URBAN AND RURAL CONSUMERS: ANALYSING THEIR ECOLOGICALLY CONSCIOUS CONSUMER BEHAVIOR

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Abstract

This paper investigates the geographical differences in sustainable consumption among Malaysians by adopting the ecologically conscious consumer behaviour (ECCB) model. With a total sample of 502 responses, a survey was developed and administered. A statistical analysis was conducted using SPSS to examine the comparison between the urban and rural groups. Two independent variables were used in this study namely; Public awareness (PA) and government regulations (GR) and the results from the independent t-test show that only GR variable has a significant difference between the respondents. However, the findings from the multiple regression analysis revealed that urban and rural respondents demonstrate no significant difference in their PA, GR and ECCB. Similarly, results from multiple linear regression analysis also indicate PA and GR are significant predictors of ECCB among the urban and rural consumers. These findings are useful in assisting the Malaysian policy makers in making decisions related to environmental education, protection laws and regulations.

Keywords: Ecologically conscious consumer behaviour; public awareness; government regulation; urban and rural consumers

1.0 INTRODUCTION

It is a norm today for many people to concern about environmental issues or so-called green issues, so much so that it has built to become a global agenda. The increasing number of forums, debates and talks have taken place in discussing problems such as climate change, pollution of the air, water, soil and many more. The ultimate effects of these problems have drastically changed the quality and quantity of all life, and in particular the human life.

In the recent years, the Malaysian Government too has been seriously involved in many green projects, namely in green technology, promoting green business and encouraging green consumerism among Malaysians. Consequently, these steps have managed to steer the country in improving its ranking in the environment ratings (Kementerian Tenaga, Teknologi Hijau, dan Air, 2010).

The Asian regions too, are embracing the power of 'going-green' as environmental threats are disturbing local governments and citizens (Lee, 2008). The Malaysian Green Technology Policy is the nation's commitment to realise the vision of a 'Green Malaysia'. The Green Technology Policy was launched on 24th July 2009 by the Prime Minister of Malaysia. The said policy outlined five strategic areas in implementing the 'Green Malaysia' framework; (i) strengthening institutional frameworks, (ii) providing a conducive environment for green technology development, (iii) intensifying human capital development in green technology, (iv) intensifying green technology research and innovations, and (v) undertaking of promotions to increase public awareness (Desan, 2009).

Many people have realized the direct impact of their purchasing behavior on global warming, climate change and problems related to ecology. Indeed, this has also led to behavior changes in people's awareness about sustainable consumption and its positive impact on the society. Essentially, environmental issues have divided the society into two groups. The first group places the government to be responsible for anything related to environmental issues. On the contrary, the second group consists of those who are highly concerned about environmental sustainability and hold themselves responsible, and strive their best to balance the ecological effects. This second group has been called by many names, such as the ecologically conscious consumer, and green consumers. Regardless of these names, in general, a consumer is to be considered ecologically conscious if they purchase goods and services which they believe to have a positive or a less negative impact on the environment (Robert, 1996). Furthermore, research has shown that green consumers are those who are truthful in their goals, with an emergent assurance to greener lifestyles; frequently evaluating their environmental practices as insufficient and do not expect organizations to be perfect in order to be considered 'green'. Relatively, they seek organizations which are taking essential steps in making their obligation to improve the environment (IISD, 2013). Several studies on urban-rural differences show urban residents are more likely to be concerned about the environment and act on this concern. They are more likely to have higher levels of education and income as well as exposure to higher levels of environmental deprivation. In contrast, rural residents having lower education levels, lower income, a more utilitarian value orientation and expect the government to be responsible towards environmental issues (Saphoresetal, 2006; Jones et al., 2003; and Chyong et al 2006).

Ultimately, the society must admit that everyone is responsible towards the environmental problems that is facing the nation. Oskamp and Saunders (2003) and Ramly et al., (2012) stressed that environmental issues are human induced and to improve the current awareness towards environment requires behavioral solutions and legislation actions. Eventually, consumers are the driving force of consumption and their sustainable behavior needs to be changed. To understand consumer consumption, the attitude and sustainable behavior towards green products is crucial and this has been widely researched. There are extensive studies pertaining to green purchase intention conducted by scholars such as Laroche, Bergeron and Barbara-Forleo (2001), Joshi and Rahman (2015), Chen and Lobo (2012), Chan and Wang (2012), Eza and Ndubisi (2013), and Lee (2014). However, similar studies are still lacking in Malaysia. Therefore, there is a need to investigate consumer consumption and sustainable behaviors, and whether there is a difference in consumer behavior of those staying in the urban and rural areas.

Since the last decade, Malaysian legislators and society have realized the importance of environmental issues. Ahmad and Judhi (2008) acknowledged the government's vigorous efforts and strategies in creating an environment for sustainable consumption and development. Among the strategies are ensuring that environment issues are taught in schools and creating environmental awareness on ecological issues. This is to ensure that sustainable consumption practices achieve their objectives (Mat Said et al., 2003). However, the Malaysian government needs to be more aggressive in promoting the public on environment issues so that Malaysians become sustainable consumption users. Researchers such as Tan and Lau (2010), Ahmad and Judhi (2008), Haron et al., (2005), and Mat Said et al., (2003) have identified a gap between environmental issues and knowledge. Thus, the gap needs to be addressed by aggressively

promoting biodiversity awareness to the public and tightening the government's enforcement in implementing policy and regulations in order to cultivate sustainable consumption among urban and rural Malaysians. In addition, there is limited research done on urban and rural Malaysian consumers about ecological conscious behaviour, thus this study seeks to add to the ecological conscious behavior literature. Findings of this study can identify if there is a need to have different environmental programs for rural and urban consumers. Specifically, in this study, the researchers want to investigate attitudes namely; public awareness and government regulations and its influence on ecological conscious behaviour among the urban and rural consumers.

2. LITERATURE REVIEW

2.1. Ecologically Conscious Consumer Behavior

Ecological consciousness focuses on a specific dimension of consumer behavior. This dimension refers to consumers` purchase intention and their willingness to pay a higher price for ecological products (Laroche et al., 2001). Ecological behavior can be generated by factors such as the desire to save money (manifested by the reduction in consumption of energy and water) and other psychological factors (when consumers feel this is the right way to behave). This features two categories of ecological consumers: (1) the ones who are constrained to adopt an ecological behavior (example: an increase in prices determines a decrease in consumption), and (2) the ones who are willing to pay more for ecological products. Empirical studies suggest that women are more sensitive to environmental issues and they tend to give a greater importance to these issues, compared to men, and they are likely to choose products or services based on ecological criteria (Rahman and Haque, 2011). However, Sheikh et al., (2014) discovered that gender difference has no significant positive relationship with consumer green behavior in Pakistan. Sengupta (2015) argued that there is no difference in consumer behavior either in the urban or rural market. Also, Holladay (2016) found that when it comes to environmental attitudes, urban living creates a more ecologically behavior surroundings as compared to rural living. In addition, some researches show that there are categories of consumers who prefer companies which are dedicated to social causes, as long as there are no major differences in terms of their product quality (Anghel et al., 2011).

2.2. Public Awareness

Consistent environmental decay in the developed countries is the reason for a persistent public concern. Similarly, in Malaysia the green movements for the environmental preservation are beginning to create public awareness (Tan & Lau, 2010). Concomitantly, public awareness is the most significant factor affecting environmental problems (Chukwuna, 1998, and Yahya & Che Ha, 2013). It is well known that environmental problems come from the population and its consumption patterns (Oskamp & Saunders, 2003) although some consumers put the blame on the government, commercial agriculture businesses or oil organizations. Therefore, one of the challenging tasks is to stimulate the citizens' knowledge and awareness towards environmental protection. This requires a shift in behaviors if the level of awareness and attitudes need to be changed. According to Haron et al. (2005), the critical step is to oversee the public environmental awareness current state before any changes of behavior can take place.

Recently, recycling activities have demonstrated a change of behaviors. However, recycling activities in Malaysia is not yet a successful program because Malaysian citizens do not do their part in separating solid household waste. As a result, Haron et al. (2005) pointed out that only knowledgeable and concerned citizens will be fully committed to work towards creating a quality environment. As a result, public awareness must be increased among consumers for them to become more concerned about their environment.

2.3. Government Regulations

The government's role in protecting the environment is very important. Likewise, the Malaysian government has applied various strategies in their effort to promote sustainable consumption practices among the citizens. In fact, social advertising has been used as one of the strategies to educate and encourage awareness and environmental concern among Malaysian citizens (Haron et al., 2005).

Despite the serious current ecology problems, many people still believe that the government is the main body which should be responsible in protecting the environment (Chyong et al., 2006). For decades, governments have played their role in upholding the social interest through laws and regulations (Wood, 1991), preserving the environment and developing sustainable consumption by implementing policies and regulations (Tan & Lau, 2010; Myers, 1997; Wang, 2010). Yet, it is still not enough as Banerjee (1998) asserts that tougher regulations and a variety of environmental policies are needed as to increase environmental awareness in order to enable behavioral changes among the public. Lately, legislation acts have proven to put pressure on businesses to be more ecologically friendly (Barakat & Cairns, 2002) and this indicates that government legislative policies are crucial in encouraging greater environmental responsibility among the citizens (Dummett, 2006). Based on the above literature review, the following hypotheses were developed.

> H1: There is a significant difference between urban and rural consumers in ecologically conscious consumer behavior.
> H2: There is a significant difference in public awareness between urban and rural consumers and ecological conscious behavior
> H3: There is a significant difference in government regulations between urban and rural consumers and ecological conscious behavior
> H4: There is a significant relationship between public awareness and ecologically conscious consumer behavior among urban and rural consumers
> H5: There is a significant relationship between government regulations and ecologically conscious consumer behavior among urban and rural consumers

2.4. Underpinning Theory

The Theory of Planned Behavior (Ajzen & Fishbein, 1980) is the underpinning theory employed to develop the framework in this study as the theory has a strong predictive utility for a wide range of human behaviors. The theory suggests that people before engaging themselves in any behaviour would consider the consequences of alternative behaviors and that they choose to perform behaviors associated with desirable outcomes. The Theory of Planned Behavior assumes that the prevailing determinants of a person's intention /action are based on their beliefs. Furthermore, the attitude towards the behavior is defined as the individual's positive or negative feelings when performing the behavior. This behavior is determined through an assessment of one's beliefs and the consequences arising from a behavior and an evaluation of the desirability of these consequences. The stronger one's intention, the more effort one will make to engage in a particular behavior, and the more likely it is that one will engage in the behavior (Ajzen, 1991; Steg & Nordlund, 2012). The intention depends on attitudes towards the behavior, subjective norms related to the behavior, and perceived behavioral control (Ajzen, 1991). Individuals with a strong belief that their ecologically conscious behavior will result in a positive outcome are more likely to engage in such behaviors in support of their concerns for the environment. Thus, in this study, public awareness and government regulations are being conceptualized as attitude.

3. RESEARCH METHODOLOGY

3.1. Data Collection and Measurement Scales

This study employed the quantitative survey method. The questionnaire was distributed online. This online platform was particularly chosen as it is less intrusive and it allows a wider coverage on respondents. The survey was sent from April 2014 to May 2014, consuming a time period of 5 weeks. Potential respondents were contacted by e-mail to participate in the study. Participants were recruited using a snowball sampling procedure as follows. First, a sample frame comprising 200 individuals was developed using the contact information from a previous study and the researchers' personal and professional networks. The potential participants were invited to complete the survey and then requested to forward the invitation e-mail to their contacts residing in Malaysia inviting them to participate in the study.

The constructs of the conceptual framework were operationalized by multi-item measures using a 7 point Likert-Scales format, anchored by "Strongly Agree" (7); "Agree" (6); "Slightly Agree" (5); "Neutral" (4); "Slightly Disagree" (3); "Disagree" (2); "Strongly Disagree" (1). The Statistical Package for the Social Sciences (SPSS) version 21 is used to analyze the preliminary data. The process of data screening and cleaning was conducted in order to identify 'outliers'. This was followed by descriptive analyses such as means, standard deviations, frequencies and reliability testing of the scales. All the items of public awareness, government regulations and environmental friendly consumer behavior were taken from the Greendex 2010 survey. Overall, 502 responses from 1370 of the total population (a response rate of 36.6%) were usable and a total of twenty-nine questionnaires was rejected. The questionnaire consists of three (3) parts which are explained below.

3.2. Public Awareness

The first part of the questionnaire refers to the questions about public awareness. It consists of six (6) questions in which researchers examined the level of awareness which the public has towards ecologically friendly consumer behavior. The questionnaire was designed to identify whether the respondents were concerned about environmental problems around them and how serious they viewed the problems were in today's world. The public's perception about environmental problems and its impact on their way of life, and the action taken on how to solve these problems was also asked in the survey.

3.3. Government Regulations

The second part of the survey instrument focused on the evaluation of the public as a Malaysian citizen when dealing with government regulations on environmental issues. There are six (6) questions in this section and the respondents were asked to rate, the rules and regulations implemented by the Malaysian government.

3.4. Ecologically Conscious Consumer Behavior

The third part of this questionnaire consists of seven (7) questions with the main purpose to ascertain the level of practices which the public has for environmental conscious consumer behavior. Questions also asked about the respondents' awareness as citizens on consumption behavior in their daily lives. Information on the respondent's gender, age, marital status, family size, education level, occupation,

monthly household income, and the state in which the respondents were currently residing was also obtained.

4. RESULTS

4.1. Respondent Characteristics

Table 1 shows the demographic profile of the respondents by gender, age, education, occupational status and income. The female respondents represented 66.5 percent of the total respondents (334 females), while male respondents were 168 (33.5 percent). The majority of respondents (68.8%) were from the age group between 21- 40 years old. Most of the respondents have obtained a tertiary education level with at least a Master's degree (91.0 %). From Table 1, 197 respondents had monthly household incomes above RM 6,000 (36.2%) while 63.8 percent of households had monthly household incomes of less than RM 6,000.

Table 1 Descriptive statistics

Demographic Variable	Item	Frequency	Percentile
	Male	168	33.5
	Female	334	66.5
Age	20 years old and lower	2	.4
	20 - 30 years old	161	32.1
	31 - 40 years old	184	36.7
	41 - 50 years old	110	21.9
	51 years old and more	45	9.0
Highest educational level	Secondary	12	2.4
	STPM/College/Diploma	33	6.6
	Degree/Master/PhD	457	91.0
Occupation	Government Servants	183	36.5
	Private	28	5.6
	Professional (Doctor, Lawyer, Lecturer)	237	47.2
	Student	48	9.6
	Housewife	1	.2
	Self-Employed	2	.4
	Unemployed/Retired	3	.6
Income	Less than RM1500	31	6.2
	RM1501 – 3000	61	12.2
	RM3001 – 4500	102	20.3
	RM4501 – 6000	111	22.1
	RM6001 and more	197	36.2
Status	Single	152	30.3
	Married with children	290	57.8
	Married with no children	57	11.4
	Divorced/Widow	3	.5
State Currently Residing	Urban	309	61.6
	Rural	193	38.4

4.2. Correlation Analysis

A correlation analysis was carried out to determine the direction and strength of the relationship between the dependent and independent variables. Table 2 illustrates the relationship between the constructs of the study. Overall, the results of the correlation exhibit the existence of a significant relationship among the variables of the study. Furthermore, the composite reliability value for all the factors was above 0.6 as suggested by Hatcher (1994). This is to prove for the existence of reliability.

Table 2 Internal consistency, square roots of average variance extracted and correlation matrix

Construct	α	PA	EFCB	GR
Public Awareness (PA)	.63	**.706**		
Ecologically Friendly Consumer Behavior (EFCB)	.63	.33**	**.803**	
Government Regulations (GR)	.64	.37**	.33**	**.802**

NOTE: **. Correlation is significant at the 0.01 level (2-tailed), Composite Reliability is displayed in Bold and Italic

4.3. Independent sample t-test

The first part of the analysis used the independent sample t-test for measurement of differences in public awareness and government regulations on ecologically conscious consumer behaviour between the locations. Table 3 provides the results of the t-test for locations (urban/rural) and consumers' attitudes on ecologically conscious consumer behavior. The result from Table 3 indicates no significant difference in the scores for urban (M=24.508, SD=3.685) and rural (M=24.528, SD=3.850) condition: t (500) = -.059, p=.952 as for EFCB elements. Similarly, the score for urban (M=25.605, SD=2.026) and rural (M=25.367, SD=3.153) condition: t (500) = .841, p=.401 also indicate no significant difference for PA elements. However, the scores for urban (M= 23.213, SD=3.207) and rural (M=22.453, SD=3.217) condition: t (500) = 2.642, p=.008 showed that statistically significant differences existed for GR variable which supported hypotheses H3 (p<0.05).
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Table 3 EFCB Variables and location

	Urban		Rural		Independent sample t-test	
Variable	Mean	SD	Mean	SD	t-statistics	Sig.
Ecologically Friendly Consumer Behavior (EFCB)	24.508	3.685	24.528	3.850	-.059	.953
Public Awareness (PA)	25.605	3.026	25.367	3.153	.841	.401
Government Regulation (GR)	23.213	3.207	22.435	3.217	2.642	.008

As presented in Table 4, only one constructed item tested in EFCB showed significant differences between the different urban and rural groups. The item "The Government is currently working very hard to make sure that we have a clean environment" (mean=3. 058, t=2. 163, p-value=0. 031), was slightly more important to urban than rural respondents. However, the other 11 items were found to be less significant.

Table 4 EFCB Variables and location

	Urban			Rural			Independent sample t-test	
	Mean	**SD**	**Ranking**	**Mean**	**SD**	**Ranking**	**t-statistics**	**Sig.**
I am very concerned about environmental problems	4.375	.694	5	4.367	.614	4	.208	.835
The seriousness of environmental problems is exaggerated today	3.631	1.333	8	3.652	1.338	10	-.178	.859
Environmental problems are having a negative impact on my health today	4.271	.847	7	4.287	.784	5	.306	.760
Global warming will worsen my way of life within my own lifetime	4.356	.713	10	4.264	.675	7	1.430	.153
As a society, we will need to consume a lot less to improve the environment for future generations	4.301	.924	6	4.212	.860	8	1.072	.284
To me, concern about the environment is very serious and should be a priority for everyone	4.669	.593	1	4.626	.555	1	.809	.419
The Government should aggressively enforce environmental rules and regulations.	4.579	.622	3	4.461	.714	3	1.954	.051
The Government is aggressive in controlling pollution of the environment	3.181	1.178	11	3.057	1.186	11	1.146	.252
The Government is currently working very hard to make sure that we have a clean environment	**3.058**	**1.039**	**12**	**2.854**	**.999**	**12**	**2.163**	**.031**
The Government must impose tighten rules on disposable products	4.404	.708	4	4.279	.800	6	1.826	.069
The Government needs to provide more information and Education on ecologically friendly behavior	4.585	.589	2	4.502	.630	2	1.497	.135
The Government is aggressively creating awareness campaigns about green behavior	3.404	1.057	9	3.729	1.017	9	1.303	.193

Note: *significant at 5 percent level

4.4. Multiple Regression

A multiple linear regression analysis was performed on H4 and H5 on two independent variables (public awareness and government regulations) towards ecologically conscious consumer behaviour (dependent variable). The results of this regression are shown in Table 5 and 6 respectively. The model with two factors was significant, $R^2= 0.132$, $F (2, 306) = 23.32$, $p<0.000$. The results from Table 5, indicate public awareness and government regulation were found to be significant predictors of ecologically conscious consumer behavior for urban respondents.

Table 5 Result of multiple regression among the urban respondents

Construct	β	t- value	Sig.
Public Awareness (PA)	0.217	3.843	.000*
Government Regulations (GR)	0.227	3.998	.000*

Note:*significant, p <0. 001

Similarly, a multiple regression analysis was conducted to identify significant predictors of ecologically conscious consumer behaviour among rural respondents. The model with two factors was significant, $R^2= 0.197$, $F (2, 190) = 23.34$, $p<0.000$. Results from Table 6 show public awareness and government regulations to be significant predictors of ecologically conscious consumer behavior.

Table 6 Result of multiple regression among the rural respondents

Construct	β	t- value	Sig.
Public Awareness (PA)	0.261	3.683	.000*
Government Regulations (GR)	0.269	3.798	.000*

Note:*significant, p <0. 001

5. DISCUSSION AND CONCLUSION

The results indicate that urban and rural respondents in this study do not demonstrate a significant difference in their public awareness and ecologically conscious consumer behaviour. This indicates that urban and rural consumers are aware about environmental issues and ecological conscious behaviour. This public awareness about environment may be due to the respondents' educational background as most of the respondents in this study have at least attained a tertiary education. Therefore, the respondents would have learned about environmental problems or have been exposed to environmental programs and environmental issues while pursuing their tertiary education. Likewise, in this study the age groups are mostly those of generation Y who are known to be technologically savvy, and they may have received information on environmental problems via their mobile phones, tablets and the social media.

However, this study found that urban and rural consumers demonstrate a significant difference in the government regulations and ecologically conscious consumer behaviour. The urban and rural respondents in this study want the government to provide more information and education on ecologically friendly behaviour and better enforcement of environmental rules and regulations. The government is expected to set rules on disposable products and should aggressively create more awareness campaigns about 'green' behavior.

In conclusion, there is no need to conduct separate campaigns or programs aimed at either the urban or rural Malaysian consumers as this study concluded that there is no difference between the two groups with regards to environmental conscious behavior. The government and the private sector should organise regular awareness campaigns aimed at enhancing knowledge and increasing awareness about environmental problems to every Malaysian. The use of social media to disseminate information must be increased as consumers today are technologically connected. In addition, environmental campaigns aimed at generation Y should be increased as they are the future generation who will inherit the world. Likewise, the Malaysian government should continue to enhance its manpower at all levels of the government, i.e local, state and federal government to ensure all regulations and policies are enforced to prevent further environmental deterioration in the country.

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