Journal of Agribusiness Marketing • Vol. 4 (2011): 51-67

RELATIONSHIPS BETWEEN ATTITUDE DIMENSIONS AND THE INTENTION TO PURCHASE GREEN FOOD PRODUCTS AMONG MALAYSIAN CONSUMERS

Hairazi Rahim*
Mad Nasir Shamsudin
Alias Radam
Zainal Abidin Mohamed

ABSTRACT

The determinant of attitude dimensions is very important in understanding the attitude role as predictor to the intention to purchase green food products. However, as one of the main predictors to the intention behavioural as suggested in the Theory of Reasoned Action (TORA) model, the measurement of attitude dimensions has been identified by many researchers as difficult and hard to determine. Therefore, this paper aims to explore the underlying dimensions that influence consumers' intentional behaviour in purchasing green food products and also the relationships between attitude and intention among Malaysian population. This is conducted using 10 questions on both salient beliefs as well as evaluation of the outcomes and intention of the subject to green food products, measured against a six-point Likert scale. A total of 600 respondents were interviewed via a structured questionnaire where respondents had to rank their agreement and the level of importance of the statements given in the questionnaire to gather information on the attitude dimensions that influence them to purchase green food products. Based on the analyses of the study, these underlying dimensions of attitude are found to have positive relationships with the Malaysian consumers' intention to purchase green food products.

Keywords: Attitude towards green food, intention behaviour, exploratory factor analysis

INTRODUCTION

Changes in decision making in the purchase of food among Malaysian consumers have brought about a new dimension in Malaysia's food industry as the changing interest from conventionally produced food products to environmentally friendly food products should be seen as a manifestation of the increasing environmental consciousness among people who demand for safer and environmental friendly food products. Kirkpatrick (1990) reported that environmentalism is the most important issue for businesses in the 1990s

*Faculty of Environmental Studies, Universiti Putra Malaysia
E-mail : hairazi1985@gmail.com

and the next decade. Theoretically, this idea of changes has been widely supported by other researchers (McIntosh, 1991; Nwakanma, Sammy, & Rita, 1994). Even though some researchers identified that environmental concern is a consideration when making purchasing decisions among the majority of consumers, there are other elements such as attitudinal, beliefs and intentional behaviour dimensions among consumers that may influence the purchase of environmental friendly products as stated in many studies.

Attitude has been the focus of the majority of research on green consumer behaviour. Basically, attitudinal dimensions have been incorporated into general measures of environmental concern. General attitude has also been shown to be a significant predictor towards improving the environment through purchasing environmentally sound products (Maloney, Ward, & Braught, 1975). However, the overall results regarding the environmental attitude-behaviour relationship have not been certain. Numerous researches have revealed low relationships between environmental attitudes and behaviours. Some of the factors that have caused the weakening of this relationship include the perception that personal action does not give a huge positive impact on environmental problems, the inconvenience behaviours that lead to the perception that people are not environmentally responsible, lack of information or skills, delayed rewards, and lack of social reinforcement (Lipsey, 1977).

However, the studies to determine the attitude factors with the intention to purchase green food products may yield a positive relationship which means the voluntary action to do the action or intent to do so, but we need not really hope for a full transformation of the intention to see the actual behaviour. As stated by Ryan, Erickson and De Young (2003), farmers in the US Midwest were more interested in joining conservation programmes that gave tidy manageable habitats than programmes that created untidy habitats without management such as the natural growth in forests or riparian buffers. The attitude can be assumed as perception of an individual's belief that clearly resulted from their participation or their action. The invisible or unseen benefits may not be a huge attraction to people to participate in environmental friendly programmes or to purchase green food products since the output is not clear.

In the meantime, consumers generally appear to overstate environmental concerns in comparison to their actual pre-purchase considerations. Furthermore, general environmental concerns may be of limited use in the prediction of environmentally responsible behaviour. Many researchers have also recognised the importance of specificity in assessing the relationship between environmental attitude and behaviour.

ATTITUDE AND GREEN FOOD PRODUCTS

Attitude can be described as a hypothetical construct that represents an individual's degree of like or dislike for an item. Attitudes are generally positive or negative views of a person, place, thing or event which are often referred to as the attitude object. People can also be conflicted or ambivalent toward an object, which means that they simultaneously

possess both positive and negative attitudes towards the item, the green food product. In the meantime, green food products can be determined as food products that are produced according to certain production standards. This means that they are grown without the use of conventional pesticides, artificial fertilisers, human waste or sewage sludge. They are also processed without ionising radiation or food additives. Livestock are reared without the routine use of antibiotics and growth hormones. In most countries, organic produce must not be genetically modified.

Based on the attitude definition, the positive and negative views towards green food products can be changed. For example, attitudes can be changed through persuasion. More important, Breckler and Wiggins (1992) stated that much of attitude research emphasises the importance of affective or emotion components as emotion is a common component in persuasion, social influence and attitude change. Important factors that influence the impact of emotional appeal include self efficacy, attitude accessibility, issue involvement, and message or source features. Self efficacy can be described as a perception of one's own human agency. In other words, the perception of one's own ability to deal with a situation is an important variable to appeal messages because it dictates a person's ability to deal with both the emotion and the situation (Bandura, 1992). For example, if a person is not self-efficacious about his/her ability to impact the global environment, he/she is not likely to change his/her attitude or behaviour about global warming.

Most of the developed countries believe on the impacts of individual action in preserving the environment such as in the changes in purchasing behaviour of common daily used products. A study on Danish recycling programmes found that attitude was the better predictor of intention than the subjective norm based on the Theory of Reasoned Action determinants or predictors for intentional behaviour (Thogersen, 1996). Bell, Erwin and McLeod (1996) also stated that attitude was the better predictor of intention than subjective norm in the context of the relationship between Australians' attitudes toward recycled toilet paper and low phosphate dish washing detergent, subjective norm and intention to purchase and actual purchasing behaviour for such items. A meta-analysis research which included 51 studies on environmentally responsible behaviour conducted by Hines, Hungerford and Tomera (1987) found a relatively weak correlation of 0.374 between attitude and behaviour. This study also reported that individuals who expressed higher levels of environmental concerns were more likely to have reported engaging in such activities as recycling, petitioning, and energy conservation. Hines et al. (1987) also found that the attitude-behaviour relationship was stronger when actual behaviours were assessed and the measures taken from environmental groups as opposed to samples from the general population. Sheth (1971) reported that the environmental attitude was effective in predicting environmental friendly behavioural intentions on the part of American business students.

Basically, the understanding of benefits and impacts to the environment from the consumption of green food products may change the consumer's purchasing behaviour from the conventional one to the alternative, green food products. According to Ottman (1992), consumers accepted green products when their primary needs for performance,

quality, convenience, and affordability were met, and when they also understood how a green product could help to solve environmental problems. The green consumers always consider the negative and positive effects towards environment that may result from their purchasing behaviour (Chern, Ishibashi, Taniguchi, & Yokoyama, 2003). The changes of attitude and consuming pattern considerably ignited the environmental concern's behaviour in food consumption among the developed countries.

Undeniably, Malaysian consumers are still not familiar with the environmentally friendly food products or green food consumption. However, it is important to study theoretically and empirically the Malaysian consumers' intention towards purchasing green food products to enhance their environmental consciousness. Conceptually, this study focuses on studying and exploring the underlying attitude dimensions among consumers and certain factors that affect the intention to purchase green food products whether directly or indirectly.

As competition among food manufacturers increases, Malaysian food producers have to implement new strategies to motivate consumers to choose their products. It is also important for producers to identify the segments among consumers who are environmentally conscious towards green food products and study the factors related to their behaviours on decision making such as knowledge and socio-economic profiles. Producers and marketers need to study and reveal the environmental behaviours of Malaysians and how they are affected by values, attitudes, and socio-economic characteristics in order to produce the relevant goods, maximise profits and at the same time give the maximum benefits to the consumers. The most appropriate way to turn the consumers to green market is to implement environmental friendly or green practices and productions among the producers and manufacturers.

Presently, environmental consciousness is not only an ideology of activities, but a matter of market competition, considerably influencing consumer behaviour world-wide including Malaysia. In addition, the impacts and challenges through the globalisation in technologies of food industry may influence Malaysian producers and marketers. It is vital that the production and use of food products is done in a sustainable manner based on the economic, social and environmental viabilities, especially when the world is now facing many environmental issues related to conventionally produced food products. Understanding the changes in food consumption patterns among Malaysians is necessary in line with the internalisation of certain aspects that influence and ignite these changes. Socio-economic factors could be the main underlying dimensions for consuming green food products among Malaysians. Whether the factors affecting the trend are related directly or indirectly, the investigation and study to identify and determine these factors are important for every party's benefits.

Even though there are very few green products that have been introduced to the public, the intention to purchase green products including green food products can be seen through the increasing number of manufacturers and companies that implement green value in their production processes and marketing strategies. So it is important to determine the

demand for green food products to confirm the existence of green consumers in Malaysia. Since previous studies and reports have established the information of environmental consciousness of food consumption among consumers, this study will examine and investigate Malaysian consumers' intention to purchase environmentally sound or green food products and the motivational factors that affect the intention itself.

Producers and marketers are fully responsible for the safety of consumers as well as the conservation and preservation of the environment. It is undeniable that the main objective of any firms is to maximise profits which means selling as many products as possible with low marginal costs. However, an increasing number of green consumers in global markets may encourage producers and marketers to produce environmentally friendly or green food products. The implementation of environmental friendly or green marketing among producers and marketers through food legislation represents the government's standards and responsibility to this industry and the consumers.

The basic concept of this study was implemented based on the Theory of Reasoned Action (TORA) modelled by Fishbein and Ajzen (1975). However, the investigation of attitude among people towards a subject was just a part of the whole model. This study focuses on investigating the sub-dimensions of consumers' attitude and the relationships between the dimensions to the intention to purchase green food products. This study also internalises the socio-economic factors in determining the relationships. Studies on consumers' attitude have adopted various measures in capturing the factors of attitude itself. The objectives of the study are firstly, to assess the reliability of the developed instrument; secondly, to explore the underlying dimensions of attitude among consumers towards green food products; and finally, to determine the relationships between the attitude dimensions or factors towards the intention to purchase green food products among Malaysian consumers.

METHODOLOGY

Data Collection Procedure

A targeted sample of 620 individuals was interviewed by 4 trained interviewers. This study applies the stratified random sampling procedure to select the respondents who met some requirements or standards such as that the respondents must be 18 years or older and they represented the percentage of whole sample population as in the race proportion that reflected the multiracial society of Malaysia. The interviewers strictly followed the questionnaire instructions to avoid any errors or unpredictable leading questions. The respondents were also briefed about the general information of food products especially about the conventionally produced food products and environmentally friendly or green food products to give some simple understanding of the study. The demographic details included gender, race, age, marital status, household size, family members below 12 years old, education level, occupation and household income were also obtained.

The interviews were conducted in July, August and September 2008 and data was collected using the designed questionnaires via personal interviews by trained interviewers. A

total of 620 questionnaires, which consisted of 3 main sections, were distributed. Two months were taken to conduct interviews in Peninsular Malaysia and one month was spent to distribute the questionnaires in Sabah and Sarawak. Places like shopping malls, markets and residential areas were targeted because of the high population density. Major supermarkets like Giant, Carrefour, Tesco, Jusco and others were chosen in each town because most manufactured green food products were widely available and consumers from different walks of life do their shopping there.

The collected data was checked and verified a number of times to make sure that it was complete and any inconsistent data were deleted from further analysis. Of the 620 questionnaires, 600 questionnaires were used for data analysis (98.68 percent completion rate). The collected data might show some discrepancies for certain variables such as gender, marital status, age, household size and household income. During the data collection female respondents tended to be more willing to answer compared to men. This may be due to the women's role as housewives or daughters who are responsible for purchasing food for the household. Most of the male respondents tended to pass the questionnaire to their wives, daughters or girlfriends during the survey while a proportion of single respondents answered the questionnaires as representatives of their household since they lived together with friends. It certainly related to the value of household income among the respondents. The age of respondents might also have a relation to their marital status. These probabilities may cause discrepancies in the ratio or value of the results.

Instrument and Sampling Procedure

The main consideration for determining the appropriate sample size for this study was from Sudman (1976) that provided the typical sample sizes for studies of human and institutional populations.

Respondents were asked using a structured questionnaire which was both in Malay and English. A pilot study prior to this indicated no discrepancies between the English and Malay version of the questionnaire. Based on the modified TORA model, attitude was divided into two major components namely salient beliefs and evaluation of the outcomes. Both attitude components in the questionnaire consisted of ten questions that were related to the consumers' attitude towards environmental issues such as the quality, taste and price of green food products. A few other issues such as the avoidance of poisonous or hazardous food ingredients, allergic effects of green food products and the convenience in purchasing the green food consumption were included as well in the questionnaire.

In order to conduct the analyses, 10 salient belief items were rated using six-point Likert scale, namely 1 = Definitely disagree, 2 = Quite disagree, 3 = Slightly disagree, 4 = Slightly agree, 5 = Quite agree, 6 = Definitely agree. While obtaining the evaluation of the outcomes, another 10 items were rated using six-point Likert scale, namely 1 = Definitely unimportant, 2 = Quite unimportant, 3 = Slightly unimportant, 4 = Slightly important, 5 = Quite important, 6 = Definitely important. The other important measurement was the intention items that were rated also using six-point Likert scale, namely 1 = Definitely

not purchase, 2 = Most likely not to purchase, 3 = Unlikely to purchase, 4 = Likely to purchase, 5 = Most likely to purchase, 6 = Definitely purchase. The intention variables were measured based on 5 questions designed to know the intention to purchase green food products on the next shopping trip with certain conditions and differences such as:

> 1) If the price of green food products is decreased by 10%, which response best reflects your intention to purchase for the purpose of helping to protect the environment on your next shopping trip?;
>
> 2) Which response best reflects your intention to purchase a green food product for the purpose of helping to protect the environment on your next shopping trip?;
>
> 3) If the price of green food product is increased by 10%, which response best reflects your intention to purchase it for the purpose of helping to protect the environment on your next shopping trip?;
>
> 4) If the price of green food products is 10% higher than conventionally produced food product, which response best reflects your intention to purchase it for the purpose of helping to protect the environment on your next shopping trip?; and
>
> 5) If the price of green food products are the same as conventionally produced food product, which response best reflects your intention to purchase it for the purpose of helping to protect the environment on your next shopping trip?

Values resulting from the sum of all items in intention represent the intention variable value in further analysis of correlation in determining the correlation between the attitudinal dimensions with intention to purchase the green food products.

The Cronbach's alpha coefficient was used to assess the reliability of the Likert scale in the survey by investigating the internal consistency of the responses for both items in salient beliefs and the evaluation of the outcome variables concerning the effect of attitudinal factors on intention to purchase the green food products. Further to the analysis, exploratory factor analysis was performed to identify common threads linking the 20 items (including both variables) for the effect of attitude factors on intention. Factor analysis should be a suitable statistical tool for estimating the underlying factor pattern for a number of attributes which have been consolidated into a manageable sort for analysis. Principal component analysis was used as the factor extraction method and Varimax Normalisation was used as the rotation method only after the Kaiser-Mayer-Olkin (KMO) test was conducted to satisfy the analysis needs and requirements. Bartlett's test of Sphericity and KMO test of sampling adequacy was initially performed on the data to confirm the appropriateness of conducting factor analysis (Tabachnick & Fidell, 2001). The underlying dimensions which occurred in the previous analysis were then analysed using the Pearson Product-Moment Correlation to determine the positive or negative relationships between the sub-variables from both salient beliefs and evaluation of the outcomes with the intention to purchase green food products.

RESULTS AND DISCUSSION

Socioeconomic Profiles of Respondents

From the 600 filled questionnaires, almost 60 percent of the respondents were female and 62 percent of the respondents were Malays. The results also indicated that 47.7 percent of respondents' were aged between 22 and 30 years. The average age of respondents was about 27 with standard deviation of 7.980. About 60.3 percent of respondents were single, 49.7 percent of respondents had between 4 to 6 family members and 54.2 percent of respondents had 1 to 3 family members below the age of 12. As for education, 54.8 percent of respondents possessed secondary school education. About 51.5 percent of respondents were in the private sector while 29.3 percent earned a monthly household income of more than RM5000.

Reliability of the Measurements

Reliability analysis was conducted to ensure that internal consistency was at least maintained, if not improved.

Table 1: Item Reliability Analysis for Attitude Scales

Item	Cronbach's Alpha	
	If Item Deleted	Standardised Items
	Salient Beliefs	
Q1.1 Purchasing green food products will help to protect the environment	0.776	
Q1.2 The quality of green food products is equivalent with conventionally produced food product	0.786	
Q1.3 The taste of green food products is as pleasant as conventionally produced	0.770	
Q1.4 Green food products are likely to have same price as conventionally produced food	0.778	
Q1.5 Purchasing green food products will avoid hazardous/poisonous food ingredients	0.777	
Q1.6 Purchasing green food products will help you save money	0.765	0.792
Q1.7 Purchasing green food products will help the sustainability of food products	0.756	
Q1.8 Purchasing green food products will prevent you from food product allergy	0.757	

Table 1 (Continued)

Item	Cronbach's Alpha	
	If Item Deleted	Standardised Items
	Salient Beliefs	
Q1.9 Purchasing green food products is likely to be better than conventionally produced food products	0.774	
Q1.10 Purchasing green food products is easy and convenient	0.765	
Q2.1 Helping to protect the environment by purchasing green food products is …….	0.877	
Q2.2 The quality of green food products is …….	0.879	
Q2.3 The taste of green food products is …….	0.883	
Q2.4 The price of green food products is …….	0.893	
Q2.5 Being confident of the food safety by purchasing green food products is …….	0.878	
Q2.6 Saving money by purchasing food products is …….	0.882	0.894
Q2.7 Saving the food product usage is …….	0.886	
Q2.8 Preventing you from food product allergy is …….	0.882	
Q2.9 Purchasing green food products is likely to be better than conventionally produced food products	0.881	
Q2.10 Easy and convenient to purchase green food products are …….	0.884	

Note: Cronbach's Alpha, $\alpha > 0.70$ considered satisfactory

Table 1 shows Alpha if item deleted for all of the items did not exceed alpha standardised item. The results indicate that all of the items are reliable and stable.

Dimensionality

Exploratory factor analysis with internal reliability consistencies and mean were employed to examine the underlying dimensions of the consumers' attitude towards environmental friendly food products scale. The Exploratory Factor Analysis (EFA) was carried out to define the underlying structure or dimensions in the data matrix. Ten questions on a six-point Likert scale which dealt with various issues pertaining to green food products were asked. In conducting the EFA, some tests were required to satisfy the analysis needs and requirements. Bartlett's test of Sphericity and KMO test of sampling adequacy were initially performed on the data to confirm the appropriateness of conducting factor analysis (Tabachnick & Fidell, 2001).

Based on Table 2, the Kaiser Mayer-Olkin measure of sampling adequacy test for the set of predetermined items reaches the values of at least 0.755 and 0.896 and Bartlett's test of Sphericity is statistically significant, $x^2 = 1790.351$, $p = 0.000$ and $x^2 = 2782.605$, $p = 0.000$.

Table 2: Kaiser-Mayer-Olkin (KMO) and Bartlett's Test of Sphericity

Variables	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	Bartlett's Test of Sphericity and Significance
Salient beliefs	0.755	1790.351 p = 0.000
Evaluation	0.896	2782.605 p = 0.000

Note: Bartlett's Test of Sphericity significant level $p < 0.000$ and Kaiser-Meyer-Olkin measure of sampling adequacy > 0.60

The advantages of varimax rotation are that the eigenvalue and the percentage of total variance (dimensions of factors) are stabilised and unaffected because the angle of each factor remains the same and does not change by the rotation. Three components of salient beliefs and two components of evaluation of the outcomes were adapted for further analysis which succeeded to suppress the value of factor loading based on the sample size (Hair, Black, Babin, Anderson, & Tatham, 2006). The Exploratory Factor Analysis (EFA) in data extraction performed three factors namely; Products' Significance (PS), Purchase Benefits (PB) and Purchase Attributes (PA) with eigenvalue above 1.0 and total variance explained of 62.296 percent. Eigenvalue is the column sum of squares for a factor; it also represents the mount of variance accounted for by a factor (Hair, et al., 2006). The analysis identifies three latent factors or dimensions that have relationships with Malaysians' intention to purchase green food products.

Salient Beliefs

As shown in Table 3, the Products' Significance (PS) is recognised as the first factor. This factor consists of 4 sub-variables and has a total variance of 3.524 percent; item Q1.9 *Purchasing green food products is likely to be better than conventionally produced food products* has the highest factor loading (0.760). This was followed by item Q1.1 *Purchasing green food products will help to protect the environment* (0.753), item Q1.5 *Purchasing green food products will avoid hazardous/poisonous food ingredients* (0.749) and item Q1.8 *Purchasing green food product will prevent you from food product allergy* (0.680). The results of this factor suggest that well-known effects of green food products that are used have a relationship with the intention to purchase the green food products.
The *Purchase Benefits (PB)* is recognised as the second factor. This factor consists of 3 sub-variables and has a total variance of 16.607; item Q1.6 *Purchasing green food products*

will help you save money has the highest factor loading (0.744). This is followed by item Q1.7 *Purchasing green food product will help you save food product usage* (0.730) and item Q1.2 *The quality of green food products is equivalent to conventionally produced food products* (0.708). The result of this factor suggests that the benefits gained from green food products in terms of physical conditions of the product itself have a relationship with the intention to purchase the green food products.

Table 3: Factor Loadings for Salient Beliefs

Items	Component		
	PS	**PB**	**PA**
Q1.9 Purchasing green food products is likely to be better than conventionally produced food products	.760		
Q1.1 Purchasing green food products will help to protect the environment	.753		
Q1.5 Purchasing green food products will avoid hazardous/poisonous food ingredients	.749		
Q1.8 Purchasing green food products will prevent you from food product allergy	.680		
Q1.6 Purchasing green food products will help you save money		.744	
Q1.7 Purchasing green food products will help you save food product usage		.730	
Q1.2 The quality of green food products is equivalent to conventionally produced food products		.708	
Q1.4 Green food products are likely to be at the same price as conventionally produced food			.803
Q1.3 The taste of green food products is as pleasant as conventionally produced			.711
Q1.10 Purchasing green food products is easy and convenient			.555
Eigenvalue	3.524	1.661	1.045
Variance Explained	35.24	16.607	10.449

Note: Factor loading > 0.40, eigenvalue > 1 and total variance explained > 60 percent

The Purchase Attributes (PA) is another factor which has a total variance of 10.449 percent and comprises 3 sub-variables; the highest factor loading in this factor is item Q1.4 *Green food products are likely to be at the same price as conventionally produced food products* (0.803) followed by item Q1.3 *The taste of green food products is as pleasant as conventionally produced food products* (0.711) and item Q1.10 *Purchasing green food products is easy and convenient* (0.555). The results of this factor suggest that the advantages of green food compared to conventional products have a relationship with the intention to purchase the green food products.

Evaluation of the Outcomes

As shown in Table 4, two components emerge from the factorisation of Evaluation of the Outcomes namely, Product Characteristics (PC) and Individual Importance (II) with eigenvalue above 1.0 and total variance explained of 61.587 percent. The Product Characteristics (PC) is recognised as the first factor. This factor consists of 6 sub-variables and has a total variance of 51.479 percent; item Q2.9 *Purchasing green food products is likely to be better than conventionally produced food products* (0.802) has the highest factor loading (0.801). This is followed by item Q2.8 *Prevent you from food product allergy is*, item Q2.10 *Easy and convenient to purchase green food product is* (0.697), item Q2.7 *Save the food product usage is* (0.675), item Q2.6 *Save money by purchasing food product is* (0.608) and Q2.1 *Helping to protect the environment by purchasing green food product is* (0.605). The results of this factor suggest that product characteristics in the Evaluation of the Outcome from belief have a relationship with the intention to purchase green food products.

Table 4: Factor Loadings for Evaluation of the Outcomes

Items	**Component**	
	PC	**II**
Q2.9 Purchasing green food products is likely to be better than conventionally produced food products	.802	
Q2.8 Prevent you from food product allergy is …….	.801	
Q2.10 Easy and convenient to purchase green food products is …….	.697	
Q2.7 Save the food product usage is …….	.675	
Q2.6 Save money by purchasing food products is …….	.608	
Q2.1 Helping to protect the environment by purchasing green food products is …….	.605	
Q2.4 The price of green food products is …….		.873
Q2.3 The taste of green food products is …….		.719
Q2.2 The quality of green food products is …….		.671
Q2.5 Being confident of food safety by purchasing green food products is …….		.553
Eigenvalue	5.148	1.011
Variance Explained	51.479	10.108

Note: Factor loading > 0.40, eigenvalue > 1 and total variance explained > 60 percent

The Individual Importance (II) is another factor which has a total variance of 10.108 percent and comprises of 4 sub-variables; the highest factor loading in this factor is item Q2.4 *The price of green food product is* (0.873) followed by item Q2.3 *The taste of green food product is* (0.719), item Q2.2 *The quality of green food product is* (0.671) and item Q2.5 *Being confident of the food safety by purchasing green food product is* with the lowest factor loading (0.553). The Evaluation of the Outcomes from the aspect of individual importance has a relationship with the intention among Malaysian consumers to purchase green food products.

Relationships of the Dimensions

Correlation analysis was employed to determine the existence of positive or negative relationships between the dimensions of Salient Beliefs and Evaluation of the Outcomes selected with intention to purchase green food products. As can be seen in Table 5, the coefficient of correlation between PS and intention is 0.600. Based upon the t-statistics value and a 1-tailed test, the null hypothesis can be rejected at the 0.01 significance level ($r = .600$, $p = .000$). This shows that there is a positive correlation between the consumers' attitude of product's significance dimension and their intention to purchase the green food products. Meanwhile, the coefficient of correlation between PB and intention is 0.029. Based upon the t-statistics value and a 1-tailed test, the null hypothesis fails to be rejected at the 0.01 significance level ($r = .029$, $p = .475$). This indicates that there is no positive correlation between the consumers' attitude towards purchase benefit with their intention to purchase the green food products. Furthermore, coefficient of correlation between PA and intention is 0.249. So, the null hypothesis can be rejected at the 0.01 significance level ($r = .249$, $p = .000$). This illustrates an apparent positive correlation between the consumers' attitude of purchase attributes with their intention to purchase green food products. The results also indicate that the coefficient of correlation between PC and intention is 0.634. The null hypothesis can be rejected at the 0.01 significance level ($r = .634$, $p = .000$) the same as the individual importance which exceeds the 0.01 significance level ($r = .217$, $p = .000$). This confirms that there is a positive correlation between the consumers' attitude of product characteristics and also individual importance dimensions with their intention to purchase green food products.

This study found positive relationships between attitude dimensions: PS, PA, PC and II; and the intention to purchase green food products. However, the PB dimension has been found to have a negative relation to the intention. Obviously, the beliefs of benefits gained from the purchase of green food products do not have a relationship with the consumers' intention to purchase the products.

Table 5: Pearson Product-Moment Correlation of Salient Beliefs

Dimension	Intention	
	Pearson Correlation	**Sig. (2-tailed)**
Salient Beliefs		
Product's Significance (PS)	0.600**	0.000
Purchase Benefits (PB)	0.029	0.475
Purchase Attributes (PA)	0.249**	0.000
Evaluation of the Outcomes		
Product Characteristics (PC)	0.634**	0.000
Individual Importance (II)	0.217**	0.000

Note: ** Correlation is significant at the 0.01 (2-tailed) and the numbers in parenthesis are alpha coefficients.

The dimensions that emerge from attitude shows the target characteristics as consumers are easily persuaded in attitude changes towards green food products subject to certain specific dimensions or factors. The Product's Significance (PS) is positively correlated with the intention to purchase green food products among consumers. The product characteristics dimension also indicates the highest value of coefficient correlation with the intention to purchase green food products. These two factors represent both aspects of emotional and physical attractions to the consumers' decision making which consequently influence the green food product's purchasing trend. The belief in significant benefits gained when purchasing green food products whether in terms of safety, health and the positive impacts on the environment contribute to the high positive correlation with consumers' intention. However, the most positive relationship identified is the Product Characteristics (PC) pertaining to the matter of physical characteristics and the invisible good effects or importance when purchasing green food products.

CONCLUSION

This study seeks to determine the Malaysian consumers' attitude and to identify factors that have a positive or negative relationships with consumers' intention to purchase green food products in order to enhance the implementation of sustainable environmental friendly food production, the marketing and the formulation of policies in improving Malaysia's food industry.

Attitude plays a major role in developing the group of consumers who have the intention to purchase green food products. The results consistently agree with the findings of many researchers about the changes in attitude with certain factors that may influence

the intended behaviour whether it is direct or indirectly related to each other. Based on the findings of this study, a few suggestions have been made in terms of theoretical and practical efforts.

Theoretically, attitude that is based on product significance and product characteristics leads to an individual change in behavioural intention towards green food products. These two dimensions, however, are more likely to be close to the interpretation of subject (green food products) but not to the unseen beneficial effects. Practically, direct persuasion through advertisements and other informative mediums can be used by the government to show the efforts in promoting green food products which are eco-friendly and harmless to the environment. Continuous advertisements and information about these green food products can surely influence Malaysian consumers to change from conventional food products to the much better green food products.

As stated, product characteristics are the main attractive traits to influence the consumer's attitude. The enhancement of these attribute levels or standards used may lead to an increase in intention to purchase green food products among Malaysian consumers. Clear and effective information on the significance of green food products to the Malaysian consumers is vital in developing the interest or intention to purchase these products, especially through the mass media or other informative channels since the influential power of these tools are proven in many different environments.

The findings generally indicate that Malaysian consumers are aware of the disadvantages of consuming conventionally produced food products and agree with the advantages of consuming green food products. Although the market for green food products is still not wide in this country, Malaysian consumers are showing a positive perception and attraction towards green food consumption and are respectively influenced by the information and knowledge from television and newspapers.

The findings suggest that firms and producers can change their production management and processes as pioneers of the environmental movement in response to the increasing concern in environmental issues among the global public. Hopefully, the changes will ignite the application of social welfare economics in the management of firms in Malaysia. The results from this study can help producers and marketers to understand and be more sensitive to consumer's needs or demands for a better, safer and healthier production of food products; thus, at the same time, can play some major roles in reducing pollution and conserving the environment, which is a critical resource in all food production.

The findings in this study outline the consumers' characteristics in terms of socio-economic profiles such as gender, education level, income level and other external dimensions. These will also assist marketers to prepare a guideline in determining the target consumers for green food consumption. Price determination of green food products should be done based on the efficient equilibrium price of supply/demand curve and dimensions found, so that it will benefit both the consumers and producers of the food industry. An appropriate way to determine the price of green food products will directly and indirectly maximise the

satisfaction of consumers and optimise the marketers' profit. To conclude, green marketing strategies must be implemented for the good of society, marketers and environment.

Undeniably, the implementation of eco-friendly or green food production and marketing strategies can maximise the satisfaction for the parties involved: consumers and producers. Therefore, the Ministry of Energy, Green Technology and Water has stated a few objectives including to review and formulate policies on green technology, formulate policies to enhance the economic development of green technologies and introduce legislative and regulatory framework to support the development of green technologies in the country. These are sound policies from the government. However; the real application of these policies is questionable due to the low response and involvement from producers and marketers. The government should provide more incentives in order to encourage an attitude to implement these new production and marketing strategies such as the use of green technology machines, and so forth. Policy makers also could provide some expert consultations to the firms to help them adapt to the environmentally friendly or green technology in their production. The information on supporting green technology through government agencies and television or official websites could also be considered as an effort from the policy makers in encouraging Malaysians to be more concerned about this issue.

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