

## DETERMINANTS OF BEHAVIOURAL INTENTION ON SUSTAINABLE FOOD CONSUMPTION AMONG CONSUMERS' OF LOW INCOME GROUP: EMPIRICAL EVIDENCE FROM MALAYSIA

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### Abstract

**Purpose** –This paper aim to examine various determinants that influenceconsumers' behavioural intention on sustainable food consumption among low income group in Penang, Malaysia. In addition, this paper also attempts to empirically test the hypothesized relationship between the determinants (i.e. attitudes, perceived barriers, personal norm and knowledge) and behavioural intention on sustainable food consumption.

**Design methodology/approach** – Survey questionnaire is used to gather data. A total of 196 respondents completed the questionnaire and multiple regression analysis was used to test the hypothesized relationship.

**Findings** –The results indicate thatattitudes, perceive barriers, knowledge are determinants that influence consumers' behavioural intention on sustainable food consumption. Likewise, hypothesized relationship on there is a positive and significant relationship between attitudes and knowledge towards behavioural intention on sustainable food consumption are accepted. Similarly, hypothesized relationship on there is a negative and significant relationship between perceive barriers and behavioral intention on sustainable food consumption is also accepted. However, there is no significant relationship between personal norms and consumers' behavioural intention on sustainable food consumption.

**Research limitations/implications** –The respondents in this study mainly are the employee from 5 of the MNC Company in Penang Industrial Area due to limited access to the company employee. Therefore the respondent size is considered small compare to the total number of MNC available in Penang Industrial Area. Hence, generalization of this result needs to be done in caution.

**Practical implications** –This paper suggests that government intervention is essential to construct policy in educating consumers' about sustainable food consumption. This is importantin order to cultivate sustainable food consumption among the low income group and to make it as a norm. This is due to early education on sustainable development can educate and mold sustainable culture within the community, hence will become part of the culture to act pro environmentally.

**Originality/ Value** –This paper contribute to the emergent interests among researchers in using the models to explain consumer's behavioural intention on sustainable food consumption. This study also helps in testing the explanatory ability of the TPB on the consumer's behavioural intention on sustainable food consumption specifically among the low income group in Malaysia. As such, this paper hopes to obtain greater insights into the applicability of TPB to explain issues pertaining to the sustainability interests among consumers in Malaysia.

**Keywords** – Sustainable food consumption, behavioural intention, Malaysia

**Paper type** – Research paper

## Introduction

Sustainable consumption and production has been defined by United Nations Commission Sustainable Development (UNCSD) as the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations (World Business Council for Sustainable, 2008).

Malaysia is considered as developing countries and industrialized with total population of 27.73 million (Department of Statistic Malaysia, 2009). Penang is one of the industrialized states with total population of 1.5 million (Department of Statistic Malaysia, 2009). 2005 data from Penang State Government shows that 32% of total Penang population is working in manufacturing sector (Penang State Government, 2005). The poverty level in Penang is very small which only comprise of 1.4% (Penang State Government, 2005) but the cost of living in big city increased exponentially. According to Department of Statistic Malaysia 2004 survey, the household expenditure in urban area of Malaysia is approximately RM2280 with foods, utilities and transportation being the highest expenses (Year Book of Statistic Malaysia 2007, 2008).

Low-income consumers account for almost two-thirds of the world's population and have a combined spending power of approximately US\$ 5 trillion. (WBCS, 2008). According to a report prepares by World Business Council of Sustainable Development, world GDP is projected to grow by 325% from 2007 to 2050 and on the average, approximately 60% of world GDP is accounted for by consumer spending on goods and services. As the world GDP improving significantly, the number of middle class consumers worldwide will increase and expected to triple by 2030. The low income group of consumers will become middle class group.

Low-income Households (LIH) are households that have a total income less than or equal to RM 2,000 per month, which represents 75% of the median income in Malaysia. It is a uniform national number. While some may perceive a monthly household income of RM 2,000 as relatively comfortable, the reality is that the rising cost of living is increasingly squeezing this group's spending power and thereby causing increasing hardship. (PEMANDU, 2010).

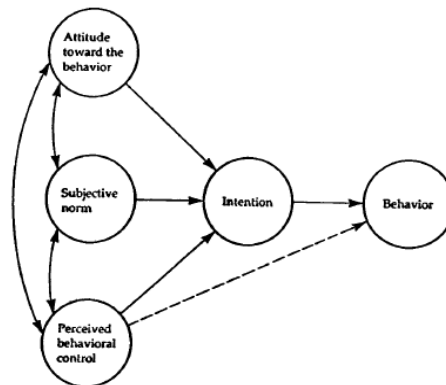
According to Department of Statistic Malaysia 2004 survey published by Department of Statistic Malaysia in 2008 publication, the household expenditure in urban area of Malaysia is approximately RM2280 with foods, utilities and transportation being the highest expenses (Year Book Of Statistic Malaysia 2007, 2008). Therefore, those living in big cities like Penang will need minimum of RM2280 a month to survive. This can be categorized as urban low income group.

Sustainable retail product normally associated with high quality and expensive product. Price is one of the factor that contribute to the purchasing of sustainable products and for low level income group it may be the most important factor. 52% of consumers were interested in purchasing "earth-sustainable" foods, but did not purchase those foods owing to the perceived barriers of lack of availability, inconvenience, price, habit and trust (Robinson and Smith, 2002). Unskilled workers or normally term as industrial operator comprise a significant number which falls under low level income earner. The market size for this group is significantly large. Undoubtedly, consumption behavior of this group somehow will have effect of the success of sustainable consumption effort. The behavioral of this group and the factors that influence the demand for such product is important. It will determine the growth and success of sustainability consumption as a whole.

Often businesses focus selling their sustainable product exclusively and often the price is not competitive. Most of the sustainable products consumers represent only small number of population. Sustainable product should no longer be specialty products. This study intends to investigate the determinant of sustainable food consumption among low level income group in Penang. This study may indicate how this group behaves towards sustainable consumption and may also become an indicator for government to react and to construct policy so that sustainable consumption is adopted at every level of society. The findings may provide insights for public policy and marketing professional inpromoting sustainable food consumption among low level income group in Malaysia.

## Theoretical Framework and Hypotheses Development

The theory of planned behaviour model introduced by Ajzen (1991) serves as the basis in developing the theoretical framework to investigate low income group consumer behavioural intention towards sustainable food consumption. A recent study on purchase intentions towards sustainable foods showed that psychosocial variables like attitudes, beliefs, and subjective norms, more than demographics, independently predict purchase intention for sustainable products (Robinson & Smith, 2002). Theory of planned behaviour by Ajzen (1991) explained the connection between attitudes, subjective norm and perceived behavioral towards the intention of performing behavior and in this study is the behavioral intention on sustainable food consumption. The theory of planned behaviour postulates three conceptually independent determinants of intention (see Figure 1)



**Figure 1: Theory of Planned Behavior Model (Ajzen, 1991)**

The first is the attitude toward the behaviour and refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question. The second predictor is a social factor termed subjective norm; it refers to the perceived social pressure to perform or not to perform the behaviour. The third antecedent of intention is the degree of perceived behavioural control which, refers to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles. (Ajzen, 1991)

The stronger the intention to engage in behaviour, the more likely should be its performance (Ajzen, 1991). According to these models, people's evaluations of, or attitudes toward behavior are determined by their accessible beliefs about the behavior, where a belief is defined as the subjective probability that the behavior will produce a certain outcome. Specifically, the evaluation of each outcome contributes to the attitude in direct proportion to the person's subjective possibility that the behavior produces the outcome in question (Ajzen, 1991). Individuals' elaborative thoughts on subjective norms are perceptions on whether they are expected by their friends, family and the society to perform the recommended behavior. Social influence is measured by evaluation of various social groups. (Ajzen, 1991)

The importance of actual behavioural control is self evident: The resources and opportunities available to a person must to some extent dictate the likelihood of behavioural achievement. Of greater psychological interest than actual control, however, is the perception of behavioural control and its impact on intentions and actions. Perceived behavioural control refers to people's perception of the ease or difficulty of performing the behaviour of interest (Ajzen, 1991).

Specifically, this study considers consumers' attitude, perceive barriers, personal norm and knowledge towards sustainable food consumption as predictor for behavioural intention on sustainable food consumption. It is hypothesized that consumers' attitude, personal norm and knowledge towards sustainable food consumption will have a positive and significant relationship with behavioural intention on sustainable food consumption. On the other hand, it is posited that perceive barriers will have a negative and significant relationship with behavioural intention on sustainable food consumption.

#### *Attitudes*

Vermeir and Verbeke (2006) argued that having a positive attitude toward sustainable products is integral to stimulate sustainable consumption. Moreover, from a research studied done on sustainable food consumption among young adults in Belgium, Vermeir and Verbeke (2008) identified that attitudes are the most important predictor for all respondents, irrespective of their value levels. Grunert and Juhl (1995) reported that there is a strong association between environmental attitudes and purchasing frequency in the sense that the more environmentally concerned an individual is, the more likely s/he is to buy organic food (cited from Vermeir & Verbeke, 2008). According to Tanner and Kast (2003), attitudes and beliefs are powerful predictors of sustainable consumption mentioned in the research on green purchases. Besides, they argued that positive attitudes toward environmental protection, fair trade, and local production are also major facilitators of sustainable consumption (Tanner and Kast, 2003). In addition, previous research also found that there is a positive relationship between consumers' attitudes and behavioral intentions for green purchasing product (i.e. organic food) in different cultural context such as in Asian and US (Chan and Lau, 2001; Tarkiainen and Sundqvist, 2005).

Hence, the following hypothesis is proposed:

*H1: There is a positive and significant relationship between attitudes towards sustainable food products and behavioural intention on sustainable food consumption.*

#### *Perceive barriers*

Behavioral control refers to the ease or difficulty of obtaining or consuming a specific product. Although the motivation to consume sustainable products is high, it may be impossible to do so because of low availability. This problem is related to the scarcity of local food shops or farmers' markets, which often lack the regularity and convenience demanded by consumers (Vermeir and Verbeke, 2006). Perceived behavioral control reflects both inner control factors (e.g. self-efficacy) and external perceived difficulty factors (e.g. perceived barriers) (Sparks et al. 1997; Vermeir and Verbeke, 2008). In addition, Tanner and Kast (2003) stated that perceived time barriers restrain one's motivation to buy green products where the results proved to be negatively associated.

A research shows that 52% of consumers were interested in purchasing "earth-sustainable" foods, but did not purchase those foods owing to the perceived barriers of lack of availability, inconvenience, price, habit and trust (Robinson and Smith, 2002; Vermeir and Verbeke, 2008). Personal (e.g. low perceived consumer effectiveness, or ignorance of sustainable products) as well as contextual or situational (e.g. lack of sustainable products in local retail outlets) factors may inhibit the purchase of sustainable foods as determined from previous research (Diamantopoulos et al., 2003; Vermeir and Verbeke, 2006; Vermeir and Verbeke, 2008).

Therefore, the following hypothesis is posited:

*H2: There is a negative and significant relationship between perceive barriers towards sustainable food products and behavioural intention on sustainable food consumption.*

#### *Personal Norms*

Consumers who are concerned about the environment are more willing to pay a premium for green products (Tanner & Kast, 2003). It is possible that consumers make an environmentally friendly choice more willingly when other motives such as finance and health are added to their environmental concerns. Arguments have been previously made that consumers are most likely to adopt any type of pro-environmental behaviors where cost and/or inconvenience are minimized (Tilikidou, 2005). Nevertheless, other findings provide little evidence that differences in social status and income account for behavioral differences (Tanner & Kast, 2003). It is reported that there is no significant association between personal norms and green food purchases (Tanner & Kast, 2003).

Nevertheless, personal norm can be influenced by the value a person carries which may come or developed by cultural or religious value. Human values are referred to as relatively stable beliefs about the personal or social desirability of certain behaviours and modes of existence. Values express the goals/needs that motivate people and appropriate ways to attain these goals/needs. Values can play an important role in the consumer decision process, like product choice and brand choice (Vermeir & Verbeke, 2006) numerous studies have linked ethical or sustainable behaviour to personal values (Vermeir & Verbeke, 2006). Religious values for instance may influence the behavioural towards certain action for example the intention to purchase sustainable product. In addition, it may also influence believe on the worthy of practicing sustainable consumption.

Thus, the above discussion leads to the following hypothesis:

*H3: There is a positive and significant relationship between personal norms towards sustainable food products and behavioural intention on sustainable food consumption.*

#### Knowledge

Education has been found to be a positive antecedent of pro-environmental purchase. (Tilikidou, 2005). Environmental knowledge has been rather neglected as a possible correlate of purchasing behavior, although it has been employed in some studies of recycling research by Schultz (2002). Studies show that few consumers have a high awareness or comprehension of the real sustainable characteristics of products. The benefits of sustainable products are often poorly communicated to consumers, so that they are unable to make informed purchasing decisions in accordance with their budget and/or conscience. Furthermore, consumers often have limited knowledge of agriculture and its production processes and a lack of insight into the implications of their food purchase decisions on the food supply chain (Vermeir&Verbeke, 2006, Dickson, 2001; Verbeke, 2005).

The less information available and/or the more complex and contradictory this information is, the more uncertain consumers may be regarding what products to choose (Vermeir&Verbeke, 2006).It has been indicated many times in the same geographical area that those who might be called ‘ecologically conscious consumers’ are people with relatively high levels of education and income (Tilikidou&Delistavrou, 2005). However, people with a high environmental motivation are less sensitive to price. (Tanner&Kast, 2003)

With regard to the education level the results are not surprising and link with the relationship between pro-environmental behavior and knowledge. With regard to income though, it has first to be noted that the variable measurement concerns the family income. For example the sense of survival is far more important than being environmental concern individual. it is still questionable whether knowledge may be considered as a direct motive to behavior, though it seems fairly established that a lack of knowledge is a barrier to purchasing change, as Schultz (2002) similarly argued with regard to recycling byTilikidou (2005).

Environmental knowledge has been found to be positively related to environmental behaviour (Tanner &Kast, 2003). In addition, Tanner &Kast (2003) found out that action related ecological knowledge (i.e. eco-labels) predicts green purchases. They argued further that even though the relationship between knowledge and behaviour was not strong, nevertheless, their studied provided evidence that to have an appropriate behavior, appropriate knowledge is well needed upfront.

Consequently, the following hypothesis is suggested:

*H4: There is a positive and significant relationship between knowledge towards sustainable food products and behavioural intention on sustainable food consumption.*

#### Method

##### *Procedure and Participants*

A survey methodology was used to gather data. A survey questionnaire comprising previously validated items by Tanner &Kast (2003) was used to assure content validity and was modified to suite low income group educational background.The target population of this study is the low income group industrial workers in Penang Island earning less than RM2000 a month. The sampling technique used for this research is based on random sampling with probability proportional to size (PPS). Roscoe’s rule of suggest samples sizes that are greater than 30 and less than 500 should be appropriate for most research. The minimum sample should be at least 10 times than the number of variables. Hence the minimum sample for this study should be 50 as there are five variables as reflected in the proposed research framework.Valid questionnaires were returned by 196 of the 300 people who received them. Multiple regression analysiswas used to analyse the hypothesized relationship between variables using Statistical Package for Social Science (SPSS) version 18.

### *Measures*

The survey questionnaire included questions on attitudes (i.e. environmental protection, genetically engineered food, fair trade, health, regional products and food taste), perceive barriers (i.e. perceive monetary barriers and perceive time barrier), personal norm, knowledge toward sustainable food products and behavioral intention on sustainable food consumption. Questions on demographic characteristics were also included.

### *Attitudes*

#### a) Environmental Protection

Three items (e.g. "It is not important to me whether the produce was grown organically or conventionally") were assessed. All three items ( $\alpha = 0.64$ ) were adapted from Tanner and Kast (2003) and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

#### b) Genetically Engineered Food

Three items (e.g. "I am opposed to genetically altered food products for ethical or moral reasons") were assessed. All three items ( $\alpha = 0.72$ ) were adapted from Tanner and Kast (2003) and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

#### c) Fair Trade

Two items (e.g. "Solidarity with third world countries is important to me") were assessed. All two items ( $\alpha = 0.62$ ) were adapted from Tanner and Kast (2003) and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

#### d) Health

Three items (e.g. "It is important to me that food products contain no preservatives") were assessed. All three items ( $\alpha = 0.73$ ) were adapted from Tanner and Kast (2003) and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

#### e) Regional Products

Three items (e.g. "It is important to me to support local farmers when making purchases") were assessed. All three items ( $\alpha = 0.65$ ) were adapted from Tanner and Kast (2003) and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

#### f) Food Taste

Four items (e.g. "When making purchases, I am guided by what I like") were assessed. All four items ( $\alpha = 0.62$ ) were adapted from Tanner and Kast (2003) and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

### *Perceive Barriers*

#### a) Perceive monetary barriers

Three items (e.g. "I cannot afford to pay more for organic food products") were assessed. All three items ( $\alpha = 0.64$ ) were adapted from Tanner and Kast (2003) and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

#### b) Perceive time barrier

Three items (e.g. "I have too little time for cooking") were assessed. All three items ( $\alpha = 0.86$ ) were adapted from Tanner and Kast (2003) and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

### *Personal Norm*

#### a) Norms

Four items (e.g. “Everybody has a responsibility to contribute to environmental preservation by avoiding packaged food products”) were assessed. All four items ( $\alpha = 0.65$ ) were adapted from Tanner and Kast (2003) and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

#### b) Religious Value

Three items (e.g. “I practiced the teaching of my religion fully”) were assessed. All three items ( $\alpha = 0.64$ ) were self-constructed and were translated into Malay Language. A five-point Likert-type scale was used where 1 = strongly disagree, through 3= neutral to 5 = strongly agree.

### *Knowledge*

One item adapted from Tanner and Kast (2003) (e.g. “Milk in plastic packaging is more harmful for the environment than milk in cardboard cartons”) was assessed. Two items were self-constructed and all of the three items were translated into Malay Language. Respondents had to choose the correct answer in which the “yes”/ “no” response format was used. The knowledge scales were changed into a dichotomous scale (yes/no).

### *Behavioral Intention*

Thirteen items (e.g. “Purchased of unbottled drinks”) were assessed. All thirteen items were adapted from Tanner and Kast (2003) and were translated into Malay Language. Respondents had to choose the correct answer in which the “yes”/ “no” response format was used. The behavioural intention scales were changed into a dichotomous scale (yes/no).

## **Results**

### *Reliability*

Reliability was calculated for all variables. The whole instrument exceeds the minimum alpha of 0.60 (Hair et al., 1998) and achieved high levels of reliability as shown in Table I. Likewise, means and standard deviations of all the variables are also summarized in Table I.

Variables	Mean	SD	Cronbach's Alpha
Behavioral Intention	7.10	1.58	-
Attitudes			
1) <i>Environmental protection</i>	4.12	0.55	0.64
2) <i>Genetically engineered food</i>	4.29	0.64	0.71
3) <i>Fair trade</i>	3.33	0.57	0.62
4) <i>Health</i>	4.31	0.68	0.72
5) <i>Regional products</i>	0.40	0.72	0.65
6) <i>Food taste</i>	3.81	0.99	0.62
Perceived Barriers			
1) <i>Monetary barriers</i>	4.21	0.68	0.64
2) <i>Time barrier</i>	3.21	1.09	0.86
Personal Norms			
1) <i>Norms</i>	3.45	0.71	0.65
2) <i>Religion value</i>	4.63	0.36	0.64
Knowledge	1.83	0.73	-

*Test of the Hypotheses*

First of all, to test the relationship between independent variables (i.e. attitudes, perceive barriers, personal norm and knowledge towards sustainable food products) and dependent variables (behavioral intention on sustainable food consumption), multiple regression analysis was performed (see Table II). From the regression analysis, it was found that attitudes ( $\beta = 0.27, p=0.05$ ) and knowledge ( $\beta = 0.17, p=0.05$ ) towards sustainable food products showing a positive and significance influence on behavioral intention on sustainable food consumption. Hence, hypotheses 1 and 4 were supported. On the other hand, hypothesis 2 which predicted perceive barriers ( $\beta = -0.19, p=0.05$ ) towards sustainable food products to have a negative influence on behavioral intention on sustainable food consumption was also statistically significant. Therefore, hypothesis 2 was supported. Nevertheless, personal norms towards sustainable food products are found to be having a negative and significance influence on behavioral intention on sustainable food consumption. As such, hypothesis 3 was rejected.

Table II: Regression Analysis of Independent Variable and Dependent Variable

	Behavioral Intention on sustainable food consumption		
	T Value	Standardized beta	Significant
Attitude	2.382	0.266	0.018*
Perceived barriers	-2.246	-0.188	0.026*
Personal norm	-0.492	-0.050	0.623
Knowledge	2.372	0.172	0.019*
F		4.605	
R <sup>2</sup>		0.088	
F Change		4.605	
R <sup>2</sup> Change		0.088	
Durbin-Watson		1.968	

Note; \* p<0.05; \*\*p<0.01; \*\*\*p<0.001

**Conclusion and Implications**

This study is a continuity of previous research conducted on specific community in Europe. This research focus how certain group of community with less buying power due to limited income deal with sustainable consumption behavior. The focus is on the intention to purchase sustainable food product by incorporating personal and contextual dimensions which include more features on sustainability and adopting previous research by Tanner &Kast (2003). This study confirms that attitudes and knowledge are strong predictors of behavioral intention on sustainable food consumption. On the other hand, as for perceive barriers, two dimensions were tested namely time dimension and monetary dimension. As expected, monetary barrier does play significant role in the intention to purchase sustainable food. Results shows that perceive barrier does have negative significant relation to intention to purchase sustainable food product. As discussed earlier, a previous research shows that 52% of consumers were interested in purchasing “earth-sustainable” foods, but did not purchase those foods owing to the perceived barriers of lack of availability, inconvenience, price, habit and trust (Robinson and Smith, 2002; Vermeir&Verbeke, 2008). This confirm the result obtained from this research showing there is a negative correlation between perceive barrier and intention to purchase.

The third variable is the personal norms, previous research by Tanner&Kast (2003) shows that cost does not play significant role in sustainable purchasing however study failed to see any significant relation to the intention to purchase sustainable food product for low income group. Hypothesis was rejected. The result somehow seems to be surprising however it may influence by the population social economic factor. Social, economic, or physical environment within which people act also matter and can keep pro-environmental attitudes from being expressed in action (Black, Stern, &Elworth, 1985). In Malaysian low income group context, the community and peer pressure may influence the intention to purchase sustainable food product. Community may still look at sustainable consumption as unnecessary and not a norm within the community. The study provide evidence that to render sustainable consumption behavior among low income group, some sort of environmental knowledge is



essential in order to cultivate sustainable culture within the group. This has been proved by the significant relation between knowledge in sustainable consumption and the intention to purchase sustainable food product.

These findings suggest a number of implications on how to foster sustainable food consumption among low income group in Malaysia. The study suggests that sustainable marketing should address age group below 25 years old. Although the number of respondent from this group is low, the group will represent second group of 25 to 45 years old in few years or once they start working. The second group, with higher purchasing power will be the gatekeeper of sustainable consumption behavior. As discussed earlier by Tanner & Kast (2003), the demand for sustainable food products may be encouraged not only by fostering pro environmental beliefs but also by promoting additional motives, such as preference for domestically produced food and for products that are traded fairly. Therefore, local and fair-trade products appear to be useful for marketing efforts. On the other hand, in order to cultivate sustainable food consumption among the low income group and to make it as a norm, government intervention is essential. Early education on sustainable development can educate and mold sustainable culture within the community, hence it will become part of the culture to act pro environmentally. Sustainable food shouldn't be a specialty product; it has to be normal product at affordable price. Government can enforce certain regulation on packaging standard, preparation method, and ingredient so on and so forth so that sustainable food production can be fostered thoroughly. As suggested earlier by Tanner & Kast (2003), informational interventions should be considered to educate consumers, so that they can accurately identify which products are environmentally friendly and which are not.

### **Limitations**

Firstly, some aspects of these findings deserve comment. This study only imply on a group of community namely industrial workers in Penang Island. It is presumed that this group, though belong to lower income group they still have some adequate purchasing power to purchase considerable quality of sustainable food product. Second, this study did not consider household income and number of person in a household. The purchasing behavior for household size with limited income maybe significantly different from those with small household size i.e. parent with 2 kids. Third, this study only involved few MNC company due to limited access to the company employee. Therefore the respondent size can still be considered as small compare to number of MNC available in Penang Industrial are. As in the future, detail research may be conducted by including low income group from other state such as form East Coast of Malaysia. The cultural rich society of east coast might have other variables that may influence the behavioral intention on sustainable food consumption such as from the view of Islamic value and culture.

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