

Green attitude and purchase intention towards environmental friendly product

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ABSTRACT

In this modern era, societal marketing business ethics and corporate social responsibility has become the guideline for green marketing strategies and practices. Consumer concerns towards the environment are the evidence which steadily increases the ecologically conscious marketplace. Consumers' awareness and attitude on food products which market in green marketing is important in guiding their purchasing intention of environmental friendly food products. The purpose of this research is to determine the moderation of consumer attitude on the relationship of subjective norms and perceived behavioral control and consumer purchase intention towards environmental friendly food products. Simple random sampling was used in this study and 151 respondents were interviewed using structured questionnaires. Descriptive analysis, reliability test and hierarchical multiple regression were used to accomplish the objective of this study. The results indicate that there is evidence to conclude that the consumer attitude is moderator in the relationship between subjective norms and their intention to purchase environmental friendly food products. However, attitude is not a moderator variable in the relationship between perceived behaviour control and consumer intention to purchase environmental friendly food products.

1. Introduction

The “Going Green” business is getting more popular as a large number of consumers have shown their increased environmental knowledge and awareness by supporting environmental friendly firms and

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products (Yahya, Musa and Hashim, 2016; Geetha and Jenifer, 2014). Green marketing depicts a broad range of marketing activities such as modification of products, packaging and production process which are performed in an environmentally safe way while satisfying customers' needs (Soonthonsmai, 2007). According to Joshi and Rahman (2015), the two major determinants of consumer green purchase behaviour are environmental concern and products functional attributes. Even though consumers were concerned about the environment, they were skeptical about those green claims on the products which hindered them in adopting green purchase behaviour (Schlossberg, 1991).

Furthermore, there is no official definition for 'green' (Shrum et al., 1995). The term "green" is namely known as environmental friendly, ecological or pro-environmental (Shamdasani, et al., 1993; Shrum et al., 1995; Tseng and Hung, 2013). Green consumers are those who are consciously aware and concern about the essentials of environmental issues (Soonthorsmai, 2007). Environmental friendly products are defined as products that can be conserved and recycled, will not cause earth pollution nor natural resources depletion (Shamdasani et al., 1993).

In addition, the green concept is now steadily and sustainably being disseminated among consumers. However, it is a new concept to Malaysians. Therefore, Malaysia government has actively played important roles in promoting food safety, environment and animal protection among all food industries which have opened doors for green marketing in Malaysia (Golnaz et al., 2011). Many firms are under increasing pressure to accommodate their environment concern by showing the act of social responsibility towards their stakeholders, having more competitive advantage products, increase more profits and have a better public image (Bhate and Lawler, 1997; Szymankiewicz, 1993). International food companies such as McDonald's, Coca-cola and Campbell Soup have already shown their concern towards environment issue.

These companies source reduction by reducing weight and volume of their packaging, use special shelf marker to indicate that their packaging is environmental friendly and use reusable plastic container (Kassaye, 2001). However, local food industries in Malaysia accommodating this green marketing are still at an infancy stage.

The uprising of food scandal, economic and changing lifestyle has rapidly changed consumers' food consumption pattern towards food products which are healthy, safe, from fair trade, protecting the environment and animal welfare (Falguera et al., 2012; Selfa et al., 2008). Numerous studies have shown a positive attitude towards consumers' willingness to pay more for environmental friendly food products (Lockie, et al., 2004; Miranda-de la et al., 2013; Van Loo, et al., 2013). Barber (2010) also reported that environmental friendly consumers who possessed environmental attitude were strongly reflecting their willingness in purchasing green wine packaging. On the other hand, most studies have shown an increase of demand on green purchasing intention of green products among Malaysians (Chen and Chai, 2010; Sinnappan and Rahman, 2011; Yusof et al., 2013). However, this green purchasing behaviour especially towards food products in Malaysia seems low compared to developed countries. According to Teng et al., (2012), the major factors that influence Malaysian consumers' green purchasing behaviour are consumers' referent, knowledge, purpose, motivation, green concept understanding and product price. Consumers' ability to meet the needs of a diverse society can be improved if increase the consumers' awareness and knowledge towards environmental friendly food products. Thus, it is hoped that this research would be able to fill the gap of purchase intention on environmental friendly food products among Malaysia consumers in the existing literatures. The environmental friendly food products mentioned in this study include food product that consists of organic logo, Good Manufacturing Practice (GMP) logo and Good Agriculture Practice (GAP) logo. Understanding consumers' attitude and intention towards environmental friendly food

products in Malaysia is important as food producers can maximize consumers' utilities and diversify their products and services.

2. Methodology

2.1. Conceptual Framework

Theory of Planned Behaviour (TPB) (Ajzen, 1991) is sufficient to adequately explain the relationship between consumers' attitude, subjective norm and perceived behavioural control towards the intention to purchase environmental friendly food products. Figure 1 shows the conceptual framework that was used in this study to investigate the moderation effect of attitude on the relationship between subjective norm, perceived behavioural control and purchase intention. In this study, subjective norm such as environmentalist, green society, government, parents and friends measure how social pressure on consumers can motivate them to purchase or not to purchase environmental friendly food products. Perceived behavioural control is described as factors which make the behaviour easy or more difficult to perform. For example, the availability and the price of environmental friendly food products in Malaysia and whether the consumers affordability may facilitate the intention of purchasing environmental friendly food products. Attitude is the moderator of this study where it is believed that attitude will moderate the effect of dependent variable and independent variables. In scientific literature, attitude has received mixed evidence for its moderating effect of the attitude-behaviour relationship (Muzikante and Renge, 2011; Karpinski, Steinman and Hilton, 2005). In each case, higher attitude was associated with better behaviour consistency. According to Robbins and Judge (2014), the most powerful moderator of the attitude-behaviour relationship has been found to be attitude as it reflects the fundamental values and self-interest. Intention is the idea or behaviour the consumer will carry out such as purchase or not to purchase environmental friendly food products.

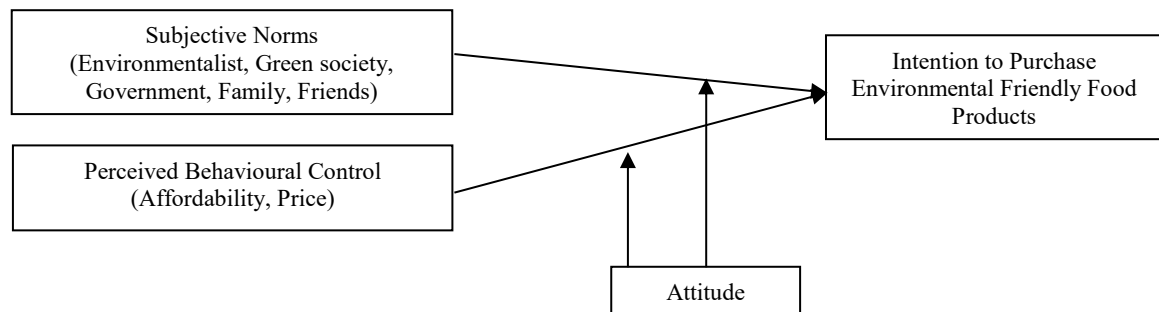


Figure 1: Conceptual framework of TPB applied towards intention to purchase environmental friendly food products among consumers in the Kuala Lumpur, Malaysia.

Based on previous studies, the following hypotheses referring to the consumer purchase intention towards environmental friendly food products were proposed.

Hypothesis 1: Consumers' attitude will not moderate the relationship between perceived behavioral control and purchase intention towards environmental friendly food products.

Hypothesis 2: Consumers' attitude will not moderate the relationship between subjective norm and purchase intention towards environmental friendly food products.

2.2. Method of Analysis

Simple random sampling methods were used and 151 consumers were interviewed using structured questionnaire to collect the information about consumer purchase intention towards environmental friendly food products. The targeted consumers for this research are those who purchased the food products from a supermarket. Sampling was conducted at the supermarkets from every tenth consumers who entered the supermarkets. Supermarkets chosen were 1) Cold storage, 2) AEON, 3) Tesco, 4) ISETAN. Seven point Likert scales of 1 to 7 (1 represent strongly disagree and 7 represent strongly agree) and dichotomous questions were used in the structured questionnaire.

Exploratory research was chosen in this study. Descriptive statistics, reliability test and hierarchy regression were used to achieve the objective of the study. Descriptive analysis was used to describe the population in this study. Cronbach's alpha was computed to assess the model for internal consistency, based on the average inter-item correlation used to determine the homogeneity of items. Hierarchical multiple regression was applied to measure the relationship between variables to determine the extent to which a given predictor variable uniquely accounted for individual differences in the dependent variable. In other words, it was used to test the moderation effect of consumer attitude on their purchase intention towards environmental friendly food products.

3. Results and discussion

In this study, the Cronbach's alpha was used to measure the reliability of 51 questions which were used to measure (in Likert scale) consumers attitude, subjective norms, perceived behavioural control and intention. The Cronbach's alpha value was 0.932 which means that the model is fit for this study.

3.1. Demographic profile of the respondents

Table 1 shows the socio-demographic profile of respondents. The demographic profile includes age, income level, education level, gender, race, marital status and household size. The result showed that 66.2 percent of the respondents were females and 33.8 percent were males. Majority of the respondents were Malays (38.4 percent), followed by Chinese (48.3 percent), Indians (7.3 percent) and others such as Kadazan, Bidayuh, Dusun and Dayaks (6.0 percent). As can be seen in Table 4.1, 78.8 percent of respondents were single and 21.2 percent were married.

With regards to age the result showed that most of the respondents were between 25 to 34 years (47 percent), followed by 43 percent below 24 year old and only 9.9 percent were 35 years old and above. Moreover, majority of the respondents graduate from bachelor (64.9 percent). In terms of income distribution, this study found that 36.4 percent respondents earned less than RM 1500, 29.8 percent earned between RM 1501 – RM 3000, 14.6 percent earned RM 3001 – RM 4500 and a smaller percentage of respondents (19.2 percent) had monthly income above RM 4501. As shown in Table 1, majority of the respondents have between 3 to 5 household size (56.3 percent).

Table 1. Socio-demographic profile of respondents (n=151)

Characteristic	Percentage	Characteristic	Percentage
Gender		Education level	
Male	33.8	Secondary	9.3
Female	66.2	Diploma	7.9
Ethnic (Race)		Bachelor	64.9
Malay	38.4	Master	17.9
Chinese	48.3	Income (RM)	
Indian	7.3	Below 1500	36.4

Others	6.0	1501-3000	29.8
Marital Status		3001-4500	14.6
Single	78.8	Above 4500	19.2
Married	21.2	Household size	
Age		Less than 2	8.6
Below 24	43.0	3-5	56.3
25-34	47.0	More than 6	35.1
35 and above	9.9		

3.2. Hierarchical multiple regression

In this study, as shown in Table 2, the results of the hierarchical regression analysis show that 36.7 % of the variance of the consumer intention to purchase environmental friendly food products is explained by their subjective norms, which is statistically significant ($R^2 = 0.367$, $F\Delta = 86.532$, $p < 0.05$). In Step 2, with attitude variable, it gives additional contribution of 11 % to explain the consumer intention ($R^2 = 0.478$, $R^2\Delta = 0.110$, $F\Delta = 31.308$, $p < 0.05$). In Step 3, with both subjective norms and attitude variables already in the equation, the results show that the interaction variable (subjective norms \times attitude) gives additional contribution of 1.7 % of the variance which was statistically significant ($R^2 = 0.495$, $R^2\Delta = 0.485$, $F\Delta = 4.998$, $p < 0.05$). This finding indicates that there is evidence to conclude that the consumer attitude is moderator in the relationship between subjective norms and their intention to purchase environmental friendly food products.

Table 2. Attitude between Consumer Intention and Subjective Norms

Variable/s	R ²	Adjusted R ²	R ² Δ	F Δ	SE B	Beta	Sig
Step 1							
Constant					0.328	2.201	0.000
Subjective Norms	0.367	0.363	0.367	86.532	0.067	0.619	0.000*
Step 2							
Constant					0.396	0.749	0.061
Subjective Norms					0.068	0.442	0.000*
Attitude	0.478	0.471	0.110	31.308	0.076	0.424	0.000*
Step 3							
Constant					1.700	-2.950	0.085
Subjective Norms					0.307	1.259	0.001*
Attitude					0.372	1.090	0.001*
Subjective Norms \times Attitude	0.495	0.485	0.017	4.998	0.065	-0.146	0.027*

Note: $R^2 = 0.367$ in Step 1; $R^2\Delta = 0.110$ in Step 2 ($p = 0.05$); $R^2\Delta = 0.017$ in Step 3

* $p < 0.05$

In this study, as shown in Table 3, the results of the hierarchical regression analysis show that 47.7 % of the variance of the consumer intention to purchase environmental friendly food products is explained by their perceived behaviour control, which is statistically significant ($R^2 = 0.477$, $F\Delta = 135.714$, $p < 0.05$). In Step 2, with attitude variable, it gives additional contribution of 4.8 % to explain the consumer intention ($R^2 = 0.524$, $R^2\Delta = 0.048$, $F\Delta = 14.799$, $p < 0.05$). In Step 3, with both perceived behaviour control and attitude variables already in the equation, the results show that the interaction variable (perceived behaviour control \times attitude) did not give any additional contribution of the variance and the interaction variable is not statistically significant ($R^2 = 0.524$, $R^2\Delta = 0.000$, $F\Delta = 0.037$, $p > 0.05$). This finding suggests that attitude, at the 5% level of significance, is not a moderator variable in the relationship between perceived behaviour control and consumer intention to purchase environmental friendly food products.

Table 3. Attitude between Consumer Intention and Perceived Behavioural Control

Variable/s	R ²	Adjusted R ²	R ² Δ	FΔ	SE B	Beta	Sig
Step 1							
Constant					0.366	0.995	0.007
Perceived behaviour control	0.477	0.473	0.477	135.71	0.070	0.821	0.000*
Step 2							
Constant					0.395	0.285	0.472
Perceived behaviour control					0.082	0.639	0.000*
Attitude	0.524	0.518	0.048	14.799	0.078	0.301	0.000*
Step 3							
Constant					2.340	0.729	0.756
Perceived behaviour control					0.472	0.550	0.246
Attitude					0.424	0.221	0.604
Perceived behaviour control × Attitude					0.083	0.016	0.848
	0.524	0.515	0.000	0.037			

Note: R²Δ = 0.477 in Step 1; R²Δ = 0.048 in Step 2 (p = 0.05); R²Δ = 0.000 in Step 3

*p < 0.05

4. Conclusion

Environmental friendly food products are also known as ecological products that are manufactured using toxic-free ingredients and environmentally friendly procedures which are certified by a recognized organisation (Gurău and Ranchhod, 2005). Green concept is now steadily and sustainability being disseminated among Malaysian consumers. Consumer awareness and public concern about the environment have increased among the consumers. Therefore, it is important for the green industries to know about the consumers' intention towards environmental friendly food products so that they can satisfy the consumers needs and wants. The results of this study indicate that consumer attitude is a moderator in the relationship between subjective norms and intention to purchase environmental friendly food products. However, attitude is not a moderator variable in the relationship between perceived behaviour control and consumer intention. Moreover, subjective norm and perceived behavioural control will influence the consumer intention to purchase environmental friendly food products. The result of the study was similar with some past researches where attitude is good predictors for customers' willingness to pay more for environmental friendly products (Laroche et al., 2001; Roberts, 1996; Shrum et al., 1995). According to Kim et al., (2013), subjective norm was the best predictor for dining in eco-friendly restaurant. Meanwhile, Smith and Paladino (2010) found that subjective norm significantly influences organic food purchase behaviour. A research done by Golnaz et al., (2013) shows that in Malaysia subjective norms such as environmentalists and the green society are important determinants of consumers' intention to go green.

The study will benefit the local and international food producers, food industry or food marketers by diversifying the environmental friendly food current consumption pattern and the green market potentials in Malaysia. The aim of this study is to gain knowledge about Malaysia consumers' attitudes and behaviors towards environmental friendly food consumption. It can contribute knowledge and identify the factors influencing the consumers' environmental friendly purchasing behaviour. Thus it is hoped that this study will fill the gap of Malaysian consumers' attitude towards environmental friendly food in the existing literatures.

Although there is a growing concern among consumers towards the importance of environment which will indirectly influence their health, the implementation of environmental friendly logo and marketing strategies are still not widely utilised in Malaysia. Recognised and certified environmental friendly logos like SOM, SALM and GAP are likely to have significant impacts on the market for foods with additional health benefits and environmental friendly. Therefore, the policy should encourage firms that are involved in green business to market more environmental friendly food products with qualified environmental friendly

logos. By having more green information, consumers can have a better understanding on how environmental friendly food products can impact their health and environment.

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