

SOCIAL SCIENCES & HUMANITIES

Journal homepage: http://www.pertanika.upm.edu.my/

Factors Influencing Students' Intention to Purchase Green Products: A Case Study in Universiti Utara Malaysia

Muhammed Abdullah Sharaf^{1*} and Filzah Md Isa²

¹Othman Yeob Abdullah School of Business, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia ²Taylor's University, 47500 Subang Jaya, Selangor, Malaysia

ABSTRACT

Green marketing is a holistic marketing concept where activities from production to sales are done in a way that is favourable to the environment. The purpose of this study is to examine the influence of price, knowledge, eco-label, and peer pressure on the intention of young Malaysians to buy green products. The results of this study showed that price, and peer pressures have an influence on young consumers' intention to purchase green products, while knowledge, and eco-label have no influence.

Keywords: Eco-label, green purchasing, intention, knowledge, peer pressure, price

INTRODUCTION

The most critical challenge that green marketers face is identifying and specifying the factors influencing consumers to go green.

ARTICLE INFO

Article history: Received: 15 September 2016 Accepted: 30 January 2017

E-mail addresses: mu21shi@yahoo.com (Muhammed Abdullah Sharaf), filzah.mdisa@taylors.edu.my (Filzah Md Isa) * Corresponding author The influence of the 2009 Climate Change Conference in Copenhagen has seen the government of Malaysia promising to decrease greenhouse gases' emission per Gross Domestic Product to 40% by the year 2020. (Bernama, 2009). In 2010 the New Economic Model sustainability is one of the economic transformation program goals aimed at making the country a green hub (Alias, Masek, Salam, Bakar, & Nawawi, 2014). This study aims to find the factors that can motivate young Malaysians to purchase green products.

Literature Review

Purchase intention refers to individual's intention to purchase a particular brand.

ISSN: 0128-7702 © Universiti Putra Malaysia Press

Having the intention to purchase a particular product requires comparing it with other similar products available in the market (Teng & Laroche, 2007). Ghosh (1990) found that when a consumer selects a particular product, his final decision relies entirely on his intention (Chen, 2008). Therefore, many marketers believe that one of the best methods to predict consumer behaviour related to purchasing price, is one of the non-product attributes of brand associations.

The literature on green products shows an increase in income usually leads to an increase of the number of people purchasing green products (Lockie, Lyons, Lawrence, & Mummery, 2002; McEachern & McClean, 2002; Storstad & Bjorkhaug, 2003). However, Van-Doorn and Verhoef (2011) contradicted these findings as they found that consumers are less likely to purchase green products if they cost more compared to regular products. Hence the following hypothesis suggests that:

H1: Price has a significant influence on young consumers' decision to green purchasing in Malaysia.

Environmental knowledge can be defined as the ecological knowledge a person has on environmental issues (Conraud-Koellner & Rivas-Tovar, 2009). However, having environmental knowledge does not always lead to favourable actions.

Previous studies stated that people who are environmentally informed tend to engage in positive environmental behaviour (Hines, Hungerford, & Tomera, 1987).Accordingly, Mostafa (2009) stated that there is a significant effect between knowledge and green purchasing intention. Therefore, the second hypothesis is:

H2: Knowledge has a significant influence on young consumers' intention towards green purchasing in Malaysia.

Eco-labels refer to a product's collective overall environmental performance (Giridhar, 1998). According to Rashid (2009), eco-labels are possibly attractive instruments that are used to inform consumers on the environmental significance of purchasing such a product and serving as means to acquiring a special place in the market. Nonetheless, some researchers suggested that eco-labelled products do not always affect consumers' sentiments towards environmental issues (Wessells, Johnston, & Donath, 1999). While the importance of eco-labelling was still being argued about Erskine and Collins (1997) stated that having an effective and workable eco-label scheme that can really enhance environmental concerns is not an easy task in practice. Based on Sammer and Wustenhagen (2006) who analysed the relative importance of EU energy-labelled products on consumer behaviour and found a positive influence the following hypothesis was formulated:

H3: Eco-label has a significant influence on young consumers' intention towards green purchasing in Malaysia.

Peer pressure is the psychological pressure people face when they evaluate their actions with others (Cohan, 2009). It is undeniable that when people are provided with certain information, they find it not satisfying enough in a way that could make them behave in a certain way. The peer pressure is the feeling of guilt created when the individual fails to perform or behave like others. Accordingly, Barua and Islam (2011) stated that peer influence plays a major role in consumers' behaviour; thus for example teenagers seem to have no problem purchasing expensive goods if their peers tend to do so (Grant & Stephen, 2006). Ewing (2001) revealed that social norms significantly motivate environmental friendly behaviour. Lee's (2008) study found that social influence is the main determinant of green purchasing behaviour. Additionally, it was stated that interpersonal communication plays an important role in influencing consumers' green purchasing

behaviour. This is due to the characteristics of social groups where people tend to share the same thinking, desires and habits and can result in supporting eco-friendly behaviour (Zia-ur-Rehman & Dost, 2013). Therefore the last hypothesis can be made:

H4: Social influence has a significant impact on young consumers' intention towards green purchasing in Malaysia.

In order to predict consumer's purchase researchers have applied the TRA and TPB extensively. Summers et al. (2006) used TRA and TPB to predict the intention to purchase luxury products and Shah-Alam and Mohamed-Sayuti (2011) uses TPB to study consumer purchase behaviour for halal food, while Tarkiainen and Sundqvist (2005) used it for organic food.

This study uses Ajzen's (1991) Theory of Planned Behavior as shown in Figure 1.

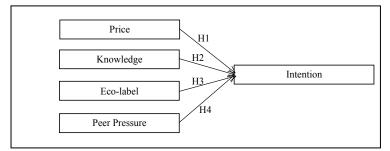


Figure 1. Conceptual framework

METHODS

To obtain a snapshot of views and attitude of respondents the quantitative survey approach was used. It applies a systematic random sampling technique to allow every member of the population to get an equal chance of being selected for the sample distribution (Hurlburt, 2006). The unit of analysis in this research are local students from the college of business, college of arts and science and college of law at UUM.

The questions in this research were phrased in the form of statements scored on a five point Likert type scale, ranging from 1 "strongly disagree" to 5 "strongly agree" (Gan, Wee, Ozanne, & Kao, 2008). In this study, questionnaires are divided into two parts; demographic and those related to the variables. In the first part, the respondents' demographic profiles were sought, and in the second part consists 24 items are listed to measure the independent variables and dependent variables.

Price as used in this study refers to the amount of money needed to buy a green product.

Table	1
Price	items

No.	Items
	Price $\alpha = .88$
1	I would choose environmentally friendly goods and services, campaigns or companies if the price were the same
2	I'm willing to pay more for environmentally friendly products
3	If the price of green products is less expensive, I'm willing to change my lifestyle by purchasing green products
4	I'm willing to pay more for groceries that are produced, processed and packaged in an environmentally friendly way
5	I would be willing to spend extra in order to buy fewer environmentally harmful products.

Knowledge was conceptualized in this environmental issues and green product's study as respondents' understanding of impact on the environment.

Table 2 *Knowledge items*

No.	Items
	Knowledge $\alpha = .78$
1	I know more about green products than the average person
2	I know how to select products that reduce the amount of waste
3	I understand the environmental phrases and symbols on product packages
4	I am very knowledgeable about green products
5	I can give people advice about different brands of green products

Eco-label in this study refers to information found in products packaging.

Table 3 *Eco-label items*

No.	Items
	Eco-label $\alpha = .70$
1	I consider what is printed on eco-labels to be accurate
2	I easily understand the information on eco-labels
3	I'm satisfied with the information available on the eco-label of the green products
4	I believe in the information on green products
5	I appreciate the package/design of green products

Peer pressure was conceptualized in this study as pressure the respondents face when comparing their actions to their peers.

Table 4Peer pressure items

No.	Items
	Peer Pressure $\alpha = .73$
1	I am encouraged to buy green products by people who are important to me
2	My friends think that I should purchase green products
3	My family thinks that I should purchase green products
4	I learn a lot about environmental friendly products from my friends
5	I always share information regarding environmental friendly products with my friends and family

Intention to purchase green products was conceptualized in this study as respondents'

willingness to buy products that are environmentally friendly.

Table 5Peer pressure items

No.	Items
	Intention $\alpha = .87$
1	I am willing to buy green products
2	It is very likely that I will buy green products in the future
3	I am willing to continuously buy green products
4	I am willing to pay more when purchasing green products

ANALYSIS

For the purpose of data collection 250 questionnaires were distributed to Malaysian students in Universiti Utara Malaysia. Out of this number, 194 questionnaires were returned, however three of them were excluded due to the large amount of unanswered questions. The total questionnaires made a total of 191 questionnaires, with a response rate of 76.4%.

The majority of respondents are aged between 18 years old and 23 years old and females outnumbered males, 63.4% to 36.6%. Majority of respondents are Malay (94 or 49.2%), followed by Chinese (73 or 38.2%), Indian (17 or 8.9%) and others (7 or 3.7%). A reliability analysis was run onto the independent variables, the Cronbach's alpha of all the variables is .925, and the Cronbach's alpha for the dependent variable is .836, while the Cronbach's alpha for the independent variables range between .723 and .893. Results of Cronbach alpha are as follows: price (.63), knowledge (.74), ecolabel (.75) peer pressure (.65) and intention (.78). The respective Cronbach's alpha values indicates that the reliability of all the variables was good and therefore acceptable.

Descriptive analysis was conducted to determine the mean scores and standard deviations for the construct. Based on the 191 valid cases being analysed the data is presented in Table 6.

Table 6

Construct	Dimension	Mean	Standard Deviation
Independent variables	Price	3.90	.660
	Knowledge	3.20	.700
	Eco-label	3.79	.633
	Peer Pressure	3.88	.802
Dependent variable	Intention	3.98	.648

The mean scores of all the variables are moderate i.e. above 3. The high mean scores for price of 3.90 suggests that this variable should be taken into consideration.

The standard deviation ranged between .633 and .802, reflecting the existence of acceptable variability in the data and answers varied among respondents.

The results of the correlation analysis proved that a significant and positive relationship with all the independent variables exists, namely the price of green products (r = 0.500), knowledge of green products (r=0.307), eco-label of green products (r=0.457), and peer pressure (r=0.441) at p<0.01 as shown in Table 7.

Factors Influencing Students' Intention to Purchase Green Products

	Intention	Price	Knowledge	Eco-label	Peers
Intention	1				
Price	.500**	1			
Knowledge	.307**	.213**	1		
Eco-label	.457**	.479**	.462**	1	
Peers	.441**	.915**	.131	.382**	1

Table 7Correlation Analysis

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

Regression analyses was conducted to examine the relationship between intention to green consumerism and various potential predictors. As it can be seen from Table8 price, and peer pressure are significantly correlated with the intention to purchase green products.

Table 8 Hypothesis Summary

Hypothesis	Р	
H1: Price has a significant influence on young consumers' intention towards green purchasing in Malaysia	.000	Supported
H2: Knowledge has a significant influence on young consumers' intention towards green purchasing in Malaysia.	.447	Not supported
H3: Eco-label has a significant influence on young consumers' intention towards green purchasing in Malaysia.	.134	Not supported
H4: Peer pressure has a significant influence on young consumers' intention towards green purchasing in Malaysia.	.000	Supported

CONCLUSION

The results of this study shows that price is always an important factor for young consumers in their purchases. Peer pressure is another important factor in determining consumption behaviour. On the other hand, the study found that knowledge and labels had no impact on students' consumption styles, suggesting more work needs to be done in promoting green consumption.

REFERENCES

- Ajzen, I. (1991). The theory of planned behaviour. Organizational behaviour and human decision processes, 50(2), 179-211.
- Alias, M., Masek, A., Salam, S., Bakar, N., & Nawawi, R. M. (2014). Applications of green technology for sustainable public bus services. *Management* and Technology in Knowledge, Service, Tourism and Hospitality, 13.

- Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology*, 27(1), 14-25.
- Barua, P., & Islam, M. (2011). Young Consumers' Purchase Intentions of Buying Green Products: A study based on the Theory of Planned Behavior. (Unpublished Master Thesis). Umea University, Sweeden.
- Batey, C. E. (2008). Atlantic Connections and Adaptations: Economies, environments and subsistence in lands bordering the North Atlantic. *Scottish Archaeological Journal*, 30(1-2), 211-212.
- Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of Consumer Research*, 473-481.
- Bernama (2009, December 18). Malaysia Announces Conditional 40 Percent Cut in Emissions. *Utusan Online*. Retrieved from http://ww2.utusan.com. my/utusan/special.asp?pr=theMessenger&y= 2009&dt=1218&pub=theMessenger&sec=Ho me_News&pg=hn_09.htm
- Blend, J. R., & Van Ravenswaay, E. O. (1999). Measuring consumer demand for ecolabeled apples. American Journal of Agricultural Economics, 1072-1077.
- Boztepe, A. (2012). Green marketing and its impact on consumer buying behavior. *European Journal* of Economic and Political Studies, 5(1), 5-21.
- Chan, R. Y. (2001). Determinants of Chinese consumers' green purchase behaviour. *Psychology and Marketing*, 18(4), 389-413.
- Chan, R. Y., & Lau, L. B. (2000). Antecedents of green purchases: a survey in China. *Journal of Consumer Marketing*, 17(4), 338-357.

- Chaplin, L. N., & John, D. R. (2010). Interpersonal influences on adolescent materialism: A new look at the role of parents and peers. *Journal of Consumer Psychology*, 20(2), 176-184.
- Chen, K. (2008). A study of the relationship between UK consumers purchase intention and store brand food products (Unpublished doctoral dissertation). United Kingdom: University of Nottingham.
- Childs, C. & Whiting, S. (1998). Eco-labeling and the Green Consumers. Working papers from Sustainable Business Publications series. The Sustainable Business Initiative, Department of Environmental Science, University of Bradford, West Yorkshire. [Online] Available: http://www. brad.ac.uk/acad/envsci/SB/init.htm
- Cohan, P. S. (2009). Use Peer Pressure To Sell Your Product. Retrieved from: www. financialexecutives.org
- Conraud-Koellner, E., & Rivas-Tovar, L. A. (2009). Study of Green Behavior with a Focus on Mexican Individuals, *iBusiness*, 1(2), pp. 124-131. doi: 10.4236/ib.2009.12016.
- Cotte, J., & Wood, S. L. (2004). Families and innovative consumer behaviour: A triadic analysis of sibling and parental influence. *Journal of Consumer Research*, 31(1), 78-86.
- Creswell, J. W. (1994). *Research design*. Thousand Oaks, CA: Sage publications.
- D'Souza, C., Taghian, M., Lamb, P., & Peretiatkos, R. (2006). Green products and corporate strategy: an empirical investigation. *Society and Business Review, 1*(2), 144-157.
- Daido, K. (2004). Risk-averse agents with peer pressure. *Applied Economics Letters*, 383–386. http:// dx.doi.org/10.1080/1350485042000228240
- Erskine, C. C., & Collins, L. (1997). Eco-labelling: success or failure? *Environmentalist*, 17(2), 125-133.

- Ewing, G. (2001). Altruistic, egoistic, and normative effects on curbside recycling. *Environment and Behavior, 33*(6), 733-764.
- Fotopoulos, C., & Krystallis, A. (2002). Purchasing motives and profile of the Greek organic consumer: a countrywide survey. *British Food Journal*, 104(9), 730-765.
- Fotopoulos, C., Krystallis, A., & Ness, M. (2003). Wine produced by organic grapes in Greece: using means—end chains analysis to reveal organic buyers' purchasing motives in comparison to the non-buyers. *Food Quality and Preference*, 14(7), 549-566.
- Gan, C., Wee, H. Y., Ozanne, L., & Kao, T. H. (2008). Consumers' purchasing behaviour towards green products in New Zealand. *Innovative Marketing*, 4(1), 93-102.
- Ghosh, M. K. (1990). Markov decision processes with multiple costs. *Operations Research Letters*, 9(4), 257-260.
- Giridhar, T. R. (1998). Eco-labelling: A comparative analysis. *Colourage*, 45(6), 27-30.
- Grant, I. J., & Stephen, G. R. (2006). Communicating culture: an examination of the buying behaviour of 'tweenage'girls and the key societal communicating factors influencing the buying process of fashion clothing. *Journal of Targeting, Measurement and Analysis for Marketing, 14*(2), 101-114.
- Griskevicius, V., Tybur, J. M., & Van den Bergh, B. (2010). Going green to be seen: status, reputation, and conspicuous conservation. *Journal of Personality and Social Psychology*, 98(3), 392.
- Hafeez, S., & Muhammad, B. (2012). The Impact of Service Quality, Customer Satisfaction and Loyalty Programs on Customer's Loyalty: Evidence from Banking Sector of Pakistan. International Journal of Business and Social Science.

- Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behaviour: A meta-analysis. *The Journal of Environmental Education, 18*(2), 1-8.
- Hurlburt, R. T., & Heavey, C. L. (Eds.). (2006). Exploring inner experience: The descriptive experience sampling method (Vol. 64). Amsterdam: John Benjamins Publishing.
- Kaiser, F. G., & Fuhrer, U. (2003). Ecological behavior's dependency on different forms of knowledge. *Applied Psychology*, 52(4), 598-613.
- Kelman, H. C. (1974). Attitudes are alive and well and gainfully employed in the sphere of action. *American Psychologist, 29*(5), 310.
- Kennedy, E. H., Beckley, T. M., McFarlane, B. L., & Nadeau, S. (2009). Why we don't" walk the talk": Understanding the environmental values/ behaviour gap in Canada. *Human Ecology Review*, 16(2), 151.
- Khandelwal, U., & Yadav, S. K. (2014). Green Marketing and Sustainable Development: Marketing Professionals Attitude Towards Green Marketing. *International Journal of Marketing and Business Communication*, 3(1), 1-8.
- Kollmuss, A., & Agyeman, J. (2002). Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behaviour? *Environmental Education Research*, 8(3), 239-260.
- Lee, K. (2008). Opportunities for green marketing: young consumers. *Marketing Intelligence and Planning*, *26*(6), 573-586.
- Lin, P. C., & Huang, Y. H. (2012). The influence factors on choice behavior regarding green products based on the theory of consumption values. *Journal of Cleaner Production*, 22(1), 11-18.

- Lockie, S., Lyons, K., Lawrence, G., & Mummery, K. (2002). Eating 'green': motivations behind organic food consumption in Australia. *Sociologia Ruralis*, 42(1), 23-40
- Magnusson, M. K., Arvola, A., Koivisto Hursti, U. K., Åberg, L., & Sjödén, P. O. (2001). Attitudes towards organic foods among Swedish consumers. *British Food Journal*, 103(3), 209-227.
- Manafi M., Saeidinia M., Gheshmi R., Hojabri R., Fazel O., & Jamshidi D. (2011). Brand Equity Determinants in Educational Industry: A study of large universities of Malaysia, *IJCRB Journal*, 7(13), 769 -781.
- McEachern, M. G., & Mcclean, P. (2002). Organic purchasing motivations and attitudes: are they ethical? *International Journal of Consumer Studies*, 26(2), 85-92.
- Menon, A., & Menon, A. (1997). Enviropreneurial marketing strategy: the emergence of corporate environmentalism as market strategy. *The Journal of Marketing*, 51-67.
- Mostafa, M. M. (2009). Shades of green: A psychographic segmentation of the green consumer in Kuwait using self-organizing maps. *Expert Systems with Applications*, 36(8), 11030-11038.
- Neuman, W. L. (2007). *Basics of social Research, Qualitative and Quantitative Approaches,* Boston: Pearson Education.
- Peattie, K. (2001). Golden goose or wild goose? The hunt for the green consumer. Business Strategy and the Environment, 10(4), 187-189.
- Pedro Pereira Luzio, J., & Lemke, F. (2013). Exploring green consumers' product demands and consumption processes: The case of Portuguese green consumers. *European Business Review*, 25(3), 281-300.

- Rashid, N. R. N. A. (2009). Awareness of ecolabel in Malaysia's green marketing initiative. International Journal of Business and Management, 4(8), p132.
- Sammer, K., & Wüstenhagen, R. (2006). The influence of eco-labelling on consumer behaviour–Results of a discrete choice analysis for washing machines. *Business Strategy and the Environment*, 15(3), 185-199.
- Sekaran, U. (2003). Research Methods for Business: A Skill Building Approach (4th ed.). New York: John & Sons.
- Shah-Alam, S., & Mohamed-Sayuti, N. (2011). Applying the Theory of Planned Behavior (TPB) in halal food purchasing. *International Journal* of Commerce and Management, 21(1), 8-20.
- Shahnaei, S. (2012). The impact of individual differences on green purchasing of Malaysian consumers. *International Journal of Business and Social Science 16*(3), 132-14.
- Singaralingam, J. (2015). Factors influencing green consumerism behaviour among penangites. (Unpublished Doctoral Dissertation), Universiti Utara Malaysia, Sintok, Kedah.
- Storstad, O., & Bjørkhaug, H. (2003). Foundations of production and consumption of organic food in Norway: Common attitudes among farmers and consumers? *Agriculture and Human Values*, 20(2), 151-163.
- Summers, T. A., Belleau, B. D., & Xu, Y. (2006). Predicting purchase intention of a controversial luxury apparel product. *Journal of Fashion Marketing and Management*, 10(4), 405-419.
- Tarkiainen, A., & Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British Food Journal*, 107(11), 808-822.

- Teisl, M. F., Roe, B., & Hicks, R. L. (2002). Can ecolabels tune a market? Evidence from dolphin-safe labeling. *Journal of Environmental Economics* and Management, 43(3), 339-359.
- Teng, L., & Laroche, M. (2007). Building and testing models of consumer purchase intention in competitive and multicultural environments. *Journal of Business Research*, 60(3), 260-268.
- Thøgersen, J. (2002). Direct experience and the strength of the personal norm-behaviour relationship. *Psychology and Marketing*, 19(10), 881-893.
- Tsiotsou, R. (2005). Perceived quality levels and their relation to involvement, satisfaction, and purchase intentions. *Marketing Bulletin, 16*(4), 1-10.
- UNEP & UNESCO (2001), Is the Future Yours? Research Project on Youth and Sustainable Consumption. Paris: Author.
- Van Doorn, J., & Verhoef, P. C. (2011). Willingness to pay for organic products: Differences between virtue and vice foods. *International Journal of Research in Marketing*, 28(3), 167-180.

- Verhoef, P. C. (2005). Explaining purchases of organic meat by Dutch consumers. *European Review of Agricultural Economics*, 32(2), 245-267.
- Wessells, C. R., Johnston, R. J., & Donath, H. (1999). Assessing consumer preferences for ecolabeled seafood: the influence of species, certifier, and household attributes. *American Journal of Agricultural Economics*, 1084-1089.
- Zainudin, N. (2013). Attitudes Towards Energy Efficient Products: The Influence Of Eco-Literacy And Social Influence. Wcik E-journal of Integration Knowledge.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *The Journal of Marketing*, 2-22.
- Zia-ur-Rehman, & Dost, M., K., B. (2013). Conceptualizing Green Purchase Intention in Emerging Markets: An Empirical Analysis on Pakistan. *WEI International Acade*.