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## **A LONGITUDINAL STUDY OF FACTORS EXPLAINING ATTITUDE OF ORGANIC FOODS**

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### **ABSTRACT**

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Aim/Purpose	The objective of this study is, for a given set demographics, to investigate the effect of knowledge, awareness and perception of consumers on the attitude/preferences of consumers for organic product in Kelantan.
Background	Organic foods are food products which are free from any chemicals and are safe to be consumed by consumers. The consumers are getting more health conscious and the awareness about the harmful effects of chemical is increasing. However, the trend towards purchasing organic food is now growing among Malaysians. This leads to the decline of market growth and therefore there is a need to study consumer attitude towards organic food.
Methodology	This study predicts consumer attitude based on their awareness, knowledge and perception. Data was collected through a self-administered questionnaire where 144 consumers were randomly selected in the supermarkets. The data were analyzed by using descriptive analysis and regression analysis to test the hypotheses.
Contribution	This paper studies the effect of demographic factor, knowledge, perception, awareness on the attitude of consumers with respect to organic foods in Kelantan. This research demonstrates the critical role of knowledge and education in shaping the attitude towards organic food. This research is useful to fill the gaps in the Malaysian literature regarding the importance of the knowledge and its relationship with the attitude.
Findings	The findings suggested the significant and positive relationship between knowledge, education level, occupation sector and the respondents' attitude

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towards organic food.

Recommendations for Practitioners	The consumer knowledge about the benefits of organic foods in Malaysia should be promoted more through television and social media as this influences their attitude when purchasing organic foods at the market. The quantity and the availability of the organic foods should be based on the demand of the consumers. The government should promote the benefits of organic foods to consumers more often to change their perceptions about organic foods in Malaysia.
Recommendation for Researchers	More studies can be done regarding the behavior and intention of consumers with respect to organic foods either in Kelantan or other states in Malaysia.
Impact on Society	The findings can help consumers in understanding the benefits and advantage of organic foods toward health. Hence, all parties, including the government, policy makers and manufacturers should encourage and grow consumer interest in organic food by making the food more accessible and available.
Future Research	This study focuses on Kelantan only and does not represent other states. Due to this, further research is required in order to generalize the findings of this study aimed at determining the effect of demographic factors on the behavior of consumers with respect to organic foods.
Keywords	Organic food, Awareness, knowledge, attitude, perception, demographic factor

## INTRODUCTION

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Increasingly, current consumers understand the importance of good health, and they search for health foods to avoid diseases and improve the quality of life. People are more concerned about what they eat and hence the kinds of foods they put on the shopping list (Abdul Latiff et al, 2016). Malaysians are showing a greater interest in purchasing healthier and more hygienic foods (Muhamad & Abdul Latiff, 2017). The demand for organic food products has increased globally by about 10%-15% or more (Zhen, 2013). Although Malaysian consumers are well aware of the benefits of organic food, lack of proper labeling and the high price of these products create less interest for Malaysia, especially those who are not living in the capital city (Boon, 2012). The majority of the consumers of organic food are Chinese followed by Malaysians and Indians. The organic product can be expected to continue increase rapidly, even if the price gets higher. This is a likely result increasing demand as Malaysians continue to become more concerned about improvement health; and concerned about the sustaining the environment. The perception of consumers will be affect if the information about the health and other benefits of organic foods is made more accessible. Traditionally, quality attributes such as the freshness and taste have been emphasized by most of the consumers in making their food choices (Torjusen et al, 2001; Dimara et al, 2003). However, sensory analysis is a major consideration of consumers, along with invisible attributes such as microbial and toxicological protection and nutritional value in deciding on their food budget (Thierman, 2000). Many buyers believe that organic foods taste better (Roitner et al, 2008). Consumers usually depend on information stated on the packaging. However, there is a larger environmental and psycho-social context that informs our understanding of consumer preferences for organic foods. Anderson et al. (2006) stated that organic foods are harmless, healthier and has greater nutritional value. Farmers in Malaysia organic farming focus on four key principles (Sung, 2012). The first is health that includes soil, plant, animal, humans, and environment; the second is the farming practices must be based on living ecological cycle and systems. The third is the practices should be fair for life opportunities. The last key principle is that a precautionary and responsible manner should be practiced protecting the generations and environment. The South-East Asian Market report regarding organic foods and drinks, states that the market growth of organic food products in Malaysia is lower than the potential demand because of the lack of knowledge and consumer awareness of the value organic foods (Sarah, 2013).

People seemed to be conservative in their choice of organic foods products because they are not sure about the benefits of the products (Voon, 2011). Malaysian government had launched the good agricultural practices (GAPs) to promote to the farmers, animal and fish breeders to enhance the objectives of promoting organic farming and improve the food quality, safety, security and productivity. Furthermore, Malaysian Farm Accreditation Scheme (SALM) was implemented by the Department of Agriculture in 1992 to recognize and certify the farms that adopt good agricultural practices (GAPs). SALM was first developed for fresh fruits and vegetables sector that operated in an environmental friendly way and yield products that are safe and high quality (Rezai et al, 2011). In addition, Malaysia Organic Scheme (SOM) has been introduced as a certification that accredits the farmer who operates his farm in compliance with the standard conditions set by the national organic standard. It provides guidelines on the production, processing, labeling and marketing of plant based on organically produced foods (Rezai et al, 2011). Attitude toward organic food is different from country to country. The concept of organic is still quite to Malaysian people, especially those with lower income. Although organic food campaigns have been carried out for quite sometimes but it is not becoming part of Malaysian's household dietary pattern. In addition, the absence of proper labeling on the organic foods packaging can cause consumers to hesitate purchasing the products especially when it comes to smaller cities like Kelantan. Abdul Latiff & Ayob (2014) stated that consumers are more confident in purchasing food with labels. Food label includes brand, logo, price, expiry date, nutritional value, ingredients to specific labels like genetically modified organism (GMO), eco-friendly and organic products. Therefore, labeling on the organic foods products is important marketing tool because it creates trust in the brand among consumers (Eco Thrifty Living, 2013). Hence, the objective of this study is, for a given set demographics, to investigate the effect of knowledge, awareness and perception of consumers on the attitude of consumers for organic product in Kelantan.

## MATERIALS AND METHOD

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A knowledge, Attitude and Practices (KAP) is partially adopted as the conceptual framework to explain the relationship between consumers' knowledge and attitude. It also assumes the perception of consumer towards a particular product, awareness and knowledge can explain their attitude (Figure 1). These are three main conceptual independent determinants to shape the attitude towards organic food. Consumer attitude is made up of their knowledge and awareness towards the concept of organic foods which they accumulate from their lifetime. Consumer attitude and their buying behaviour may also base on the external factors such as socio demographic profiles and influence by their religious, knowledge, information and advertisement. All this factors will build their attitude and lead them to practice organic purchasing behaviour. Thus, the following hypothesis can be drawn:

H<sub>01</sub>: There is no significant relationship between the three main conceptual independent determinants and consumer attitude of organic food.

H<sub>02</sub>: There is no significant relationship between respondent's demographic factor and their attitude of organic food.

This study used data collected from a survey which was conducted in August 2016 until September 2016 in Kelantan. A random sampling method was used and the survey was done in supermarkets such as Pantai Timur, KB Mall and EON Mall because consumers' from all walks of life usually shop at supermarkets. A total of 144 respondents were interviewed using structured questionnaire. A Likert scale of 1 to 5 (1 represent strongly disagree and 5 represent strongly agree) was used to measure the consumer knowledge, awareness, perception and attitude on 24 statements formulated in relation to organic foods consumption. Consumer socio-demographic backgrounds were also recorded via survey. Data were analyzed by using SPSS 21.0. Descriptive statistics and regression analysis were used to analyze the information gathered from the questionnaire. Descriptive analysis was used to summarize the socio-demographic data into a simpler summary to make it easier to understand

and measure while linear regression approach was used to determine the relationship between the three conceptual independent determinants and consumer attitude.

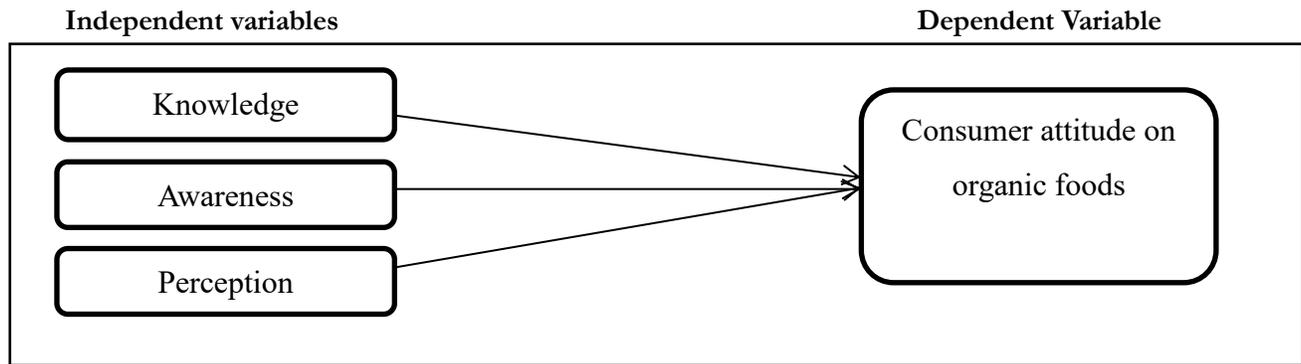


Figure 1: Conceptual Framework (Adopted from KAP)

(Source: Remesh *et al.*, 2013)

## RESULTS AND DISCUSSION

### Demographic Profile

The results in Table 1 showed that most of the respondents are female (65.3%). Majority of respondents were aged between 18-25 years (50.7%). Malay respondent is the highest (87.5%) in Tanah Merah region. Most of the respondents are married (51.4%). About the educational level, University graduates (64.6%) showed the highest percentage. On the other hand, 6 to 10 people (52.1%) for household size indicates the highest percentage. Next related to occupation, others occupation option (39.6%) showed the highest percentage. Besides that, household income mostly earns between RM3001-RM5000 (32.6%).

Table 1: Demographic Background of Respondents

Characteristics	Frequency (n=144)	Consumers (%)
<b>Gender</b>		
Male	50	34.7
Female	94	65.3
<b>Age</b>		
18-25 years	73	50.7
26-30 years	17	11.8
31-40 years	17	11.8
41-50 years	18	12.5
51-60 years	16	11.1
Above 61 years	3	2.1
<b>Race</b>		
Malay	126	87.5
Chinese	12	8.3

Indian	6	4.2
<b>Marital Status</b>		
Single	70	48.6
Married	74	51.4
Divorce	0	0
<b>Educational Level</b>		
Primary school	2	1.4
Secondary school	24	16.7
College	20	13.9
University	93	64.6
No formal education	0	0
Others	5	3.5
<b>Household Size</b>		
Below five people	66	45.8
6-10 people	75	52.1
11-15 people	3	2.1
<b>Occupation sector</b>		
Housewife	6	4.2
Private Sector	19	13.2
Self-employed	24	16.7
Retired	8	5.6
Public sector	30	20.8
Others	57	39.6
<b>Household income</b>		
Below 250 US\$	42	29.2
251 US\$ - 750 US\$	46	31.9
751 US\$ - 1250 US\$	47	32.6
Above 1251 US\$	9	6.3

(Source: Survey, 2016)

### ***Regression Analysis***

Multiple regression approach was employed to estimate the relationship between the three main conceptual independent determinants and some selected demographic factors with attitude of organic food. The results of the multiple regression are presented in Table 2. Three out of eight variables were positively and statistically significant suggesting that the association between knowledge, education level and occupation sector. Based on the statistically significant coefficients, knowledge is an important determinant in shaping attitude. This finding indicates that, the more knowledgeable respondents become, the better attitude they will have towards organic foods. The education level is

related to the knowledge of a respondent, the respondent who has higher education level will has the more knowledge. And the higher education of the respondent, the good occupation sector the respondent will work. The good occupation sector such as government sector because the government workers are sponsored workers since their study time. The other independent variables which are perception, awareness, race, marital status, and household income were not significantly significant. The results show that the education level is positively and significantly related to the consumers' attitude at 5% intention level of significance. It means that the education level has significant positive effect on consumers' attitude towards organic food products. The perception, awareness, race, marital status, and household income are positively related to consumers' attitude toward organic food products though they not statistically significant at 5% level of significance. According to the result, knowledge and occupation sector are statistically and positively significant and therefore, these two determinates play key role in shaping consumer attitude towards organic food. The outcome of this study is in accordance with results of other studies that highlighted the importance of knowledge (Saleki, Seyedsaleki & Rahimi, 2012). The R square (the regression coefficient) was 0.396 indicating the variance in the dependent variable is explained by the model. Saunders et al (2012) stated that the regression coefficient varies between -1 and +1 whereas -1 represents a complete negative relationship while +1 represents a perfect relationship. This also means that the used model explains 39.6% of the variance in consumers' attitude and it has a positive relationship with the independent variables.

**Table 2: Regression Analysis Results**

Independent Variables	Beta	t-value	Significant
Knowledge	0.308	2.961	0.004
Perception	0.147	1.377	0.173
Awareness	0.112	1.076	0.285
Race	0.037	0.376	0.708
Marital Status	0.199	1.883	0.064
Education Level	0.212	2.155	0.034
Occupation Sector	0.466	4.461	0.000
Household Income	-0.201	-1.816	0.073
R-square = 0.396 Adj R-square = 0.330 Significant F = 6.058			

(Source: Survey, 2016)

## CONCLUSION

The main purpose of the study was to discover the relationship between the independent variables which are knowledge, awareness, perception, race, marital status, education level, occupation sector and household income towards consumers' attitude of organic food products. A primary survey was done in Tanah Merah, Kelantan area for 144 respondents by distributing self-administered of questionnaires randomly. Regression analysis was executed to find out the results. In this study, the independent variables such as knowledge, education level and occupation sector are statistically significant with the attitude of consumers toward organic food products. In light of this, the finding suggests that there may be specific opportunities for government, policy makers and other parties to focus more on creating knowledge about organic food in order to increase the demand especially among those working for others sectors but not government. On the other hand, food manufacturers also

need to disclose more information and features of the products. Because that will increase the consumers' knowledge which will lead to the positive attitude toward organic food products. There are a few limitations which should be acknowledged. First, this research was conducted in a small city in Malaysia. Therefore, it may impact the findings as it is limited to one city. In this study, the number of respondents is less than 200. This can arguably impact the credibility of the generated results. Thus, when considering these findings, one should be aware that the data collection procedure and the limitations.

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