

EXAMINING SUSTAINABLE CONSUMPTION PATTERNS OF YOUNG CONSUMERS: IS THERE A CAUSE FOR CONCERN?

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Abstract

One of the main reasons identified, as the cause of deterioration of the environment is over-consumption. A remedy to reverse this trend will require urgent changes in human behaviour and cultural practices to reduce consumption. Due to an increased pressure of environmental deterioration and the need to study the patterns of sustainable consumption behaviour of young consumers, four research questions are raised in this paper: (1) Is there any significant difference between gender and consumption behaviour? (2) Is there any significant difference between business and non-business students in their consumption behaviour? (3) What is the level of sustainable consumption behaviour exhibited? (4) Is there a cause for concern of over-consumption? The results indicated that there were no significant differences between gender and courses pursued with consumers overall sustainable consumption behaviour. The finding also shows that young consumers exhibit a moderate level of sustainable consumption behaviour and concludes that there is no cause of concern for over-consumption behaviour among young consumers. The results should be an interest to policy makers and practitioners in Malaysia. This study has contributed towards advancing the literatures on social responsible consumptions.

Key Words: Over-consumption, sustainable consumption behaviour, gender differences, young consumers, environmental knowledge and attitude.

1. INTRODUCTION

Over the last decades, a number of environmental issues that threaten the environment and human lives have been identified that include global warming, depletion of stratospheric ozone layer, pollution of sea and rivers, noise and light pollution, acid rain and farmland erosion. One of the main causes of these problems is over-consumption of natural resources, with the industrial nations showing the highest per-capita consumption. Human behaviour is the key source as well as the main solution to these problems (Gardner and Stern, 2002). Human consumption habits affect the environment directly and also indirectly through the demands influence the production process (Fransson and Garling, 1999). Any remedy will require urgent changes in human behaviour and cultural practices to reduce consumption. Furthermore it also requires the new development of cleaner and more efficient technologies.

Malaysia, a developing country faced great challenges in ensuring a balance between development and environmental sustainability. Urban air and river quality, deforestation, household waste and hazardous waste are the serious and worrying environmental problems faced by the country at the present stage. Malaysian government had allocated RM510 million for cleaning, preserving and beautifying rivers; RM530 million for coastal management; RM200 million for reforestation; and another RM70 million for the management of wildfire and protected areas to ensure environmental sustainability and resource management, as reported in The Ninth Malaysia Plan (2006-2010).

Various strategies to encourage sustainable consumption and development in promoting sustainable consumption practices among Malaysians have been implemented. Since Sixth Malaysian Plan (1991-2000), Malaysian Government had integrated environmental considerations into the formulation of projects and programmes. It was further strengthened in the Seventh Malaysia Plan (1996-2000), Eighth Malaysia Plan (2001-2005), and Ninth Malaysia Plan (2006-2010). The Malaysian Ministry of Education formally introduced environmental education to schools in 1986 with the objectives of fostering the environmental knowledge and to instil environmental values in school management (Aini et al., 2007). The environmental

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educational programmes are essential as the relationship between environmental knowledge and attitudes is always positive (Bradley et al., 1999). The efforts of policy maker in promoting the environmental values during early ages are notable with the intention to create a more sustainable future generation. Mansaray and Abijoye (1998) believe that the level of knowledge, attitude and practices will critically affect the quality of the environment.

The Malaysian Ministry of Housing and Local Government (2008) reported that the solid wastes generated by Malaysians consist of household waste (36.5%), paper (27%), plastic (16.4%), steel (3.9%), glass (3.7%), and others (12.5%). In addition, there is over 15,000 tons of rubbish that have been produced locally every day. The lifespan of the landfill can last 10 years longer if Malaysians recycled 50% of their garbage. It is predicted that 80% of 230 available landfills will be filled within 2 years (Aini et al., 2003). Aini and Roslina (2002) reported that the recycling rate has increased gradually from 1-2% in 1997 to 5% in 2001 and the waste generated is 1.0 kg per person per day (Aini et al., 2003). On the other hand, Grunert (1993) found that 30% to 40% of environmental degradation has been brought about by the consumption activities of private household. Therefore, immediate changes in human behaviour and cultural practices are sorely required to reduce consumption (Oskamp, 2000). To avoid further environment deterioration, a shift towards sustainable consumption is required in developed as well as developing countries. Therefore, over 1000 recycling bins and 65 centres in Malaysia are currently being placed in schools to gas stations as well as shopping malls to encourage recycling behaviour within the country (Ministry of Housing and Local Government, 2008).

The current study will investigate the consumption behaviour of young consumers. The focus on young consumers is understandable as this group is representing a new generation of consumers with a strong potential impact on the type of goods and services offered in the market. Giges's (1991) study found that the lifestyles and consumption habits of people age 14 to 34 around the world to be similar, especially in the consumption level of soft drinks, beer and footwear. Among the population of 1.8 billion youth aged 10 to 24 in the world, 1.0 billion (i.e. 61%) are in Asia (Nugent, 2006), making the Asian youth segment an important target market for products as well as social ideas. They also have a relatively higher disposable income than their Western counterparts because of more generous allowances and income from part-time jobs. Within the Southeast Asian region, Malaysia is a major market with strong economy, central location and the many presence of international companies. Moreover, these young consumers will be the future marketing planners, policy makers and the educators of the new economy.

2. LITERATURE REVIEW

2.1 Environmental Quality in Malaysia

The river and marine water quality remained within normal variations in Malaysia. Out of the 146 rivers basins that have been monitored, 7 rivers (4.8%) had been categorized as polluted. This indicated an improvement compared to 15 polluted rivers (10.3%) reported in 2005. In terms of the air quality, there was a slightly deterioration in 2006 compared to previous year due to the haze episodes experienced from July until October 2006, (Department of Environment, 2006). Three sources of air pollution contributions come from the industries (including power stations), motor vehicles and the irresponsible open burning activities in the country (Department of Environment, 2006). In terms of the waste quantity, there was an upward trend with a total of 1,103,457.06 metric tones of waste generated in 2006 as compared to 548,916.11 metric tones in 2005. Gypsum, oil and hydrocarbon, dross, heavy metal sludge, mineral sludge and e-waste are the main categories of waste produced in Malaysia. The quantity of scheduled wastes generated ranked from chemicals (42.7%), electronic (21.6%), automotive/workshop (17.2%), metal (7.1%), pharmaceutical (2.9%) and other industries (Department of Environment, 2006). The environment degradation in Malaysia is anticipated to be worsening if the present trend of economic growth and irresponsible consumption pattern continues.

2.2 Sustainable Consumption Behaviour

The earliest publications on green consumer behaviour were published around 1970s, and there was a boom in research interest on environmental issues throughout the 1990s (Hartmann and Ibanez, 2006) and in

the 21st century (Lisowski, 2004). Concerns about the environment have certainly on the uptrend (Fraj and Martinez, 2007). Sustainability can be defined as a combination of economic, ecological and social aspects. It has to do with a fair price for agriculture entrepreneur and consumers, involving care for the natural environment, and socially acceptable behaviour (Vermier and Verbeke (2007). It means consuming goods and services without harming the environment or society (United Nations Decade, 2005-2014). It is one of the most important areas of activity in society today (Janikowski, 2000). Janikowski formulated the sustainable consumer behaviour based on four principles from selection, minimization, maximization and segregation. It encompasses the behaviour of choosing environmentally friendly products and services (selection), minimizing the range of consumption (minimization), maximizing functionality and extending life of the product (maximization) and segregating and recollecting the waste for recycling or reusing purpose (segregation). The sustainable consumption behaviour is very much encouraged as it helps to improve the environment from further deterioration.

Autio and Heinonen (2004) view the environmentally friendly consumption as the activities of recycling, using environmentally friendly products, and managing waste by separating and limiting consumption. Society must change their personal attitudes and practices if they wish to live in a sustainable environment. Krause (1993), in his research found that consumers were becoming more concerned about their everyday habits and the impact on the environment. Some of the consumers translated their environmental concern into actively purchasing green products commitment (Martin and Simintiras, 1995; Mainieri et al., 1997). Many studies have focused on attitudes towards sustainability and sustainable consumption behaviour (Verbeke and Viaene, 1999). However, favourable sustainable consumption does not necessarily translate to the actual sustainable behaviour as it depends largely on the habits, attitudes and preferences as well as the opportunities to engage in sustainable consumption (Thogersen, 2001). Sitarz (1994) stated that changing consumption patterns is important in developing environmentally sound and sustainable behaviour. Socially responsible or environmentally concern consumers will be actively involved in waste management behaviour which involved waste reduction, reuse and recycling activities (Barr, 2007). More importantly, a shift towards a more sustainable consumption pattern is required given that behaviour of over consumption in industrial countries is a main cause of environmental degradation (Tanner and Kast, 2003).

2.3 Gender and Courses Differences in Environmental Research

Research from academic scholars and decision makers had focused on the consumer profile characteristics from three different perspectives (demographic and socio-economic variables, knowledge towards the environment, and psychographic variables) that best define their environmentally responsible behaviour (Bhate and Lawler, 1997; Fraj and Martinez, 2007). The attention given to the situational factors emerged gradually and they served as the barriers towards the environmentally friendly behaviours and undermine the influence of positive attitudes or values (Fraj and Martinez, 2007). Socio-demographic variables are the common and favourite profiling approach used by researchers (Peattie, 2001). In terms of gender differences, women are found to be more willing to engage in the environmental friendly activities (Diamantopoulos et al., 2003; Mainieri et al., 1997; Straughan and Roberts, 1999; Zelezny et al., 2000). However, Tannes and Kast (2003) discovered that green purchases are not significantly related to socioeconomic characteristics of the consumers. Moreover, the relationship was not significant in the case of environmentally behaviour and gender (Samdahl and Robertson, 1989; Chan, 1999; Aini et al., 2007; Tan and Lau, 2008). In addition, past studies have shown that there were significant differences between men and women in environmental attitudes with men having more negative attitudes towards the environment compared to women (Benton Jr, 1994; Tikka et al., 2000). However there were evidence that women shows greater concern (Benton Jr, 1994) and are most likely to buy green product because they believe the product was better for the environment (Mainieri et al., 1997).

Many studies have also been conducted to understand the environmental behaviour of business and non-business students. Benton Jr (1994) reported that business students were less environmentally oriented compared to non-business students. Business students were found to be environmentally knowledgeable but expressed less concern towards the environment and less willing to act in environmentally friendly ways. Synodinos (1990) discovered that business students to be less environmentally knowledgeable and display less environmentally oriented attitudes compared to psychology students. A contrasting finding by Shetzer, et

al. (1991) discovered that business students expressed positive attitudes towards the environment and were strongly pro-environmental. Thus far, reviews of the literatures have been inconclusive on the environmental behaviours of business and non-business students. This warrants for further study.

Based on the above literatures, the primary research questions of this study can be articulated as follows:

RQ1: Is there any significant difference between gender and consumption behaviour?

RQ2: Is there any significant difference between business and non-business students in their consumption behaviour?

RQ3: What is the level of sustainable consumption behaviour exhibited by these young consumers?

RQ4: Is there a cause for concern of over-consumption among young consumers?

3. METHODOLOGY

In order to obtain reliable information from the respondents, an established and validated scale was selected for data collection. It consisted of 15 items adopted from Aini, et al. (2007), which was derived from the concepts developed by Janikowski (2000) on the four principles of sustainable consumption behaviours (selection, minimization, maximization and segregation). The respondents were asked to rate each item on a 4-point Likert scale from 1 = "never true" to 4 = "true all the time". The questionnaires for this study were administered using convenience sampling to 280 undergraduate students from a major private university in Malaysia. Ferber (1977) argued that using students sample is considered valid for exploratory studies. The students completed the survey during class time and were assured anonymity. Participation was voluntary and no remuneration was offered. The respondents were undergraduate students from both business and non-business disciplines, consisted of both sexes and include international students.

A total of 270 completed questionnaires were obtained in which 49% were female and 51% were male. The response rate of 96% was deemed sufficiently complete to be useable for this study. In terms of the courses pursued, 54% of them were business students and 46% of them were non-business students. The respondents consist of Malaysian students (92%) and International students (8%).

4. RESULTS

Table 1 indicated the reliability levels obtained in this study. The alpha values were calculated to evaluate the internal consistency reliabilities of the scales. Schuessler (1971) stated that a scale is considered reliable if it has an alpha value greater than 0.60. Hair, et al. (1998) added that reliability estimates between 0.60 and 0.70 represent a moderate level of acceptability and alpha value between 0.80 to 0.90 represent a very good level of acceptability in quantitative research studies. Due to the exploratory nature of this study, alpha value greater than 0.60 is considered adequate and acceptable.

Table 1: Reliability levels for the sustainable consumption behaviour

Construct	No of Items	Alpha Value
Selection	3	0.643
Minimization	5	0.682
Maximization	4	0.681
Segregation	3	0.651
Overall sustainable consumption behaviour	15	0.839

Independent sample t-test was used to measure the differences in sustainable consumption behaviour between gender and courses pursued by the respondents, Based on the results, research question 1 and 2 were not supported ($p>0.05$). The results show that there were no significant differences between male and female students as well as business and non-business students with their overall sustainable consumption behaviour. Table 2 provided the summary of the independent sample t-test results of sustainable consumption behaviour by gender and courses pursued by the young consumers.

Table 2: Independent sample t-test of sustainable consumption behaviour by gender and courses pursued (n= 270)

Variables	Mean	Mean	Sig. level
Sustainable consumption behaviour	Male 2.64	Female 2.59	0.333
Sustainable consumption behaviour	Business 2.58	Non-business 2.65	0.221

In terms of the mean scores on the sustainable consumption behaviour, the respondents were asked to rate on a 4-point Likert scale from 1 = “never true” to 4 = “true all the time”. Based on the findings, it can be concluded that the sustainable consumption practises were moderate with the overall mean score of 2.62; and selection (mean= 2.37), minimization (mean= 2.78), maximization (mean= 2.80), segregation (mean= 2.61) respectively. The means score and standard deviations are summarized in Table 3.

Table 3: Means score and standard deviation for sustainable consumption behaviour (n=270)

Construct	Mean	Standard Dev.
Selection	2.37	0.520
Minimization	2.78	0.583
Maximization	2.80	0.537
Segregation	2.61	0.648
Overall sustainable consumption behaviour	2.62	0.435

5. DISCUSSION

The following section will address each of the research questions formulated above.

RQ1: *Is there any significant difference between gender and consumption behaviour?*

The result shows that there is no significant difference between gender and sustainable consumption behaviour of young consumers. This result supported the earlier research from Aini et al. (2007) that there were no significant different found between gender and sustainable consumption behaviour among the Malaysian secondary students in the state of Johor, Malaysia. However, several past studies have shown that there were significant differences between men and women in environmental attitudes with men having more negative attitudes towards the environment compared to women (Benton Jr, 1994; Tikka et al., 2000). Due to the mixed results from the previous studies, gender-based investigations are still far from conclusive and it seems that this area warrants more future research.

RQ2: *Is there any significant difference between business and non-business students in their consumption behaviour?*

The outcome indicated that there is no significant difference between business and non-business students in their sustainable consumption behaviour. The analysis also shows that business and non-business students were moderate in their sustainable consumption behaviour. The current research contrasted with the

findings from Benton Jr (1994) where business students were found to be less environmentally oriented compared to non-business students. Finding by Shetzer, et al. (1991) discovered that business students displayed positive attitudes towards the environment and were strongly pro-environmental. Thus far, the result of the current study as well as reviews of past literatures has been inconclusive on the environmental behaviours of business and non-business students. This merits further study in the future.

RQ3: *What is the level of sustainable consumption behaviour exhibited by these young consumers?*

The mean score for the overall of sustainable consumption behaviour is at 2.62. A maximum score of 4.00 indicate a high level of sustainable consumption behaviour and a minimum score of 1.00 indicate a low level of sustainable consumption behaviour. Based on this, the mean score of 2.62 implies that young consumers exhibit a moderate level of sustainable consumption behaviour. Maximization has the highest mean score of 2.80, which means that consumers tend to emphasize on maximizing the functionality and extending the life of the products. This is followed by minimization, segregation and selection. The component of selection, which has the lowest mean score of 2.37, indicates that young consumers in our study has a lower behavioural patterns of choosing environmentally friendly products and services. The possible cause could be due to the barriers in the selection process. Four factors have been identified as barriers to buying green; (1) perceptions of inferior product quality, (2) scepticism about green marketing claims, (3) difficulty in identifying green products, and (4) price sensitivity (Aceti Associates of Arlington, 2002).

RQ4: *Is there a cause for concern of over-consumption among young consumers?*

As the level of sustainable consumption behaviour is at a moderate level, the finding concluded that there is no cause for concern of over-consumption among young consumers. However, policy maker should still proactively cultivate environmental knowledge and attitudes in young consumers in order to promote sustainable consumption behaviour in the future generation. Through environmental education, it is envisage that it will help create environmental awareness and promote environmentally responsible behaviour (Bradley et al., 1999).

6. LIMITATIONS AND FUTURE RESEARCH

Some aspects of these findings deserve comment. There are a number of limitations that should be borne in mind when interpreting the findings of the study. The results of this research must be used with caution, as the sample of the exploratory study is basically undergraduate students. Due to the constraints of time and financial resources, the sample size in this study was relatively small. The sample size needed to be increased to include students from both public and private universities. A larger sample size would have been more useful to assess the stability and dependability of the findings. Future research should investigate the environmental knowledge and attitudes of consumers in general, as it is essential for the government to understand consumers trend in order to be more cost effective in promoting sustainable consumption behaviour. In addition, future study need to consider examining the effects of value orientations on environmental behaviour as past literatures have shown that it influence attitudes and behavioural outcomes. The perception of consumers towards environmentally friendly products, areas of green purchase intention and green buying commitment need be addressed in future research to provide appropriate recommendations for current and potential green firms in the market.

7. CONCLUSION

Environmental problems are largely caused by unsustainable practices fuelled by wasteful runaway consumerism. By making small changes to the lifestyle and consumption habits, each individual can make a worthy contribution to conservation. Malaysian government had implemented various strategies to encourage sustainable consumption and development over the past decades. This study sought to discover whether there is a pattern of sustainable consumption behaviour among young consumers in Malaysia. The research adopted

the four principles of sustainable consumption behaviour on selection, minimization, maximization, and segregation formulated by Janikowski (2000). The result shows that there were no significant differences between male and female consumers, business and non-business students in their overall sustainable consumption behaviour. Furthermore the level of sustainable consumption behaviour among young consumers was moderate. Therefore, it was concluded that there was no cause for concern of over-consumption among young consumers in Malaysia. However, concerted effort need to made to ensure that these young consumers continue to practice sustainable consumption. Despite some limitations of the research, the outcomes of this study provide insights to policy makers and marketers to their future strategies incorporating environmental knowledge and values as this has shown to impact consumers' daily consumption practices. The joint efforts and cooperation from all parties are able to generate more sustainable and responsible consumption behaviour among the society and produce a healthier environmental quality.

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