World Applied Sciences Journal 22 (8): 1129-1134, 2013
ISSN 1818-4952

DOI: 10.5829/idosi.wasj.2013.22.08.616

Consumers' Intention to Purchase Green Product: Insights from Malaysia

[1]*Syaidatina Akila Mohamad Azizan and* [2]*Norazah Mohd Suki*

[1]Labuan School of International Business and Finance Universiti Malaysia
Sabah Labuan International Campus Jln Sg. Pagar 87000 Labuan F.T Sabah, Malaysia
[2]Labuan School of International Business and Finance Universiti Malaysia
Sabah Labuan International Campus Jln Sg. Pagar 87000 Labuan F.T Sabah, Malaysia

Abstract: Climate change has become a global concern prior to the irresponsible human activities and development whereby previous research has shown that environmental issues and problems had psychologically influenced consumers' attitude and behaviour. This study aims to investigate the factors that influence consumers' green purchase intention in the case of Malaysia. A total of 430 samples were collected at several capital cities in Malaysia by using self-administered questionnaire with regards that respondents are aware with environmental-related activities such as recycling to avoid bias or unrealistic answers. Data were analysed using multiple regression analysis via Statistical Package for the Social Sciences (SPSS) version 19.0 computer program. The results revealed that environmental knowledge was the most important predictor towards consumers' purchase intention, followed by health consciousness and environmental attitude whereas environmental labelling was found insignificant. It is crucial for government and marketers to work closely not just to create a better awareness on the green labelling and certification among Malaysians but also to transform consumer knowledge on environmental issues as a strong platform to practice an ethical consumption.

Key words: Green Marketing · Intention · Consumer Behaviour · Labelling · Multiple Regressions · Malaysia

INTRODUCTION

The increasing of needs from consumers for healthier lifestyles along with the urge to preserve the environment have resulted some changes in global consumer market in tandem with the rapid growth of the economy. In 2007, the total organic area in Asia is nearly 2.9 million hectares. This constitutes nine percent of the world's organic agricultural land [1]. Cities such as Kuala Lumpur, Manila, Bangkok, Beijing, Shanghai, Jakarta, Delhi, Bangalore and other cities are being identified to have an increasing internal consumption of organic products.

This study defines green marketing as any marketing activities of product and service not just to satisfy the needs and wants of human, but as well as to minimize the negative impacts from the usage of them to the natural environment. While green purchase intention is term as a person's attention to look for more environmental friendly or greener products (i.e. organic foods, chlorofluorocarbon (CFC)-free aerosol, biodegradable soaps or vehicle) within a specified period of time and the probability that he or she will purchase the products. Several factors have been identified as predictors towards consumers' green purchase intention.

Green marketing became a central component of marketing strategy [2] but, it is still at its infancy stage in Malaysia. For instance, the organic food is considered at the introductory stage as not many people are aware about it [3]. The Grocery Manufacturer Association (GMA) [4] found that green shoppers are still on a learning curve. As consumers are lacking of understanding about the social and environmental benefits of green products, it is crucial to educate consumers through media and the product information at the point of purchasing. There is still lack of availability of such products in common supermarkets where consumers do their household purchasing. Hence, this study aims to investigate the factors that influence consumers' green purchase intention in the case of Malaysia.

Corresponding Author: Norazah Mohd Suki, Labuan School of International Business & Finance Universiti, Malaysia Sabah Labuan International Campus Jln Sg. Pagar 87000 Labuan F.T Sabah, Malaysia.

Literature Review: Green marketing emergence in the late of 1980's and early of 1990's was significant to several factors: (a) environmental problems were not only issues of public controversy and political regulation, but was a competitive factor in the market, (b) the focus was not only on production process but also on packaging and products, (c) there was a broadening beyond the original 'front line' of industries with the most direct impact on the natural environment, such as oil, mining, chemistry and cars, to consider a wide variety of consumer goods industries and even service markets such as tourism or financial services [5].

Health Consciousness: There are many factors contribute to healthier lifestyles. Psycho-graphically, a place with more green spaces nearby residential areas was proven to be one of the reasons of lower morbidity rate of diseases within a locality [6]. According to Salleh, Ali, Harun, Jalil and Shaharudin [7] perceived value and health consciousness are significant predictors towards green purchasing intention among Malaysian consumers. It is because consumers believed that environmental friendly products are beneficial for a healthier lifestyle and could help preserving the environment. However, another study found health consciousness to be the least important in predicting attitude towards organic products compare to food safety and ethical concerns (Michaelidou and Hassan, 2008). This study implies that:

H_1: Health consciousness significantly influences consumers' intention to purchase green product.

Environmental Attitude: Attitude has been found to be a significant factor that influences the green purchasing intention and behaviour by previous researchers [8-12]. The results contradict to the findings by Lee [13] where she found out that environmental attitude ranked as the second last predictor of green purchasing behaviour. Environmental issues are very important to the consumers and it evokes their positive feelings on the green products [14], consumers with this set attitude and beliefs will relate environmental issues with their daily lives, work and family. This study see consumers' attitude towards environmental issues and problems as a significant predictor towards the intention to purchase green products. It is proposed that:

H_2: Environmental attitude significantly influences consumers' intention to purchase green product.

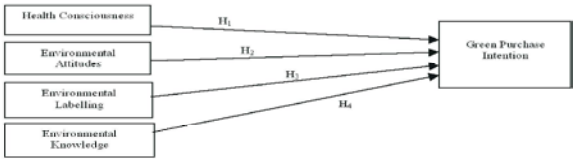

Fig. 1: Conceptual Framework

Environmental Labelling: Labelling plays an important role in distinguishing the difference of a product to another product. Studies have been done by previous researchers shown a significant relationship of eco-labelling towards green purchasing intention [12, 15-16]. Consumers' source for products information (i.e. country of origin, ingredients, nutritional facts, expiry date and certification) are based on what they read on the labelling, at their point of purchasing. Therefore it is important to give need a clearer information and awareness on green product labelling to help consumers understand green products benefits and goodness among others. Thus, this study proposes that:

H_3: Environmental labelling on product significantly influences consumers' intention to purchase green product.

Environmental Knowledge: Several researchers have studied the relationship of environmental knowledge towards green purchasing intention [9, 12, 15-18]. Haron, Paim and Yahaya [18] studied about Malaysians' environmental knowledge which divided knowledge into four types: basic environmental knowledge, knowledge of environmental problems in Malaysia, knowledge about recyclable items and knowledge about environment-related concepts. The results shown that respondents have strong basic environmental knowledge, high ability to identify environmental problems in Malaysia, high knowledge on recyclable items and interestingly, 60 to almost 90 percent of respondents admitted that they knew nothing about environment-related concepts listed. Knowledge about emerging environmental issues such as climate changes, hazardous waste problems, water and air pollution, ecological damage that have been endangered protected living species etc. are useful to facilitate consumers with a clear awareness of its social responsibility as a human to the nature. The next hypothesis is generalised as:

H_4: Environmental knowledge significantly influences consumers' intention to purchase green product.

The conceptual framework of this study is illustrated in Figure 1.

MATERIALS AND METHOD

The study collected 430 usable self-administered questionnaires from out of 431 questionnaires utilizing stratified random sampling method. The data were collected at the main cities of seven states in Malaysia: Kuala Lumpur, Selangor, Johor, Pahang, Penang, Sabah, Federal Territory of Labuan and Sarawak. Laroche, Bergeron and Barbaro-Forleo [9] also chosed target location of sampling from capital cities with regards that the respondents are aware of any environmental friendly programs (i.e. recycling) in order to avoid biased or unrealistic answers from respondents. The data was analysed by means of multiple regressions to determine relationships between independent variables and dependent variable via a computer program, Statistical Package for Social Sciences (SPSS) Version 19.0. Baron and Kenny [19] suggested that in analyzing the effect of moderator variables, the statistical test must measure and test the differential effect of independent variable on the dependent variable as a function of the moderator. The measurement of items were adapted from previous researchers as follows: Health Consciousness [7], Environmental Attitude [7-8], Environmental Labelling [16], Environmental Knowledge [18] and Green Purchase Intention [17]. The items were using 7-point likert scale (1=Completely disagree to 7=Complete agree).

Data Analysis: The demographic profile of respondents is presented in Table 1 where male accounted 44 percent while female were 66 percent out of 430 respondents. More than half of the respondents' age was between 20 to 29 years (63.7 percent) while only 3 percent of the respondents age between 50 to 59 years. The Malays dominated the race group with 66.7 percent, Chinese were 11.6 percent and Indian was at 2.1 percent. On the other hand, 33 percent respondents received their education at SPM level or secondary, 32.6 percent respondents have a degree and the rest was either certificate/diploma, postgraduate, professional certificates or others.

Reliability Analysis: A reliability test were conducted on each factors (i.e. health consciousness, environmental attitude, environmental knowledge, environmental labelling and green purchase intention) in order to measure the internal consistencies. According to Hair anderson, Tatham and Black [20], Cronbach's Alpha value is satisfactory if the value's range is from 0.65 to 0.87. Table 2 summarizes that variables are reliable and have high internal consistency after three items from environmental attitude construct and two items from environmental labelling on product construct were dropped in order to strengthen the value.

Correlation Analysis and Normality Test: Correlation analysis was conducted to see whether two different constructs are measured relatively distinctive and their correlation values were neither an absolute value of 0 nor 1 [21]. The significant level was set at $p< 0.01$. All factors are not perfectly correlated where their correlation coefficients range between 0 to 1. Hence, a discriminant validity has been established. The result also suggested the data was normal. Kurtosis for each variable was reported both positive and negative, where the range was between ±3.29 while skewness falls within the range of ±2.58 at 0.01 significance level. The negative values of skewness indicated a higher of high scores whereas negative values of kurtosis shows a flatter shape of graph [22]. Table 3 presents the result for correlation analysis and normality test.

Hypotheses Testing: Multiple regression analysis was conducted to test the direct relationship between independent variables (health consciousness, environmental attitude, environmental labelling and environmental knowledge) and dependent variable (green purchase intention). Table 4 enumerates that the $R^2 = 0.180$ ($F=22.241$, $p<0.05$). It suggested that all four independent variables have explained the green purchase intention at 18%. Health Consciousness stands out to be the most important factor in influencing Malaysian consumers intention to purchase green product ($\beta_1= 0.189$, $p<0.05$). Hence, H1 is supported. Environmental knowledge as proposed in Hypothesis 4 was the second important factor that affects respondents intention to purchase green product ($\beta_2= 0.188$, $p<0.05$), implying H4 is supported. Environmental attitude posited a standardized coefficient beta value of 0.150 with $p <0.05$. Therefore, H2 is supported. On the other hand, variable "Environmental labelling" was found insignificant as the $p=0.244$ with standardized coefficient beta value of 0.057 with $p>0.05$. Thus, H3 is rejected.

Table 1: Demographic profile of respondents

Variable		Frequency	Percentage
Gender	Male	189	44.0
	Female	241	56.0
Age (years old)	Below than 20	51	11.8
	20 – 29	274	63.7
	30 – 39	77	17.9
	40 – 49	15	3.5
	50 – 59	13	3.0
Race	Malay	287	66.7
	Chinese	50	11.6
	Indian	9	2.10
	Others	84	19.5
Residential city	Kuala Lumpur	64	14.9
	Selangor	52	12.1
	Johor	58	13.5
	Pahang	4	0.9
	Penang	51	11.9
	Sabah	147	34.2
	Sarawak	40	9.3
	Federal Territory of Labuan	14	3.3
Marital status	Single	308	71.6
	Married	119	27.7
	Divorced/separated	2	0.5
	Widowed	1	0.2
Education level	Secondary/ High School	142	33.0
	Certificate or Diploma	114	26.5
	Bachelor's Degree	140	32.6
	Postgraduate (i.e. Master/ Doctorate)	18	4.2
	Professional Certificates	3	0.7
	Others	13	3.0

Table 2: Reliability analysis

Variable	Number of Item	Measures of Items	Items Dropped	Cronbach's Alpha
Health Consciousness	3	7 Points Likert Scale	-	0.858
Environmental attitude	7	7 Points Likert Scale	3	0.825
Environmental knowledge	3	7 Points Likert Scale	-	0.70
Environmental labelling on product	4	7 Points Likert Scale	2	0.852
Green purchase intention	4	4 Points Likert Scale	-	0.875

Table 3: Correlation analysis results

Variable	1	2	3	4	5	Mean	Std. Dev.	Skewness	Kurtosis
(1) Green Purchase Intention	1					3.811	0.802	-0.190	-0.370
(2) Health Consciousness	0.319*	1				5.639	0.967	-0.563	-0.326
(3) Environmental Attitudes	0.287*	0.338*	1			6.201	0.942	-1.474	2.452
(4) Environmental Knowledge	0.324*	0.323*	0.346*	1		5.714	0.988	-0.515	-0.239
(5) Environmental Labelling on Product	0.194*	0.382*	0.228*	0.216*	1	4.847	1.183	-0.532	0.391

*Correlation significant at the 0.01 level (2-tailed)

Table 4: Multiple regression results

	Unstandardized coefficients		Standardized coefficients			Collinearity Statistics	
	B	Std. error	Beta	t	Sig.	Tolerance	VIF
Health consciousness	.158	.043	.189	3.643	.000*	.752	1.330
Environmental attitude	.132	.045	.150	2.947	.003*	.779	1.283
Environmental Labelling	.039	.034	.057	1.166	.244	.842	1.188
Environmental Knowledge	.152	.041	.188	3.762	.000*	.812	1.231
R^2			.180				
Adjusted R^2			.172				
F value			22.241				
Sig. F			.000				

*Significance at $p<0.05$

DISCUSSION

This study investigated the factors that influence consumers' green purchase intention in the case of Malaysia. Results revealed that environmental knowledge was the most important predictor to consumers' green purchase intention. This study has shown that understandings upon the basic issues relating to the environmental problems were crucial in putting a significant effect in consumers' intention towards purchasing greener products. Attitude played an important role in putting consumers' mind set into a positive attitude towards environmental responsibilities especially in engaging consumers in recycling activities, perspective towards the importance of reduce, reuse and recycle as a positive manner as well as affecting their personal thoughts of going green through responsible consumption.

When the results suggested insignificant relationship of environmental labelling towards green purchase intention, it was clear that ecolabel was not well familiarized by respondents due to lack of participation among companies to use the logo. Aligned with Rashid [16], this study also implies that there is a need to improve the level of awareness on eco-labelling among Malaysian consumers as the higher level of eco-label awareness influence a better perception on the product reliability and hence, create a positive intention towards consuming greener products. Consumers were more likely to purchase green products when the information of the product is adequate and the label is well established [15] which they believe that a green certified products were better in terms of quality. Even though consumers may hold higher income and have more power to purchase, without a clear understanding of ecolabel they will not put their attention to distinguish greener products among various established conventional products in the market.

CONCLUSION

The main purpose of green consumption is to create a better environment. It is important to make green behaviour as a phenomenon among households. Every sustainability values should come from home. It is important to increase the understanding on environmental-related issues, not just for the basics but on critical issues such as climate changes, water and air pollutions, illegal logging that is endangering the forestry and also the needs to get Malaysians to be more serious in participating in preserving the environment. The changes must be made from home, where recycling should become a daily practice and also by supporting local organic products in food consumption. Attitude is an important factor that will determine a person's intention and hence, actual behaviour. A positive attitude on environment will encourage consumers to be "green-savvy" because they put their actions and consumptions as important responsibility towards society and the country. Thus, consumers should be more open to accept changes in their living style by practicing a healthier lifestyles as well as being an ethical consumer.

It is recommended to future research works to investigate the understandings, awareness and participation of individuals in green-related actions, indirect causes could be useful i.e. government policies (such as improving energy efficiencies or tax reduction on renewable energies), environmental problems around the placement of residency, the role of significant others (such as family and closed-friends) over the individuals' attitude, or the role of mass media and technologies to spread the information and awareness on issues and activities related to environment; which may seek for further elaboration as mediating factor in the current research model or how they moderate the relationship of one to another.

REFERENCES

1. Willer, H. and L. Kilcher, 2009. The world of organic agriculture: Statistics and emerging trends 2009. IFOAM, DE-Bonn and FiBL, CH-Frick.
2. Kassaye, W.W., 2001. Green dilemma. Marketing Intelligence and Planning, 19(6): 444-455.
3. Ahmad, S.N.B. and N. Juhdi, 2008. Consumer's perception and purchase intentions towards organic food product: Exploring the attitude among Malaysian consumers. Working paper.
4. Grocery Manufacturers Association (GMA), 2009. Finding the green in today's shoppers: Sustainability trends and new shopper insights. Deloitte Development LLC.
5. Beltz, F.M. and K. Peattie, 2009. Sustainability Marketing: A Global Persepective (1st ed.). United Kingdom: John Wiley and Sons.
6. Maas, J., R.A. Verheij, S. de Vries, P. Spreeuwenberg, F.G. Schellevis and P.P. Groenewegen, 2009. Morbidity is related to a green living environment. Journal of Epidemiology and Community Health, 63(12): 967-973.
7. Salleh, M.S., S.M. Ali, E.H. Harun, M.A. Jalil and M.R. Shaharudin, 2010. Consumer's perception and purchase intentions towards organic food products: Exploring attitude among academician. Canadian Social Science, 6(6): 119-129.
8. Kim, Y. and S.M. Choi, 2005. Antecedents of green purchase behaviour: An examination of collectivism, environmental concern and PCE. Advances in Consumer Research, 32(1): 592-599.
9. Laroche, M., J. Bergeron and G. Barbaro-Forleo, 2001. Targeting consumers who are willing to pay more for environmentally friendly products. Journal of Consumer Marketing, 18(6): 503-520.
10. Laskova, A., 2007. Perceived consumer effectiveness and environmental concerns. In Proceedings of the 13th Asia Pacific Management Conference, Melbourne, Australia, pp: 206-209.
11. Sinnappan, P. and A.A. Rahman, 2011. Antecedents of green purchasing behaviour among Malaysian consumers. International Business Management, 5(3): 129-139.
12. Wahid, N.A., E. Rahbar and T.S. Shyan, 2011. Factors influencing the green purchase behaviour of Penang environmental volunteers. International Business Management, 5(1): 38-49.
13. Lee, K., 2008. Opportunities for green marketing: Young consumers. Marketing Intelligence and Planning, 26(6): 573-586.
14. Chen, T.B. and L.T. Chai, 2010. Attitude towards the environment and green products. Management Science and Engineering, 4(2): 27-33.
15. D'Souza, C., 2004. Ecolabel programmes: A stakeholder (consumer) perspective. Corporate Communications: An International Journal, 9(3): 177-188.
16. Rashid, N.R.N.A., 2009. Awareness of eco-label in Malaysia's green marketing initiative. International Journal of Business and Management, 4(8): 132-141.
17. Chan, R.Y.K., 2001. Determinants of Chinese consumers' green purchase behaviour. Psychology and Marketing, 18(4): 389-413.
18. Haron, S.A., L. Paim and N. Yahaya, 2005. Towards sustainable consumption: An examination of environmental knowledge among Malaysians. International Journal of Consumer Studies, 29(5): 426-436.
19. Baron, R.M. and D.A. Kenny, 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. Journal of Personality and Social Psychology, 51(6): 1173-1182.
20. Hair, J.F., B. Black, B. Babin, R.E. Anderson and R.L. Tatham, 2010. Multivariate Data Analysis: A Global Perspective. Pearson Education Inc., NJ.
21. Campbell, D.T. and D.W. Fiske, 1959. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 56(2): 81-105.
22. Field, A., 2009. Discovering statistics using SPSS. Sage Publications Limited.