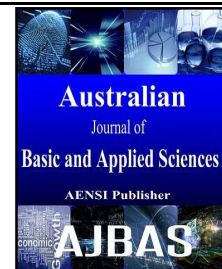




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Green Marketing and Purchasing Decisions among Teenagers: An Empirical Perspectives

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ABSTRACT

The objective of this paper is to identify relationship between green marketing and purchasing decision among teenagers. A convenience sampling method was employed from university students enrolled in Malaysia, who have embarked on green marketing successfully. Eight factors were found to be critical for purchasing decisions among teenagers. The factors are demographic, environmentally conscious consumer behaviour, perceived consumer effectiveness, environmental concern, liberalism, eco-label, eco-brand and green marketing advertisement. The paper provides a framework for future research to explore the teenagers purchasing decisions.

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INTRODUCTION

Environment concern has emerged in United States and Western Europe over the past decades. A positive change with consumers' behaviour toward environmentally friendly products can be seen due to the increased level of environmental awareness since the 1970s (Alwitt and Pitts, 1996). This positive change contributed to the start of the green revolution to prevent further damage to the environment. Throughout the year, similar with other developing nations, Malaysian government also has started following the same measures to protect the environment such as Product Certification Program etc., It is a national labelling program launched in 1996 by Standards and Industrial Research Institute of Malaysia (SIRIM) in providing the information to the customers on the products, so that they can identify environmental products and their specifications such as Environmentally Degradable, Non-toxic Plastic Packaging Material, Hazardous Metal-Free Electrical and Electronic Equipment, Biodegradable Cleaning Agents and Recycled Paper to name a few products under certification.

Another national labelling program is for agriculture products which endorsed by the Agricultural Department and Federal Agriculture Marketing Authority (FAMA). Skim Amalan Ladang Malaysia (SALM) is a national program that is implemented by the Department of Agriculture of

Malaysia to recognize and certify farms which adopt fair practices in agriculture, that operate in environmentally friendly ways and yield products that have quality, safety and suitability for human consumption. Only agricultural produces from the certified farms can apply for the Malaysia Best eco-label. Malaysian Energy Commission (MEC) is also an eco-label agency that related to the energy efficiency (EE). MEC established an energy labelling scheme for household appliances to assist Malaysian consumers while purchasing the products. The scheme known as Energy Rating Label, with this scheme the consumers will be able to compare the products before make purchasing decisions.

Green marketing initiatives in Malaysia is used to encourage consumers to take into account the environmental aspects before making any purchasing decisions. Green marketing tools such as eco-brand, eco-label and environmental advertisement will make easier perception and awareness of green products and will guide them while making the purchasing decisions.

This paper was conducted to study the green marketing and purchasing decisions among teenagers. This paper discusses the relationship between demographical-psychological-environmental knowledge and teenagers purchasing decision. Based on these grounds the current study is conducted to address the following research questions:

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1. Is there any significant relationship between demographic and purchasing decision among teenagers?
2. What is the relationship between green marketing and teenagers purchasing decisions?
3. What are the factors that increase consumers' awareness on green marketing and green product purchases?
4. Is there any relationship between psychological factors and teenagers purchasing decisions?
5. Is there any relationship between environmental knowledge factors and teenagers purchasing decisions?

This study attempts to answer the research questions through the development of a research framework after investigating prior literatures in this context.

Literature Review:

Green Marketing:

Green or environmental marketing is defined as actions intended to replace current needs and wants with minimal harmful ones which impact on the environment (Stanton and Futrell 1987). Polonsky (2007) stated that green marketing includes wider range of organizational activities such as product modification, changes to the production process, delivery change and more and to satisfy human needs or wants, all activities consist green or environmental marketing designed to generate and facilitate any exchange intended so that the satisfaction of these needs and wants occurs with minimal detrimental impact on the natural environment.

Kärnä *et al.* (2001) defined green marketing as "the holistic management process responsible for identifying, anticipating and satisfying the consumers and society requirement in a profitable and sustainable way".

Ottman (1992), Kaufman (1999), Laroche *et al.* (2001), Vaccaro (2009) consider green marketing as an important entrepreneurial opportunity to innovate more on the product and an outstanding advantage against the competition.

According to Pride and Ferrell (2008) green marketing objectives should be: i) Focus on production of products without waste instead of getting rid of waste. ii) Become consistent with the environmental commitment by re-inventing the concept of product. iii) High value for the consumer's money, the price of the products portraying the real cost. iv) Create profit by creating the operational occasions that derives from the environmental conscience in the market.

Perception of Eco-Label Product:

Kangun and Polonsky (1995) found that consumers do not always understand environmentally friendly labels that are attached to the products. Eco-labels those are unfamiliar and/or unknown by the consumers such as 'biodegradable',

'sustainable', 'fair wage/ fair trade', 'environmentally friendly', and 'recyclable'. Morris Hastak and Mazis (1995) stated that recognizing a label does not mean that one understands the meaning of the label.

Giridhar (1998) referred eco-labels as a product's collective overall environmental performance. Childs and Whiting (1998) stated that the indicators of the environmental performance of a product and developed to prevent consumers from being confused over claims of environmental friendliness is aptly called eco-label. Eco-labels is a tool for consumers to facilitate making decision for select environmentally friendly products also enable them to know how products are made (Rex and Baumann, 2007) to promote the identification of green products the Environmental labels are increasingly being utilized by marketers (D'Souza *et al.*, 2006). Sammer and Wustenhagen (2006) who identify an important tool to allocate asymmetry information between sellers and a buyer is eco-label. For consumers, labels are a signal to accomplish two main functions such as information function about intangible product characteristics such as products' quality and value function that will provide value in themselves. Nik Abdul Rashid's (2009) study has shown that the awareness of eco-label has positive effect between knowledge of green marketing product and consumers' intention to purchase. A few studies have been conducted by D'Souza (2004), Nik Abdul Rashid (2009), Whitson and Henry (1996) to investigate the link between environmental labelling and a consumer's intention and behaviours to purchase environmentally friendly products. D'Souza (2004) explained that little is understood on the effect of label information on a consumer's intention to purchase environmental friendly products. According to Nik Abdul Rashid (2009), eco-labels are attractive instruments informing consumers about the environmental impact of their purchasing decisions. To help consumers about the environmentally preferable than other similar products, eco-labelling schemes were initiated in order to promote environmental consumerism. Before a consumer makes a purchasing decision, they must know and trust the label before they use it. Referring to the Body Shop's marketing tactic, the environmental information promotions is used throughout the store. Their consumer purchasing decisions is related to their integrated marketing communication approach such as using eco-labels to educate consumers on the social and environmental impacts of their purchasing decisions.

Perception of Eco-Brand:

American Marketing Association defined brand as "a name, term, sign, symbol or design or the combination of them, intended to identify goods or services of one seller or group of sellers and to differentiate them from those competitors". Other

than that, a name, symbol or design of a product that are harmless to the environment also can be generalized for eco-brand as well.

Rahbar and Abdul Wahid (2010) consumers gave predicted positive response to the products with environmental features that are known as eco-branded products. Wüstenhagen and Bilharz (2006) supported the idea from earlier research in western countries that consumers in USA and Germany take action positively to eco-branded products such as Body Shop and green energy.

Green Marketing Advertisements:

According to Zinkhan and Carlson (1996) all appeals that include ecological, environmental sustainability or nature-friendly messages that targeted the needs and desires of environmentally concerned stakeholders are known as environmental (green) advertisements. There are three categories: i) Relationship between a product or services and the natural environment is either express directly or indirectly. ii) Environmentally responsible lifestyle promoted with or without highlighting a product/services. iii) that present an image of corporate environmental responsibility- Banerjee *et al.* (1995)

Green Segmentation Criteria:

Market segmentation underlying logic is established. Customers demonstrate heterogeneity in their product preferences and buying behaviour becomes the centre of the assumptions (Wind, 1978). do Paço Raposo (2009) stated that in many studies of green marketing literature it is attempted to define

Theoretical Framework:

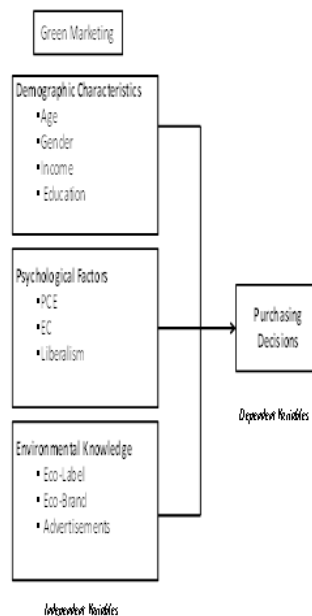


Fig. 1: Theoretical Framework.

the characteristics of green consumer for segmentation purpose. These researchers are not always yielded the wanted results, and the results produced in one study have been frequently contradicted in another. To identify demographic variables that shape the green consumer profile, number of studies has been made to meet the results. For marketers to segment the market and capitalize on green attitudes and behaviour variables, when significant, it will offer easily and efficiently (Anderson *et al.*, 1974; Samdahl and Robertson, 1989; Roberts, 1996a, b; Jain and Kaur (2006); D'Sauza *et al.*, 2007).

Research Methodology:

This study employs empirical analysis to determine the relationship between purchasing decisions among teenager's variables, which consisted of ECCB, green marketing and purchasing behaviour. Purchasing decisions factors are tested in the questionnaires and students were asked to rate on a Likert type scale of 1 to 5, 1 denotes "Strongly Disagree" and 5 reflects "Strongly Agree" with other degrees in the range on these factors with respect to what decisions among teenagers. Data for the study were collected through a self-administered survey distributed to students enrolled in Malaysian University. Questionnaires were either sent by e-mail or delivered by hand to the respondents. A total of 135 undergraduates participated in the study. The targeted group was of age range from 18 years to 25 years, with an average of 20 years. The research adopted the snow ball-or-chain sampling technique.

RESULTS AND DISCUSSION

Overview of Data Gathered:

A total of 150 questionnaires were distributed randomly to convenience respondents among the university students enrolled in Malaysia, only 135 questionnaires were returned, which representing 90% response rate. The rest 10% were not returned.

Demographic Data:

The results indicate that out of 135 respondents, there were more female than male respondents. The results showed that 52.6% of the respondents were females and the remaining 47.4% were males. The majority of 87 respondents were aged between 22 – 23 years old (64.4%), 17.8% (24) were aged between 20-21 years old, 7.4% (10) were aged between 24 – 25 years old, 5.2% (7) were aged

between 18 -19 years old and above 26 years old. As for the education level, the majority of 115 (85.6%) respondents were from degree graduates, 16 (11.9%) were from diploma holders and 4 (3.0%) were from post graduates. A total ethnicity of 80 (53.1%) respondents were Malay, 17 (12.6%) were Chinese, 8 (5.9%) were Indian and 30 (22.2%) were others which consist of Bajau (1.5%), Bidayuh (1.5%), Brunei (0.7%), Bugis (2.2%), Iban (3.7%), Kadazan Dusun (0.7%), Kenyah (3.0), Melanau (8.9) and Sungai (0.7%). As for the monthly spending, the greater numbers of the respondents spend between RM100 - RM200 and RM201 - RM300 (25.2%), there were 25 (18.5%) were spend below RM100, 23 (17.0%) were spend from RM301 to 400 and there were 19 (14.1%) respondents spend more than RM500.

Reliability Analysis:

Table 1: Results of Reliability Test.

Variables	Number of Items	Items Dropped	Items Recorded	Cronbach Alpha
Purchasing Decisions	3	-	-	.536
ECCB	10	-	-	.763
PCE	2	-	-	.592
EC	5	-	-	.594
Liberalism	2	-	-	.377
Advertisements	3	-	-	.810
Eco-Label	3	-	-	.566
Eco-Brand	3	-	-	.647

Table 1 shows the Cronbach's Alpha and items of each dependent variable namely Purchasing Decisions and Cronbach's Alpha for independent variables item namely ECCB, PCE, EC, Liberalism, Advertisements, Eco-Label and Eco-Brand. The Cronbach's coefficients alpha values for all factors are ranged from 0.377 to 0.810.

It is indicated as good inter-item consistency reliability among the variables analyzed. The reliability of a measure were established by testing

for consistency and stability of data collected (Sekaran, 1992). To measure the goodness of data, reliability tests were conducted on the overall instrument. This is to ensure that all items used in each variable are free from error and thus, providing consistent results. Cronbach's Alpha was the measurement. Alpha over 0.80 is considered good, whereas range of 0.70 is considered acceptable (Sekaran, 2000).

Descriptive Analysis among All Variables:

Table 2: Descriptive Analysis.

Factors	Mean	Standard Deviation
Purchasing Decisions	1.5160	.30669
ECCB	3.4548	.50663
PCE	2.7741	.93983
EC	3.7452	.52657
Liberalism	3.6370	.64481
Advertisements	3.8272	.63982
Eco-Label	3.1704	.70519
Eco-Brand	3.5605	.58824

Table 2 presents the summary of all descriptive statistics i.e. 'means' and 'standard deviation' for all the variables that is analysed in this study. It is clearly presented that the mean for all variables are in range from 1.5160 to 3.8272.

The mean and standard deviation for independent variables measures which are ECCB, PCE, EC, Liberalism and Advertisements were 3.4548, 2.7741, 3.7452, 3.6370 and 3.8272 respectively. Finally for dependent variable,

Purchasing Decision has the lowest mean 1.5160 and Standard Deviation of .30669.

Respondents agree ECCB and EC is affecting teenagers purchasing decisions (mean=3.4548) and (mean=3.7452), moreover, they recognize the eco-

label (mean=3.1704), trust eco-brand (3.5605), enjoy watching green marketing advertisements (mean 3.8272). Meanwhile, respondents disagree that PCE is affecting teenagers purchasing decisions (mean=2.7741).

Independent t-test analysis:

Table 3: Independent t- test with gender.

Factors	Gender			t-value	Sig
	Male	Female			
Psychological	3.4086	3.4685		.311	.757
Environmental Knowledge	3.5486	3.4930		.651	.516
Purchasing Decisions	1.5052	1.5258		-.389	.698

From the Table 3 above, from gender variable, there are no significant differences in psychological,

environmental knowledge and purchasing decision between female and male.

Correlation Matrix:

Table 4: Correlation Matrix.

	PD	ECCB	PCE	EC	Liberalism	Advertisement	Ecolabel	Eco-brand
PD	1.000							
ECCB	-.311	1.000						
PCE	.032	.022	1.000					
EC	-.098	.434	.136	1.000				
Liberalism	.030	.289	.033	.414	1.000			
Advertisement	-.172	.466	.038	.379	.326	1.000		
Eco-label	-.018	.178	.135	.159	.216	.332	1.000	
Eco-brand	.003	.301	.031	.439	.390	.458	.372	1.000

Table 4 shows that the variables are not highly correlate between one another. Only the factor Advertisement has a value 0.466 in the table which

means that it has a high correlation among other variables with purchasing decisions among teenagers.

Regression Results:

Table 5: Regression Result.

Variables	Beta	t-value	P value	VIF
ECCB	-.332	-3.253	.001	1.426
PCE	.038	.446	.656	1.043
EC	-.021	-.204	.839	1.553
Liberalism	.122	1.277	.204	1.322
Advertisements	-.105	-1.013	.313	1.568
Eco-Label	.006	.067	.947	1.240
Eco-Brand	.106	1.020	.310	1.572
R Square = .126 Durbin Watson = 1.940 F = 2.604 Sig. F = .000				

Table 5 shows that Multi co-linearity problem does not exist in this regression model since condition index, VIF and tolerance fell within the accepted range which is below VIF = 10. The results of the regression analysis shows that determinant factors affecting purchasing decisions, ECCB was found to have significant effect (sig.t = .001) and negative beta of (-.332) on teenagers purchasing decisions. This indicates that teenagers purchasing

decisions were affected if the ECCB did not satisfy them. The regression analysis also indicates that PCE did not have significant effect (P-value = .656) on teenagers purchasing decisions. This shows that teenagers purchasing decisions were not affected due to the PCE in this study.

EC also found to have no significant effect on teenagers purchasing decision with significance level

of .839. This shows that EC does not influence teenagers purchasing decisions.

Liberalism did not play a role in influencing teenagers purchasing decisions with significance level of .204. This means that teenagers purchasing decisions were not affected due to the Liberalism.

The regression analysis indicates that Advertisement does not have significant effect (P -value = .313). This shows that Advertisement does not affect teenagers purchasing decisions. One of the factors contributing to the failure of the applying environmental advertisements to enhance purchasing decisions among teenagers is due low credibility of green advertisements among consumers (Kilbourne, 2004). According to Davis (1993), the factor resulting to consumer's weak response to environmental advertising is not the consequence of consumer unwillingness to take action and change their behaviour to purchase green product; rather consumer are unwilling to change their purchase behaviour given the manner in which "green" products have been promoted and advertised. One of its specific reasons is the lack of specificity in many environmental claims that may have resulted in consumers forming a negative view of the green advertisements and advertised products.

Eco-Label did not play a role in influencing teenagers purchasing decisions with significance level of .947. The finding expressed the Malaysian teenager trust in eco-label but it does not influence their purchasing decision. Eco-label is a new concept in Malaysia not only in term existence but as strategies that are utilized by marketers to influence on the purchase behaviour.

Eco-Brand did not significantly affect teenagers purchasing decisions with significant level of .310. The study showed regardless to the eco-branded products succeed in commercial their products due to its positive image, it still do not lead Malaysian teenagers to purchase and caused growth to brand loyalty.

ECCB, PCE, EC, Liberalism, Advertisements, Eco-Label and Eco-Brand can only be explained 12.6 % (R square = .126) variation of teenagers purchasing decisions. Durbin-Watson fell within the accepted range of 1.940; therefore there was no auto correlation problem with the data.

Conclusion:

This study found that PCE, EC, Liberalism, Advertisements, Eco-label and Eco-brand were negatively related to teenagers purchasing decisions. The study contributes to the better understanding of teenagers purchasing decisions. The results also revealed that certain psychological variables are significant to show the relationship with teenager purchasing decisions.

Overall, most of the teenagers sampled demonstrated awareness of environmental problems but it is not translated in environmental friendly

behaviour. However, there are consumers who are prepared to base their buying decisions on purchasing environmentally products.

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