ABSTRACT

Today green consumers are creating a new economy around the globe. Indeed, the ‘green consumer’ idea was the focus of academicians and manufacturers at the end of 1980s and in the early 1990s. Likewise, rising knowledge on the various environmental problems has led a change in the way consumers go about their life. People are insistently trying to reduce their impact on the environment and living a ‘green lifestyle’. As a result, business has seen this change in consumer attitudes and is trying to sell many green products by exploiting the potential in the green market industry. Using green home electronic products are environmental initiatives for consumers to become green consumers. Research, although limited in the areas of ethnicity and green electronic home products, does suggest that a consumer’s ethnicity will influence their attitude toward home electronic choices, which in turn will affect their purchase decision. Therefore, the goal of the present study was to expand the body of research concerning ethnicity and its influence on purchase of green home electronic products. Therefore, this study examines if there exist differences in ethnic groups for the intention to purchase home electronic products, namely air conditioner, refrigerator and television. A total of 251 self-administered questionnaires were collected from respondents living within the cities of Klang Valley,
Malacca and Penang. Results of the study show eco-label information is important in all three ethnic groups while social influence was not important to the Indians when purchasing green home electronic products. The results of the study indicate the importance of viewing ethnic consumer groups as unique markets and suggest some possible areas for further research.

**Keywords:** social influence, eco-label, ethnicity, home electronic products, Malaysia

**INTRODUCTION**

The green intention supports a person, modify their views, actions and practices from the source where the key intention drives their actions. Due to the increase in environmental awareness since 1970’s a lot of positive change within users’ behaviour can be seen towards environmental related products. This change saw the need to save the environment from more damages. For many consumers’ qualities, attributes and characteristics of green goods are introduced with the help of green marketing and green awareness to guide them into buying environmentally friendly products very easily.

The accountability of companies for the quality of the environment while meeting customer needs, demands and satisfaction is associated with green marketing awareness (Chan et al., 2012). Due to the high number of environmental awareness and the purchasing power of Asian consumers, Asian countries become the primary target by international marketers to sell green products (Noor & Muhammad, 2012). Today, the movement of ‘going green’ has expanded all over the world due to intensified awareness. The need for a healthy lifestyle and the emergence of eco-friendly products reflects consumers’ growing concern for the environment (Norazah, 2013; Soyez, 2012; Thøgersen et al., 2015). However, the lack of information on green products in many countries has made the local and international marketers face difficulties in developing adequate and effective marketing strategies (Aman et al., 2012). In Malaysia, there is limited study on the influencing factors of green purchase behaviour, more so for the green purchase of green electronic products (Shahnaei, 2012).
Many studies on environmental concern, social norms/influence and self-image have been investigated (Lasuin & Ng, 2014). However, research is still lacking on different outcomes in different demographic context can be found because of the complexity in green purchase behaviour of consumers (Ali & Ahmad, 2012). According to the Department of Statistic Malaysia (2017) the population of Malaysia is approximately at 32 million. The number of Bumiputra was at 68.8 per cent of total population of citizens, Chinese at 23.2 per cent while Indians and others remained at seven per cent and one per cent respectively.

Many studies have explored, primarily in Western contexts, consumption behaviour across various ethnic groups in consumer decision-making and brand loyalty (Dimofte et al., 2010; Verbeke & López, 2005). However, due to the diversity in ethnic dimensions including race, religion and language, marketers encounter difficulties in using mass media strategies to target ethnic consumers (Cui & Choudhury, 2002). This contention is supported by research that suggests that compared to mainstream consumers; ethnic consumers differ in their consumption patterns, media usage patterns and perceptions of marketing activities targeted at them (Cleveland et al., 2012; Crockett, 2008; Gerlich & Gopolan, 1993; Lavin, 1996; Mokhlis, 2009; Ouellet, 2007; Webster, 2011).

Thus, this paper investigates green purchase intention toward green home electronic product among ethnic groups in Malaysia. The objectives of this paper are:
(i) To determine if social influence and eco-label influence green purchase intention.
(ii) To examine if there are any significant differences in purchase intention in green home electronic products across ethnicity.

GREEN HOME ELECTRONIC PRODUCTS

Chen and Chai (2010) defined a green product as a product which has less effect on environment and the product incorporates strategies with recycled materials, reduced packaging and use less harmful substances. However, according to Kawitkar (2013), green product is the product which is friendly to the environment or ecology. Many green products from developed
countries have been studied previously (Luzio & Lemke, 2013). However, to increase a better understanding of differences and similarities that exist in various cultural setting, continuous efforts are being made to broaden the horizon of green products in developing countries (Ritter et al., 2015). To date, research on green purchase intention toward green home electronic products is limited especially in Malaysia.

**SOCIAL INFLUENCE**

There are many definitions of social influence which can be found from previous studies. Venkatesh et al. (2012) defined social influence as how consumer perceives the approval of them using certain products from their family and friends as well as peers. In order to be granted the consumer as part of a community or social group, this acceptance is crucial. Escalas and Bettman (2005) stated that a consumer evaluates the product based on opinions of others and sometimes from peer pressure. Subsequently, based on preference and tastes (Dholakia et al., 2014), an approval from others will become one of the factors a consumer tend to buy the green products (Lee, 2008).

Nowadays, living in an environmentally friendly lifestyle has become common for consumers (Grier & Despande, 2001) and one self’s image and social acceptance among family and peers increases through this lifestyle. Griskevicius et al. (2010) expressed that this lifestyle is preferred to consumers who understand the benefits of green products and as a result they tend to purchase green products.

**ECO-LABEL**

In the field if green consumerism, eco-labelling which is also known as green labelling is among the most researched area. European Commission (2007) purported that to show the advantages and authorisation of being a green product in a tangible manner, eco-label of products is made compulsory. The European Commission (2007) has considered green labels as ‘EU eco-labels’, ‘International eco-labels’ and ‘Privately Sponsored eco-labels’. In addition, to assist consumers in their decision making, eco-labels must
provide specific environmental information of a particular green product. Thøgersen et al. (2012) believed that eco-labels help consumers learn about specific environmental information before they make their purchase decision. In Malaysia, Standards and Industrial Research Institute of Malaysia (SIRIM) has launched its own eco-labelling schemes which also known as National Eco-Labelling Programme of Malaysia (Lasuin & Ng, 2014).

In addition, a study in China identified how green labels (eco-labels) are pivotal indicator for consumers’ willingness to pay more for green products (Xu et al., 2012). Eco-labels are considered as an attractive instrument in informing consumers with regards to the environmental impact of their purchasing decisions (Nik, 2009). The eco-labelling schemes were initiated to help consumers to identify products that are more environmentally preferable than other similar products and also to promote environmental consumerism.

**SOCIO-DEMOGRAPHICS AND PURCHASING INTENTION OF GREEN HOME ELECTRONIC PRODUCTS**

The influence of socio-demographic variables is important as it determine consumers’ attitude and purchase intention. The preference of consumers towards green home electronic products can be described by socio-demographic variables. Previous research shows there is a strong correlation between environmental purchase behaviour and the level of income, education and gender. However, research to investigate the relationship for the purchase of green home electronic products and ethnicity is scarce (Zakersalehi & Zakersalehi, 2012). Thus, this study aims to examine the role of ethnicity in their purchasing intention of green home electronic products. The investigation on ethnicity is important as Malaysia is made up of three main ethnicity groups, namely Malay, Chinese and Indian.
RESEARCH DESIGN

Sampling and the Measurement Instrument

The unit of analysis in this research is individual consumer aged 20 years and above living in the urban areas of Klang Valley, Penang and Melaka. For this study, 400 self-administered questionnaires were issued via direct distribution to relatives and friends and direct distribution to working adults at their workplace. To ensure respondents understand the context of the study, the definition of green home electronic appliances was presented at the very beginning of the questionnaire and a photo of the home electronic products was shown. The questionnaire of this study was designed to contain four main parts. Part I aimed at collecting correspondents’ demographic information. Part II measured the social influence factors that affect respondents’ attitude towards green home electronic products. Part III measured eco-labels and the purchase intention for green home electronic appliances is measured in part VI.

The questionnaire survey for this study was adopted from established questionnaires from studies by Roberts and Bacon (1997); Chan (2001); Lichtenstein et al. (2004); D’Souza et al. (2006); Barber (2010); Cheah and Pau (2011); Biswas and Roy (2015); Lin and Huang (2012); Lien and Qian (2010); Khan et al. (2016); Valentine et al. (2014); Kong et al. (2014);

Many past literatures have adopted the five points Likert scale as the measurement method used in the questionnaires (Petschnig et al., 2014; Kim et al., 2010). A five-point Likert-type scales (1 - strongly disagree to 5 - strongly agree) were used to measure all constructs and the scales were adopted and adapted from previous studies. The measurement scale items used in the study were adopted and adapted from the past studies which have been validated. 251 responses were used for the analysis which represents 63% response rate. According to Goyder (1985), the acceptable range could vary between 30% and 70%. The green home electronic products for this study are air conditioner, refrigerator and television.
Data Analysis

The data was analysed using the Statistical Package of the Social Science (SPSS). The descriptive and inferential analysis techniques (correlation analysis, multiple regression analysis and ANOVA were both employed using the SPSS version 23.

RESULT AND DISCUSSION

Respondents’ Demographic Analysis

From Table 1, the dominant ethnic group was Malays (69.3%) followed by Chinese (20.3%) and Indians (10.4%). Most of the respondents were females (69.7%). Most of the respondents were also married (63.7%). Almost 80% of the respondents were from the ages of 20 years old to 49 years old. Table 1 also show that majority of the respondents earn between RM2500 to RM7500 (56.6%).

Table 1: Demographic Profile of Respondents (N=251)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>30.3</td>
</tr>
<tr>
<td>Female</td>
<td>69.7</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
</tr>
<tr>
<td>Malay</td>
<td>69.3</td>
</tr>
<tr>
<td>Chinese</td>
<td>20.3</td>
</tr>
<tr>
<td>Indian</td>
<td>10.4</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>63.7</td>
</tr>
<tr>
<td>Single</td>
<td>29.1</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>7.2</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>20-29 years old</td>
<td>12.7</td>
</tr>
<tr>
<td>30-39 years old</td>
<td>39.8</td>
</tr>
<tr>
<td>40-49 years old</td>
<td>27.5</td>
</tr>
</tbody>
</table>
Reliability Test

To test the reliability of a survey instrument, Cronbach’s alpha is used since it determines the internal consistency or average correlation of items as be shown in Table 2. Social influence, eco-label and purchase intention showed the value of 0.736, 0.908 and 0.874 respectively which indicates the strength of each instrument from moderate to excellent.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s Alpha</th>
<th>N of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Influence</td>
<td>0.736</td>
<td>5</td>
</tr>
<tr>
<td>Eco-label</td>
<td>0.908</td>
<td>7</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>0.874</td>
<td>5</td>
</tr>
</tbody>
</table>

Regression Test

A multiple regression analysis was conducted on social influence and eco-label to determine their significant influence on purchase intention of green home electronic products. Model 1 from Table 3 could explain 74.3 per cent of the variance in purchase intention. The results also unveiled that social influence ($\beta = 0.209, p < 0.001$) and eco-label ($\beta = 0.581, p < 0.001$) were found to have significant positive influences on green purchase intention (see Table 4).
Table 3: Model Summary of Green Purchase Intention

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.743(^{a})</td>
<td>0.552</td>
<td>0.548</td>
<td>152.771</td>
<td>0.000</td>
</tr>
</tbody>
</table>

\(^{a}\) Predictors: (Constant), Eco-Label, Social Influence

Table 4: Regression between Social Influence, Eco-label and Green Purchase Intention

<table>
<thead>
<tr>
<th>Variables</th>
<th>Std. Beta</th>
<th>(t)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Influence</td>
<td>0.209</td>
<td>3.421</td>
<td>0.001</td>
</tr>
<tr>
<td>Eco-label</td>
<td>0.581</td>
<td>9.527</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Analysis of Variance (ANOVA)

From Table 5, an Analysis of Variance (ANOVA) was conducted on each ethnic group and the factors to determine their influence on purchase intention.

Table 5: ANOVA

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>99.365</td>
<td>2</td>
<td>49.683</td>
<td>3.809</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3234.770</td>
<td>248</td>
<td>13.043</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3334.135</td>
<td>250</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6: ANOVA for each ethnic group

<table>
<thead>
<tr>
<th>Race</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malay</td>
<td>1.51694(^{*})</td>
<td>.57546</td>
<td>.024</td>
</tr>
<tr>
<td></td>
<td>-2.5648</td>
<td>.74732</td>
<td>.937</td>
</tr>
<tr>
<td>Chinese</td>
<td>-1.51694(^{*})</td>
<td>.57546</td>
<td>.024</td>
</tr>
<tr>
<td></td>
<td>-1.77342</td>
<td>.85956</td>
<td>.100</td>
</tr>
<tr>
<td>Indian</td>
<td>.25648</td>
<td>.74732</td>
<td>.937</td>
</tr>
<tr>
<td></td>
<td>1.77342</td>
<td>.85956</td>
<td>.100</td>
</tr>
</tbody>
</table>

Dependent Variable: Purchase Intention

A one way between groups of ANOVA was conducted to explore the impact of ethnicity on purchase intention of green home electronic products. Ethnicity was divided into three groups (Group 1: Malay; Group
There was a statistically significant difference at the $p<.05$ level in purchase intention scores for the three ethnicity groups $[F (2, 248)=3.8, p=.02]$. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. The effect size, calculated using the eta squared, was .03. Post-hoc comparison using the Tukey HSD test indicated that the mean score for Malay ($M=18.59$, $SD=3.57$) was significantly different from Chinese ($M=17.07$, $SD=4.06$). The Indian ($M=18.85$, $SD=2.92$) did not differ significantly from either the Malay or the Chinese.

**DISCUSSION AND CONCLUSION**

The findings suggest that eco-label information have positive influence on the purchase of home electronic products among the three ethnic groups in Malaysia. As this study focus on home electronic products, eco-labels are important because consumers seek information before purchasing. This is consistent with a study by Taufique *et al.* (2016) which found eco-label to influence pro environmental behaviour. The current study contributes to existing literature by confirming that eco-label is important for ethnic groups in Malaysia before they purchase home electronic products. In addition, relevant information in eco-labels act as a communication tool to promote green behaviour. For home electronic products specific information indicating economic and environmental benefits together with logos of green certification and electricity consumption should be included in the eco-label. Manufacturers of these products must ensure information contained in the eco-labels are correct and environment benefits for the products must be part of the information. Findings from this study also found social influence important for the Malay and Chinese ethnic groups in their purchase intention. Therefore, family, friends and peers do play a role in the decision-making process. However, this study found social influence was not significant for the Indian ethnic group. This may be because in Indian households the husband is dominant in making decisions and all decisions are made by the husband (Yusof, 2015). However, marketers of green products should continue with their green campaigns and intensify marketing activities to promote home electronic products for all consumers. One of the limitations of this study was the survey was conducted in only three cities in Malaysia. Secondly, the study covers only three home electronic
products. Testing the model with other home electronic products would provide potentially useful insights. Finally, because this study uses cross sectional research design, future research should employ a longitudinal design to measure changes in behaviour.

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REFERENCE


