultaneously examining the effect of attitude as a mediator.	Self-administered questionnaire (online and offline) survey. Exploratory factor analysis, reliability analysis, correlation analysis, and multiple regression analysis.	Environmental knowledge and environmental concern were disclosed to be significantly important for green purchase intention in general, regardless of green product categories. Attitude was found to have a partial mediation effect on the relationship between environmental concern and green purchase intention.
Teng <i>et al.</i>	2011, Peninsular, Malaysia	Conference paper	1355	Theory of Planned Behavior (Ajzen, 2002) was used to determine the extent to which selected socioeconomic/demographic characteristics and attitudes influence the consumers' intention to purchase green foods in Malaysia.	Questionnaire survey. Binary logistic regression.	Consumers' education, income level, food safety concern and environment friendliness were found to influence in purchase intention of green foods.
Voon, Ngui and Agrawal,	2011, Kuching, Malaysia	Journal article	406	Theory of Planned Behavior (Ajzen, 1991) was used to explore the impact of consumers' attitude, subjective norms and affordability on willingness to pay which was considered to predict the actual purchase of organic food.	Questionnaire survey. Exploratory factor analysis (EFA) and structural equation modeling (SEM).	Found significant impact of attitude and subjective norms on willingness to purchase where the impact of affordability was not found significant. Health and environmental concerns together with trust of organic food claims and desirability of organic food attributes were assumed to form Malaysian consumers' attitude towards organic food.
Ahmad and Juhdi	2010, Klang Valley, Malaysia	Journal article	177	Studied the impact of demography and other factors affecting consumers' intention to buy organic food.	Mall-intercept personal survey. Factor analysis and Pearson correlation using SPSS 15.0.	Perception on organic product worth of purchase and health & safety issues were elicited to be heavily influential in the purchase intention of organic food. Women compared to men, were also found to be more willing to buy organic food.
Rahbar and Wahid	2010, Penang, Malaysia	Journal article	250	Examined the effect of consumer attitude towards environmental protection and knowledge of environmental issues, which affects actual purchase behavior.	Mall-intercept questionnaire survey. Factor analysis and multiple regression analysis	Found attitude toward the role of government and industry and financial role in environmental protection significantly influence consumers' actual purchase behavior.
Shaharudin <i>et al.</i>	2010, Kedah, Malaysia	Journal article	150	Examined the influence of health consciousness, perceived value, food safety concern, and religious factor towards customer purchase intention of organic products.	Self-administered questionnaire survey. Factor analysis and regression analysis using SPSS 17.0.	Revealed health consciousness and perceived value are relatively more important for purchasing organic food. Consumers place low level of importance on food safety concern and religious factor in their intention to purchase organic food products.

Table 2. Premises identified from selected papers regarding consumers' purchase intention of green food

Premise 1	Food safety issue
Premise 2	Health concern
Premise 3	Environmental concern
Premise 4	Perceived value
Premise 5	Consumer demography
Premise 6	Attitude toward the role of government and other agencies

purchase of green food. Rezai *et al.* (2012) found that consumers with higher education levels, higher income, who live in urban areas, are Chinese and age below 35 year old were more likely to be aware of and have a positive perception towards green food consumption. Results of the study undertaken by Teng *et al.* (2011) show that consumers' education and income level, along with other issues, are vital in purchase intention of green food. Interestingly Ahmad and Juhdi (2010) concluded that women compared to men, were found to be more willing to buy organic food. In another study Zakersalehi and Zakersalehi (2012) mentioned that gender, age, income and race have significant impact on the purchase intention of green packaged food, although the result was not found to be statistically sound and the concept of 'green packaged food' was not clarified.

Premise 6: Attitude toward the role of government and other agencies.

Only one study out of nine selected papers examined this issue and found that attitude toward the role of government and industry and financial role in environmental protection significantly influence consumers' actual purchase behavior (Rahbar and Wahid, 2010). The study (Rahbar and Wahid, 2010) argued that the significant result on the relationship between attitude toward the role of government and industry in environmental protection and actual purchase behavior emphasizes how this attitude affects consumers' actual purchase behavior. They further argued that the consumers' perception the vital role of government and industry in protecting the environment will lead them to support government policies on the environment. Consumers believe that government and industry actions can reduce environmental problems more quickly than their own purchasing actions (Rahbar and Wahid, 2010).

Implications and further research

The study, in its limited scope has concentrated on a mentionable part of the existing knowledge base on the concerning issue. As all inclusive studies

on the paradigms and dimensions of green food consumption are scarce, this study can be resourceful to the concerned academicians and researchers. However, the study can also be considered as a tool for policy development regarding to this emerging macroeconomic issue confronting the countries around the world. The study can also prove itself resourceful in understanding the dimensions of consumer attitudes towards environment-friendly consumption.

The scope for further research arising from the study can be two dimensional. First, an empirical study can be conducted on the consumers to specify factors affecting attitude towards green food consumption and later identify their willingness for such. Stratified studies can also be conducted on different strata of consumers with a view to establish a 'Consumption Index' of green foods that may have multi-dimensional use in research and policy issues. Second, large scale studies may be conducted on the supply side of green food industry to identify the impact of consumer attitudes on the choice, quantity and other aspects of production of this emerging business.

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