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Consumer Perception of Green Issues and Intention to Purchase Green Products

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Abstract

The objectives of this study is to examine consumer's perception towards green issues, to examine factors that influence green purchasing intention and to examine factors related to usage of recycle bags. The respondents in this study comprised of 170 university students. The study reflects that young Malaysian customers displayed positive attitudes towards environmental protection issues and usage of recycling bags. "Perceived environmental responsibility" dimension, recognized as the top predictor of green purchasing intention followed by "Social influence". The third most important predictor is "Concern for self-image". It is recommended that future research should utilize a larger sample size and enlarge the study scope to include other countries in order to compare their attitude towards green issues and green purchasing behaviour.

Keywords: Green purchasing intention, Green products, Environmental concern, Social influence.

Introduction

Recent decades have witnessed increasing concern for the environment and issues pertaining to it. The importance of natural resources cannot be overemphasized in everyday living, as people utilize these resources to satisfy their needs. In such a world where people are becoming more concerned about the environment and its protection, there is a need for corporate organizations to also become more concerned about the environment (Polonsky, 1994). As the world becomes greener, every single product of

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the 21st century is expected and arguably required to be "environmentally friendly". Nowadays, most of us like to buy green products. Numerous surveys have been done in this area to highlight people's interest in purchasing green products. "In the 1990s, consumers voiced their concerns in the shopping market which helped to shape a new trend called environmental consumerism or green consumerism" (Ottman, 1992). Green consumerism is also growing; it refers to "an attempt by individuals to protect themselves and the planet by buying only green products on the shelves" (Ottman, 1992). Therefore, it is timely to study consumer perception of green issues and factors that influence their intention to purchase green products.

Marketers try to achieve the organization's objective and utilize resources as efficiently as possible because resources are limited and human wants are unlimited. So, environmental marketing is unavoidable. As the demand for environmentally friendly products continues to increase all over the world, customers nowadays are more concerned about ecological issues than before. All of these have resulted in the emergence of green marketing (Dash, 2009).Due to increased interest in the environment in the last few years, and the heightened consideration for and continuing provision of green products by firms, it is important to have more understanding towards consumers' perception and intention of green purchasing. Thus, this study aims at providing further insight and pertinent information with regard to the factors which influence green purchase intention as well as usage of recycle bags.

More specifically, the objectives of this research are: to examine consumers perception towards green issues, to examine factors that influence green purchasing intention and to examine factors influencing the usage of recycle bags. Subsequently, research questions include: What is the general consumer perception towards green issues? What are the drivers that make people buy green products? What are the weights of these factors? What factors are related to the usage of recycle bags?

Green Marketing concept

The term "green marketing" is not only related to green products. It also covers company services and industrial goods. Green marketing involves activities like product packaging and recycling. Defining green marketing is not easy. Different terms like sustainable marketing, environmental marketing and ecological marketing have been used in this area (Grundey and Zaharia, 2008). "Green or Environmental Marketing consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment" (Shamsuddoha, 2005). The aim of green marketing is minimizing environmental harm, not necessarily eliminating it and its objectives are improved environmental quality and customer satisfaction.

"Academic treatments of green marketing spoke of the rapid increase in green consumerism at this time as heralding a dramatic and inevitable shift in consumption towards greener products" (Rex and Baumann, 2006). The 1990s have been called "decade of the environment" and environmental concern had got too much attention from consumers and suppliers. For today's knowledgeable customers, the ecological environment is likely to carry great importance as part of their social concern. Kotler,

2003, stated that in order to retain these customers, firms must be more concerned with ecological marketing and should try to satisfy the needs of the target market and improve society health (cited in Rex and Baumann, 2006).A green consumer is defined as " a person who is mindful of environment related issues and obligations and is supportive of environmental causes to the extent of switching allegiance from one product or supplier to another even if it entails higher cost " (Business Dictionary.com, 2009).

Like other marketing concepts, so many studies have been done in the area of green marketing. Many of them highlighted facts like: environmental awareness, a growing consumer interest in green products, and willingness to pay for green features. During the years, consumers have realized that their purchasing behavior had a direct impact on many ecological problems. Some scholars believed that the only interesting area in studying the greening issues was the consumer profile. In terms of industrial development and economic growth, Malaysia is progressing fast which has lead to a general increase in income with a resultant effect on the consumption level of products and services. Environmental issues in Malaysia emanate from human activities and biological reactions to them (Haron, Paim and Yahaya, 2005). Current eco-friendly activities in Malaysia focus on controlling the product at the manufacturing stage (Al Khidir and Zailani, 2009).

Factors Influencing Green Purchasing

Attitude is considered as a very important aspect of customer behaviour research. Many researchers in their studies refer to environmental attitude as a cognitive judgement towards environmental protection. Findings from studying the effect of environmental attitude on behaviour, suggest that "attitudes are the most consistent predictor of pro-environmental purchasing behaviours'" (Schlegelmilch, Bohlen & Diamantopoulos, 1996). Several factors might influence green purchasing behaviour like social influence, environmental concern, perceived environmental responsibility, concern for self-image as well as affective commitment.

Social Influence

Social influence is defined as "change in an individual's thoughts, feelings, attitudes, or behaviours that results from interaction with another individual or a group. Social influence is distinct from conformity, power, and authority". In this process, individuals as a result of interaction with others make real changes to behaviours and attitudes under the influence of another person who is perceived to be an expert on the matter at hand. The influence of others is one of the important determinants of an individual's behaviour.

As expected, social influences and physical structures within the environment will develop and modify human expectations, beliefs, and cognitive competencies. The social environment has a strong effect on green purchasing behaviour (Cheah & Phau, 2005). Based on social learning theory, individuals learn attitudes and behaviours from past experiences. However, some of the studies indicate that individuals learn behaviours and attitudes through the observation of other individuals or via electronic or print media (Bandura, 1977). Social media is another influencer which has a big impact on purchasing intention.

H1: Social influence has a positive impact on green purchasing intention.

Environmental Concern

A major and fundamental factor to consider in environmental research is an individual's concern for the environment. Environmental concerns of the customers may not be translated into pro-environmental behaviours however; individuals who believe that their behaviour will have a positive effect are likely to engage in environmentally concerned activities (Kim and Choi, 2005). Furthermore, an attribute which shows a person's worries and compassion about environment is called environmentally concerned behaviour.

Xiao and McCright, in their 2007 study examined the predictability of demographic variables to environmental concern. They have found that demographic variables like age, educational attainment, political ideology, ethnicity, and gender and value orientation have consistent effects on environmental concern. Other researchers have investigated the relationships between environmental concern and behavioural intentions. Bang, Ellinger, Hadjimarcou and Traichal, in 2000, stated that environmentally concerned consumers expressed more willingness to pay more for renewable energy than others (Cited in Lee, 2009). Some other factors like "personal efficacy" have been introduced by other researchers which help to elaborate on customer participation in environmentally friendly behaviour (Kim and Choi, 2005).

H2: Environmental concern has a positive impact on green purchasing intention.

Concern for Self-image

In general terms, self-concept is an individual's perception of "self" and behaviour that they have about themselves. Self concept includes self-image. Many individuals choose the products which are similar or match their self-concept. People have different images of themselves. They try to improve their self-images by purchasing products that are close to their self-image and avoid those which are not (Schiffman & Kanuk, 1997). "Self-image" is also defined as the perceptions individuals have of what they are like (Goldsmith, Moore & Beaudoin, 1999). Other studies show that self-image is a concept which can help to identify factors influencing green purchasing behaviour. They also realized that there is a direct relationship between intentions to use recycled products and the individual's self image of being an environmentally responsible person (Mannetti , Pierro, & Livi, 2004). Other than that, being an environmentally-friendly person could reflect a good image of the person to others. In one study, concern for self-image in environmental protection was recognized as the third top predictor of green buying behaviour among Hong Kong adolescents, which came immediately after social influence and environmental concern (Lee, 2008).

H3: Concern for self-image has a positive impact on green purchasing intention

Perceived Environmental Responsibility

Manzo and Weinstein in their 1987's research postulated that, perceived environmental responsibility has a relationship with environmental behaviour (Lee,

2008). In other studies such as Kaman Lee's research, this factor has been recognized as the fourth predictor of green purchasing behaviour (Lee, 2008).

H4: Perceived environmental responsibility has a positive impact on green purchase intention.

Affective Commitment

It is a known fact that commitment plays a very important role in individual success. It shows motives towards continuing a relationship that contains both psychological and behavioural aspects. According to Kumar, Scheer & Steenkamp, 1995, "affective commitment involves the intention to continue on the basis of affect towards the partner, expectation of continuity involving a firm's perception of its own and its partner's intention to remain in the relationship, and willingness to invest involving a desire to do more than just remain" (cited in Sharma, Young & Wilkinson, 2006).

Green purchase intention (PI) refers to willingness of an individual to prefer green products to other products (Abdul Rashid, 2009). Mostafa (2007) stated that "green purchasing behaviour refers to the consumption of products that are beneficial to the environment, recyclable, sensitive or responsive to ecological concerns" (cited in Lee, 2009). Some other studies have examined the relationships that exist between environmental knowledge, intention and behaviour to predict environmentally responsible purchase intention. Results from such studies show that a positive relationship does exist. It has been stated that those individuals, who believe that environmentally friendly behaviour is an important fact, had more willingness towards green purchasing. Results from previous research also indicated that "intention is formed as the end result of an evaluation or trade-off between the environmental and individual consequences" (Follows and Jobber, 1999).

H5: Affective commitment has a positive impact on green purchasing intention.

Usage of Recycle Bags

In today's world, using recycle bags to go green is also necessary. Governments all around the world are now guiding people to use recycle bags. Most of the stores sell special kinds of bags that can be used for shopping and helping people go green. These kinds of bags are substitutes for plastic bags (Canadatop.com, 2010). Plastic bags are quite harmful to the environment and also the cost of recycling a plastic bag is much more than producing a new one. There are various types of bags available in the market for shoppers, however consciousness on environmental issues has made the ones less harmful to the environment more preferable to others (Muthu, Li, Hu, & Mok, 2009). In recent times and worldwide, designers are making efforts to produce nice, trendy and stylish bags from different materials. These kinds of endeavours contribute to environmental conservation and protection by minimizing waste and pollution potential. One of the studies conducted in this area investigated three dimensions relating to the use of shopping bags namely "Reusability, Recyclability and Disposal to Landfill" (Li, Muthu, Hu, Mok, Ding, Wang and Chen, 2010). In their study, they examined how many times customers reuse plastic bags, percentage of plastic bags that can be recycled and

willingness of customers to support recycling activities (Li, et al., 2010). Figure 1 indicates the research model.
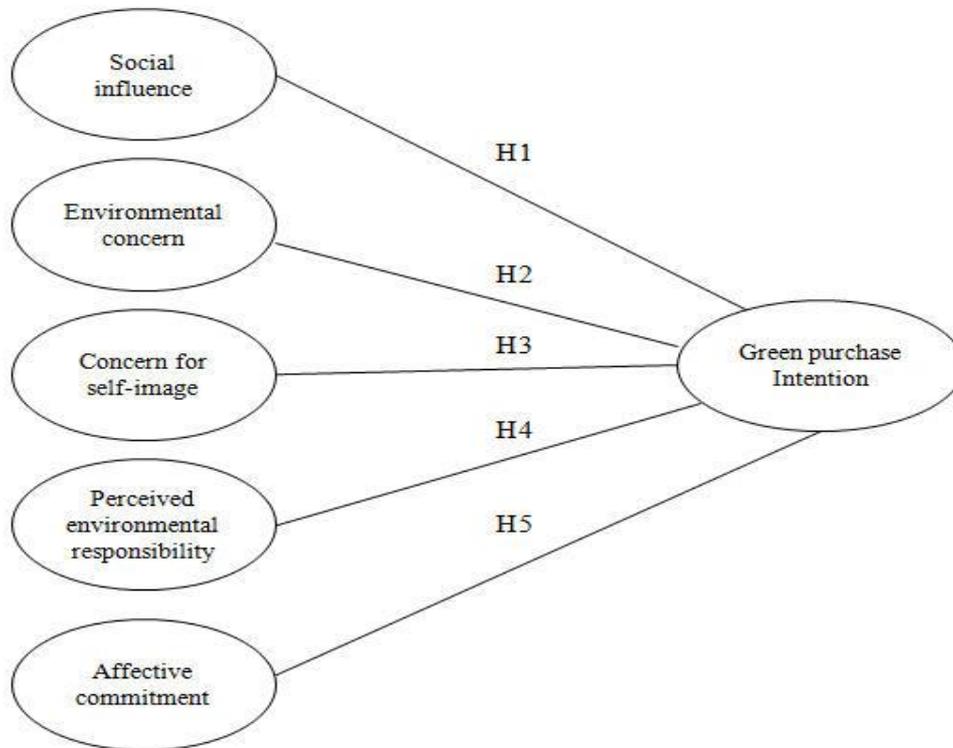

Figure1: Research model

Research method

A descriptive research design is used in this study to describe perception of customers towards green issues. This is a quantitative survey and data for this research was collected through online survey (using online questionnaires) to measure and assess the individual's perception towards green issues and purchasing of green products. In other words, the approach used here is quantitative and utilizes a web-based online survey. The online questionnaire contained two parts: the demographic aspects and questions related to variables which were included in this study. The first part of the questionnaire was divided into 7 dimensions which included 30 questions to measure the variables. The first four dimensions were "social influence", "environmental concern", perceived environmental responsibility and concern for self image, which consisted of 6, 4, 6 and 3 questions respectively adapted from Lee's (2008) study. The fifth dimension is "affective commitment" which contained 4 questions and was adapted from N.Sharma, L.Young, and I. Wilkinson (2006). The sixth dimension, "green purchasing intention" consisted of 4 questions and was adapted from Lee's (2008) study and the last dimension "usage of recycle bag which was proposed by this research and consisted of 3 questions. The second part of the questionnaire was made up of 12 questions to measure the respondents' demographic characteristics. A 10-point Likert scale (with 1 strongly disagree to 10 strongly agree) was used in this study to measure the studied variables.

Convenience random sampling was used in this study which essentially involves choosing the sample of the study based on the convenience of the researcher. It actually assumes a homogeneous population that one person is pretty much like another (Hair Jr, Money, Samouel, Page, 2007). The respondents in this study mostly comprised of university students. Emails were sent to different universities in order to obtain permission to forward the survey message about green survey. The survey was based on non-probability convenience sampling method. The survey duration was two months and comprised of 170 respondents. An important point to note is that although the purchasing power of students may not be as strong as working adults, they will be the major green consumers in future. The SPSS software was used for data analysis.

Data Analysis and Findings

In this study, descriptive statistics were used in order to describe the main features of collected data in quantitative terms. Data was analyzed by statistical methods such as frequency distribution, mean and standard deviations. Reliability test was used to examine the reliability of the measurement of variables. Regression analysis was used to test the hypotheses and correlation was run to explore the relationship between tested variables and usage of recycle bags.

Result of descriptive statistics shows that most of the respondents hold under graduate degrees (56.4 % or 96 respondents) and post graduate degrees (42.4% 72 respondents). As the university community is the target population of the study, a large number of the respondents are students (91.2 % or 155 respondents) and the second largest population after that are the employed (7% or 12 respondents) while only a small number (0.6% or 1 respondents) are unemployed or business owners. Most of the respondents are from UKM (63.5 % or 107 respondents) and the second largest population corresponds to UPM (28.2% or 48 respondents) while only a small number (3.6 % or 6 respondents) corresponds to MMU and the rest only contributed 0.6 % or 1 respondent each. The average age of the respondents in this study is 23 years old.

Most of the respondents (88.8 % or 151 respondents) have not attended any environmental talk while only a small number (11.2 % or 19 respondents) have attended these kinds of meetings.About 52 % or 156 of the respondents do not donate a certain portion of their income for environmental or charity purposes while only a small number (8 % or 14 respondents) do this. Only a small number of the respondents (15.5 % or 26 respondents) agreed that people do not have time to get involved in environmental activities while a much larger number (84.7 % or 144 respondents) perceived that people have time to do this. A small numbers of the respondents (11.8 % or 20 respondents) were of the opinion that people hardly care about environmental protection while a large number (88.2 % or 150 respondents) disagreed with the statement that "people hardly care about environmental protection".

In order to ensure that variables in this study measure the concept in a consistent manner, we tested the reliability of variables. Reliability is concerned with the consistency of research findings (Hair Jr, Money, Samouel, Page, 2007). Internal consistency reliability is usually used to test scale reliability when each variable includes several items. One type of internal consistency reliability is Cronbach's alpha which

ranges from 0 to 1. If the correlations between the items increase, the Cronbach's alpha will also increase. If the value is 0.7 or higher, correlations between the items are considered reliable (Hair Jr, Money, Samouel, Page, 2007).

Reliability alpha was 0.705 for 6 items of social influence, 0.717 for 4 items of environmental concern, 0.579 for 2 items of Concern for self-image, 0.470 for 6 items of perceived environmental responsibility, 0.682 for 4 items of affective commitment, 0.632 for 4 items of purchase Intention and 0.777 for 3 items of recycle bag. Therefore the obtained alpha values are acceptable. The value of Cronbach's alpha would increase if we delete some of the items like "environmental protection starts with me" from "Perceived environmental responsibility" dimension , item "I have positive feelings towards environmental protection" from "Affective commitment" dimension , and item "I buy Green products even if they are more expensive" from "Purchase intention" dimension Reliability alpha has increased to 0.504 for 5 items of perceived environmental responsibility, 0.703 for 3 items of affective commitment and 0.725 for 3 items of purchase intention.For testing the hypotheses suggested by this study, multiple regression analysis was conducted. Table 1 shows the result of the regression analysis.

Table 1 Multiple Regression Analysis (N=170)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.596[a]	0.355	0.336	1.37049

Table 2 ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	169.880	5	33.976	18.089	0.000[a]
Residual	308.031	164	1.878		
Total	477.911	169			

Table 3 Standardized coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.502	0.833		-0.603	0.547
Social influence	0.456	0.107	0.299	4.282	0.000
Environmental concern	-0.088	0.081	-0.075	-1.087	0.278
Concern for self-image	0.174	0.086	0.171	2.012	0.046
Perceived environmental responsibility	0.459	0.106	0.310	4.334	0.000
Affective commitment	0.134	0.111	0.106	1.212	0.227

a. Predictors: (Constant): social Influence, environmental concern, concern for self-image, perceived environmental responsibility affective commitment

b. Dependent Variable: green purchasing intention

Model summary shows independent variables that are entered into the regression model. Correlation of the five independent variables with the dependent variable is R (0.596ª). R Square value is 0.355 taking into account all independent variables so we can conclude that only 33.6 percent of (Adjusted R Square) variances of green purchase intention was explained in this model. Based on the ANOVA analysis in Table 2, the F value of 18.089 is significant at the 0.000 level. So it shows that 33.6 percent of the variance (R-Square) in green purchasing intention has been significantly explained by five independent variables. The Coefficients table helps to evaluate the relative influence of independent variables on green purchasing intention, so we can distinguish which variable among the five independent variables is the most important factor in explaining the variance in purchasing intention.

Standardized coefficients in Table 3 show us the relative influence of predictors on green purchasing intention. The highest number in the beta is 0.310 for "perceived environmental responsibility" dimension, which is significant at the 0.000 level. "Social influence" dimension also reflects a considerable amount of Beta which is 0.299 and is also significant at the 0.001 level. The third predictor is "Concern for self-image with b value of 0.171 which is significant at 0.046. This shows that there is a positive relationship between perceived environmental responsibility, social influence, and concern for self-image and purchasing intention for environmentally friendly products. "Affective commitment" and "Environmental concern" are not significant because the significant value is greater than 0.05. Results of multiple regression analysis can be used for testing the hypotheses proposed by this study.

Hypothesis 1: Social influence has a positive impact on green purchasing intention. Social influence has a significant positive impact on green purchasing intention with a significant value of 0.000. Hence hypothesis H1 was supported.

Hypothesis 2: Environmental concern has a positive impact on green purchasing intention.

Since the Sig value of 0.278 is more than 0.05 and is not significant, environmental concern does not have a positive impact on green purchasing intention. Hence hypothesis H2 was not supported.

Hypothesis 3: Concern for self-image has a positive impact on green purchasing intention. Concern for self-image has a significant positive impact on green purchasing intention with a significant value of 0.046. Hence hypothesis H3 was supported.

Hypothesis 4: Perceived environmental responsibility has a positive impact on green purchase intention.

Perceived environmental responsibility has a significant positive impact on green purchasing intention with a significant value of 0.046. Hence hypothesis H4 was supported.

Hypothesis 5: Affective commitment has a positive impact on green purchasing intention.

Affective commitment has a positive impact on green purchasing intention but was not supported since the value of 0.227 is more than 0.05 and is not significant. Thus, hypothesis H5 was not supported in this empirical study.

The usage of recycle bags is dependent on numerous factors. Using the variables tested in this study, for the initial analysis, correlation was used to examine the relationship of these variables with usage of recycle bags. Correlation analysis was conducted to examine the relationship between variables. Pearson correlation measures the linear association between two metric variables; it is represented by correlation coefficient which ranges from -1.00 to +1.00. If the correlation coefficient is strong and statistically significant we conclude that there is a positive relationship between variables (Hair Jr, Money, Samouel, Page, 2007). Table 4 shows the result of correlation analysis.

Table 4 Correlation analysis (N=170)

		Social Influence	Environmental concern	Concern for self-image	Perceived environmental responsibility	Affective commitment	Purchasing Intention	Recycle bag
Social Influence	Pearson Correlation Sig. (2-tailed)	1.000						
Environmental concern	Pearson Correlation Sig. (2-tailed)	0316** 0.000	1.000					
Concern for self-image	Pearson Correlation Sig. (2-tailed)	0.262** 0.001	0.094 0.223	1.000				
Perceived environmental responsibility	Pearson Correlation Sig. (2-tailed)	0.223** 0.003	0.344** 0.000	0.266** 0.000	1.000			
Affective commitment	Pearson Correlation Sig. (2-tailed)	0.178* 0.020	0.288** 0.000	0.566** 0.000	0.439** 0.000	1.000		
Purchasing Intention	Pearson Correlation Sig. (2-tailed)	0.403** 0.000	0.207** 0.007	0.395** 0.000	0.444** 0.000	0. 431** 0.000	1.000	
Recycle bag	Pearson Correlation Sig. (2-tailed)	0.353** 0.000	0.425** 0.000	0.170* 0.026	0.211** 0.006	0.224** 0.003	0.277** 0.000	1.000

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

 *. Correlation is significant at the 0.05 level (2-tailed).

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"Environmental concern" is related to the usage of recycle bags since the correlation coefficient is 0.425^{**} and is significant (0.000). The second variable related to recycle bag usage is "Social influence" with a correlation coefficient of 0.353^{**} and is also significant (0.000). "Purchasing intention" and "Perceived environmental responsibility" also correlated with the usage of recycle bags (Correlation coefficients are 0.277^{**} and 0.211^{**} respectively and are significant). "Affective commitment" is related to usage of recycle bag as it had a correlation coefficient of 0.224 which is significant at 0.003.

"Concern for self-image" dimension also positively correlated with the usage of recycle bags since the correlation coefficient is 0.170^{*} and is significant (0.026). With reference to correlation analysis, factors such as environment concern, social influence, green purchase intention, affective commitment and perceived environmental responsibility are positively related to the usage of recycle bags. Therefore, these variables can be included in future studies that focus on recycle bag usage.

Conclusion

The objectives of this study was to examine consumer's perception towards green issues, to examine factors that influence green purchasing intention and to examine factors related to usage of recycle bags. the study reflected that young Malaysian customers displayed positive attitudes towards environmental protection issues and usage of recycling bags. The results from regression helped to identify drivers that make people buy green products, and these included "Perceived environmental responsibility" dimension, recognized as the top predictor of green purchasing intention followed by "Social influence". The third most important predictor is "Concern for self-image". So there exists a positive relationship between perceived environmental responsibility, social influence, concern for self-image and green purchasing intention. Results of the hypotheses suggested by this research also indicated that "social influence, concern for self-image and perceived environmental responsibility" have a positive impact on green purchasing intention. Factors related to the usage of recycle bags were identified by correlation analysis. This process revealed that "Environmental concern" is positively related to the usage of recycle bags followed by "Social influence", "Purchasing intention", "Affective commitment", "Perceived environmental responsibility" and "Concern for self-image".

Research Implications

A number of practical implications can be deduced from this research. Due to continuous increase in green consumerism, it is expected that the green market would be considered as a profitable market in the not too distant future. Many consumers will value the merits of green products offered by marketers because all of them promise safety and health. Based on the findings in this study, respondents are willing to pay a higher price for green products which have higher quality. This translates into the respondent's willingness to pay a little more if they know that products are healthier, safer or better for the environment. Marketers can use word-of-mouth and educate customers on environmental issues to increase their green purchasing intention. The outcome and findings of this study can be considered as an input towards promoting green purchasing behaviour. It is recommended that marketers should provide clear advertising and

promotion activities for customers and strive to use labeling which would enable everyone to easily distinguish green products from other products.

Research Limitations and Future Research Suggestions

Considering that this particular study is among initial efforts to examine green marketing issues, the sample size selected was small and consisted of 170 individuals from Malaysia. Therefore, the findings of this study cannot be generalized for general populations. It is recommended that future research should utilize a larger sample size and enlarge the study scope to include other countries in order to compare their attitude towards green issues and green behaviour. This study examined five variables influencing "green purchasing intentions" in relation to "usage of recycle bags". These are not the only determinants as there are many purchase considerations that influence the consumer's decision to buy or not to buy green products. It is suggested that, future research should consider and focus on other demographic and psychographic factors and purchasing considerations as determinants of green purchasing intention.

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