THE EFFECT OF GREEN MARKETING TOOLS ON SPORT PRODUCTS CONSUMERS’ BEHAVIOR: HAMEDAN ISLAMIC- AZAD-UNIVERSITY HIGHER EDUCATION STUDENTS AND FACULTY MEMBERS VIEW POINT

Sirous Ahmadi¹, Fateme Javadi², Parvin Mohammadi Pakravan³

¹Sport management and Planning, Islamic Azad University, Hamedan Branch, Hamedan, Iran
²Sport management, Islamic Research and Science Azad University, Hamedan Branch, Hamedan, Iran
³Sport management, Islamic Azad University, Hamedan Branch, Hamedan, Iran

Correspondence should be addressed to Sirous Ahmadi

Received January 01, 2015; Accepted February 24, 2015; Published February 04, 2015;

Copyright: © 2015 Sirous Ahmadi et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

The aim of this study is to investigate the consumer's attitude toward green marketing and its effect on green purchase decision of sport equipment consumers. For this purpose, a sample of 384 samples has been selected using stratified random method from physical education university students of Islamic Azad University of Hamedan in all degrees (associate degree, bachelor's, and master's). By studying the theoretical basis of green marketing mix and green purchase decision, the conceptual model and questionnaire have been designed and developed and data has been collected. Finally, regression results on consumer purchasing behavior have been used to examine the hypotheses. Findings imply that aspects green marketing have significant and positive influence on consumer's green purchase decision.

Keywords: Green Marketing, Green Marketing Mix, Green Purchase Decision, Biological Advertisement, Biological Brand (Green Brand), Biological Tag

INTRODUCTION

At recent ten years, paying attention to environment is increased and it is regarded as a very important phenomenon all over the world (Jian and Kaur, 2004) and environmental pollutions that are appeared because of human beings productions and consumptions are considered as the major problems that are known as threat for humans by active organizations in this field (Ra’naei Kordshooli and Allahyarri Bozenjani, 2012). It seems that environmental problems, citizen, organizations and institute’s all around the word cause more concerns nowadays than 30 years ago(Papadopoulos et al., 2010). Increasing of concern and general information related to health and protection of environment cause those consumers consider environmental problems in their purchases (Nakheci and Kheyri, 2012) and cause some progressive companies be in pressure in order to design and create benevolent environmental programs (Min and Galle, 2001). Evidences show that many of consumers have this readiness to pay more cost for actual protection of environmental for products that consider environmental standards (Kotler and Armstrong, 1999). Although some companies have established steps for productions compatible with environment (Cao, 2001), it should be considered that production of green products is necessary condition for protection of environment, but isn’t sufficient condition. When it is possible to attempt for environment green products are used by consumers. So being aware of green purchase behavior of Iranian consumers as one of the effective steps in supporting of sustainable development and attending to environment is necessary. It can be referred about innovation of this article in two kind of scientific and applied innovation. Scientific innovation is in
a way that offered as developed one by using of two models (Ali et al., 2011) and (Chen and Chang, 2012), and applied innovation is in a way that the most green marketing in Iran is attended to explore the green purchase intention (Ramzanian et al., 2010; Nakhaei and Kheyri, 1391; Ra'naei Kordshooli and Allahyaryr Bozenjani, 2012) and it paid less scientific and exact attention to green purchase behavior of Iranian consumers.

Green product can be categorized as a product that will not pollute the earth or deplete natural resources and can be recycled or conserved (Shamdasani et al., 1993). Green purchase behavior can be translated to the act of consuming products that are conservative, beneficial for the environment and responding to environmental concern (Lee, 2009). Green purchase behavior refers to purchases and consuming products that have minimal impacts on the environment (Mainieri and barnett, 1997). Green purchase behavior according to Mostafa (2007) is “the consumption of products that are: Benevolent/beneficial to the environment; Recyclable/conservable; or Sensitive/responsive to ecological concerns. There are different terms used interchangeably with green purchase behavior, such as green buying behavior (Kim, 2002; Kim and Choi, 2003; 2005), pro-environmental purchase behavior (Soutar et al., 1994; Tilikidou, 2007) and environmentally responsible purchase behavior (Follows and Jobber, 2000).

Some companies are less keen on overhauling their operations in order to reduce their environmental impact than they are in merely jumping on the green marketing bandwagon, seeking out spurious or downright fabricated associations to convince consumers of the green credentials of their products. However, this research paper aims to investigate the effect of green marketing tools on sport products consumers' behavior in the context of Hamedan Islamic Azad University in the view point of higher education students and faculty members.

THEORETICAL BACKGROUND

In 1970 in the Earth Day, there was a movement for the preservation of the environment that to educate people about the dangers of pollution give large-scale training. It was exhausting. At that time, most people were not interested in the environment preservation. But in 1990 at Earth Day, people across America consider this issue and articles in popular magazines and newspapers published. It seems that that day came into existence as starting point for the earth decade thereby the environmentalists have been global mass forces (Dahl, 2008).

This type of marketing protects the environment through making environmental detectable benefits based on what the customer expects (Cheah, 2005). Green marketing is a social process thereby individuals and groups through the exchange of goods and the value meet their needs through the moral method that make minimum negative effects on the environment. In other words, according to "Polonsky", green marketing consists of all activities that are designed to create and facilitate exchanges to satisfy human needs and desires. So that, satisfy needs and desires are minimized the pernicious effects on the environment (Kennedy, 2008). Increased activities of green marketing can occur as a result of internal or external pressures. Among the external pressures that lead to being green can named satisfy consumer demand, media, business-business customers, response to the actions of competitors, increasing government interference and increasing environmental pollution. There are also many internal factors that put pressure on companies to operate their green implementation that some of these include: Operating costs, corporate philosophy, creating a competitive position in the marketplace (Volsky, 1999).

REVIEW OF LITERATURE

Over the past few decades, concern about the environment has become not only a significant public issue, but also a crucial topic in academic research. A sharp rise in environmentalism has emerged in the US and Western Europe. A positive change within consumer behavior towards environmentally related products can be seen due to the increased level of environmental awareness since the 1970s (Rahbar and Abdul Wahid, 2011).

This change contributed to the start of the green revolution to prevent further damage to the environment. Indeed green marketing is a type of marketing that aims to reduce our effects on the environment by design, produce, packaging, labeling and consumption.

Green marketing has concentrated on product (packaging and labeling) and incentive strategies in recent years. Assessing universal incentives to be green are necessary because it can show us how green marketing in all organizational activities can be carried out (Rahbar and Abdul Wahid, 2011).

Companies apply a strategic approach to environmental and entrepreneurial parts of industry to create the possibility of modifying consumer satisfaction through new and green products. This can also create a competitive advantage and reduces the pressure of competition.

Purchasing behavior generally consists of five parts: the discovery of the need to seek solutions, evaluate solutions, decision to purchase and post-purchase behavior. Factors such as socio-cultural, psychological-individual, marketing and mixed situations all influence consumer purchasing behavior.

Organizations and consumers should have a responsibility towards environmental issues and by the purchasing of green products they participate in this process. Although the reasons to participate in green activities and their commitment to the environment is different, the green consumer has a vital role in helping the environment. Generally, these consumers will not buy products that endanger human health, have associated risk during the production process, cause any serious damage to the environment, inflict serious damage to the environment during the production process, produce excess waste, are involved in the extraction of raw materials, damage endangered plant and animal species and/or a natural resource (Rahbar and Abdul Wahid, 2011).

Certain studies have investigated the change in consumer’s behavior, where those who worry about the environment...
will indicate their concerns through different behaviors, such as checking the products they will purchase to ensure they are buying ethically.

Moreover, another study assessed environmental knowledge as one of the effective variables on green consumer behavior. Creating concern in relation to environmental issues is the role of ‘knowledge’ in green marketing. Knowledge and awareness about the environment are directly related to a person’s intended purchasing. People who have more knowledge than others in this field, who show concern for the environment, could process the information related to environmentally friendly products.

Marketing experts need to focus on environmental knowledge in organizations, and advertise their products in order to achieve their objectives, such as consumer purchase behavior.

1. Green Marketing

Marketing means ‘working in the market’, with the aim that completing transactions will satisfy the needs and desires of a human being. Green marketing is currently not achieving its potential for improving the quality of life of consumers, whilst improving the natural ecosystem (Polonsky, 2011).

Green marketing has substantial coverage within the media. It seems that many personal and industrial consumers are more conscious about the environment and increasingly interested in its preservation (Rahbar and Abdul Wahid, 2011).

The American Marketing Association workshop attempted to bring together academics, practitioners, and public policy makers to examine marketing’s impact on the natural environment. At this workshop ecological marketing was defined as: the study of the positive and negative aspects of marketing activities on pollution, energy depletion and non-energy resource depletion (Henion and Kinnear, 1976).

Green marketing has passed different stages during the course of its development. Each stage has specific characteristics and changing situational and environmental needs (Fathi et al, 2007).

Green marketing has passed three eras, the first, ecological green marketing, lasted from the 1960s into the early 1970s. Characteristics of this era concentrated on external problems of the environment, such as air pollution (Peattie and Crane, 2005). The second era, green environmental marketing, this process began in the late 80s and it consisted of new concepts, such as clean technology, sustainability, consumer and competitive advantage emerged. The significant difference between the first and second eras was that the first era was focused on effective industries on the environment, but the second era, environmental marketing, included all services and manufacturing methods, such as tourism (Peattie and Crane, 2005).

The third era is sustainable green marketing. With increasing demands and expectations of people and strict rules of state the second era was not able to continue. Sustainable development, in the area of marketing science, made a great impact on the economy (Fathi et al, 2007).

The modern environmental movement in America began in the late 1960’s and was recognized as being a leader in the environmental statement. At that time European countries reconstructed the economic devastation caused by the Second World War (Cassell, 1972).

The ecological movement in America started during the 1960s and increased in public awareness and concern, in the context of this the Environmental Quality Council (CEQ) and Environmental Protection Agency (EPA) were created in the 1970s, and several environmental laws were passed during the 1970s (Carroll, 1999).

In addition, ethical consumers noted that 5% of the world’s population uses 30% of the world resources. Over the years, environmental regulations were slowly integrated. Finally, concern for the environment began in West Germany, the Netherlands and Scandinavia; however, this is a relatively recent development for many countries (Maremont and Now, 1989).

According to Ottman (1992, 1993) and Peattie (1992) demand and attitudes for green products is likely to be uneven across market segments and cultures. Consequently, research on the effect of green marketing tools on purchase behavior in emerging Asian markets is considered to be well-timed (Rahbar and Abdul Wahid, 2011).

According to Chan (2004), the reasons for the lack of attention are the inadequate green products and services in the market. Although this argument is somewhat true in the consumer society, in Iran, green food products, light bulbs or CFC-free spray are frequently found. The first step, ‘buying’ them, shows the consumer interest in environmental issues, and the next step has reflected this approach in the buying behavior.

Hence, it can be said that the purchasing behavior of consumers influenced varies and the intensity of the effect is can be different. For instance, in a recession, the economic issues are so important that other issues, such as the environment, are ignored (Kalafatis et al, 1999).

2. Green Marketing Tools

Green marketing tools, such as eco-label, eco-brand and environmental advertisement, will make perception easier and increase awareness of green products attributes and characteristics. The consequence of this will guide consumers into purchasing environmentally friendly products. Applying these policy tools plays an essential role in altering consumer purchasing behavior to buy environmental friendly products, therefore, reducing the negative impact of synthetic products on the environment (Rahbar and Abdul Wahid, 2011).

According to Hartmann and colleagues (2006) green marketing generally focuses on the efficiency of cognitive
persuasion strategies, and believes that the consumer’s high involvement concerning environmental issues is an effect of growing environmental knowledge. Stanton and Futrell (1987) define green or environmental marketing as ‘actions intended to replace current needs and wants with minimal harmful impact on our environment’. Ginsberg and Bloom (2004) claim that there is no single marketing tool that would be appropriate for all firms. Rather, strategies should be different based on different markets and the degree of consumer concern on the environment.

Studying the determinants of consumers’ green purchase behavior would be beneficial for green marketers, although our focus is on the influence of green marketing tools on purchase behavior. The majority of these studies have been conducted in industrialized countries (Chen, 2012; Bleda and Valente, 2009; Chatterjee, 2009; Davis, 1993). In the following we will review each of the green marketing tools.

i. Eco-labeling

One of the significant green marketing tools used is the eco-label on environmentally friendly products. Environmental labels are used by marketing to promote the identification of green products (D’Souza and Taghian, 2006). Labels consist of a range of small pieces of paper, up to very complex diagrams that are included as a part of the goods packaging. Labels can contain simply the brand products or a range of varied information. In some cases, the seller may want a simple ‘Label’, but law obliges them to provide additional information (Kotler, 2010).

Sammer and WuEstenhagen (2006), identify the eco-label as an important tool to allocated asymmetry information between sellers and buyers. They also state that labels are a signal to accomplish two main functions for consumers: an information function that informs them about intangible product characteristics, such as product quality and a value function, which provides a value in themselves (e.g. prestige).

Rex and Baumann (2007) define eco-labels as a tool for consumers to facilitate making a decision to select environmentally-friendly products; it also enables them to know how products are made. Many of the studies on eco-labels look for ways to make them effective in consumers’ purchase behavior and environmentally safe products (D’Souza and Taghian, 2006; Sammer and WuEstenhagen, 2006). Sometimes consumer distrust of eco-labels can be expressed through their ignorance in identifying eco-labels and the regulations that companies follow to place authorized labels on their products (Iyer, 1999).

Nik Abdul Rashid’s (2009) study has shown that awareness of eco-label has a positive effect between the knowledge of a green product and consumer’s intention to purchase. However, other studies indicate that although the functions of labels are recognized by some consumers, this does not automatically lead them to green purchasing decisions (Leire C, Thidella, 2005).

Few studies have investigated the link between environmental labeling and a consumer’s intention and behavior to purchase environmentally friendly products (Nik Abdul Rashid, 2009; D’Souza, 2004; Whitson and Henry, 1996). In addition, D’Souza (2004) explains that little is understood about the effect of label information on a consumer’s intention to purchase environmental friendly products.

Kuhn (2013) illustrates that these situations will emerge from growth in pollution from enlarging the market as a result of achieving greater market share through manufactured environmental friendly products.

ii. Eco-brand

The American Marketing Association define a brand as “a name, term, sign, symbol, or design, or the combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of a competitor.” This definition can be generalized for the eco-brand as well. Eco-brand is a name, symbol or design of products that are harmless to the environment. Utilizing eco-brand features can help consumers to differentiate them in some way from other non-green products (Rahbar and Abdul Wahid, 2011).

According to a prior study by Rahbar and Abdul Wahid (2010), Malaysian consumers consider glass based, household cleaning, aerosols, pesticides and plastics as non-green product categories, with a high level of impact on the environment. Hence, it can be predicted that consumers will respond positively to products with environmental features, known as ‘eco-branded’ products. Earlier research in western countries supports the idea that consumers in the USA and Germany take positive action to eco-branded products, such as the Body Shop and green energy (Wustenhagen and Bilharz, 2006).

Knowing about consumers’ brand purchase decisions are very important for marketers and market researchers. This effect is known as brand equity. Brand equity can be defined as data that has different effects on consumer response to the marketing. Green brands that generally focus on the environment should be used to highlight the status of green products, in a similar way to non-green products (Aaker, 1992).

iii. Environmental advertisement

In the wake of increasing consumer concern about the environment, in the late 1980s and early 1990s, green marketing activities progressed, especially in the field of environmental advertising (Carlson et al., 1996).

Davis (1994) describes that environmental advertising by corporations usually contains three elements. First, the advertisement begins with a statement of corporate concern for the environment. Secondly, the advertisement describes the way the corporation has
changed its procedures in order to demonstrate its concern and dedication to improving the environment. Thirdly, the advertisement describes specific environmental actions in which the corporation is involved, and/or results for which the corporation takes credit.

According to Baldwin (1993), environmental advertisements help to form a consumer’s values and translate these values into the purchase of green products. As stated by Chase and Smith (1991), ‘Environmental’ messages in advertisements and product labeling was found to “sometimes” influence the purchasing decisions of 70% of respondents.

3. Consumer Purchase Behavior

For the participation of this study, some researcher-made pamphlets are handed to all the participants in which a brief summary of the green marketing behaviors was included. The researcher was supposed to make the participants familiar with the ABC of what is called ‘green marketing’. The researcher aims to increase the familiarity level of participants in order to fill in the questionnaire with more knowledgeable ideas.

Comprehending this point is of high significance, that consumers can affect the environment as the environment itself can influence consumers. Therefore, changes in the cost of pattern/model or the saving of consumers can affect the economy (Moon and Minor, 2006).

Consumer purchasing behavior is defined as: final consumer behavior during the purchase. There are four types of purchase behavior: Complex purchase behavior, those purchasing behaviors that seek variety, purchasing behavior that seeks to reduce tensions after purchase and normal purchasing behavior (Kotler, 2010).

Numerous estimations indicate that consumers take the environment seriously, but generally nothing is seen or observed in their acts, for example, in purchasing the environmentally-friendly products (Karim, 2008).

Consumer behavior perception and “knowing customers” is not so simple. Sometimes customers express their needs and desires, but do so in different ways. They may be unaware of their inner motivations or react to the affecting factors and at the last moment will change their opinion. Nevertheless, members of marketing should survey their customer needs, their receiving subjective, and their buying and purchasing behavior (Kotler, 2000).

Green marketing activities are increasing in many countries, and these activities have had an important influence on increasing consumer knowledge and in shifting consumers into purchasing green products (Cohen, 1973). The ‘greenness’ can be due to outer or inner pressure (Polonsky and Rosenberger, 2001).

Thus, in this study, we have a main hypothesis and three sub-hypotheses that are as follows: The main hypothesis: A significant and positive relationship exists between green marketing tools and customer’s purchase behavior.

Sub-H1: A significant and positive relationship exists between eco-label and sport products customer’s purchase behavior in higher education students and faculty members of Hamedan Islamic Azad University point of view.

Sub-H2: A significant and positive relationship exists between eco-brand and sport products customer’s purchase behavior in higher education students and faculty members of Hamedan Islamic Azad University point of view.

Sub-H3: A significant and positive relationship exists between environmental advertisement and sport products customer’s purchase behavior in higher education students and faculty members of Hamedan Islamic Azad University point of view.

METHODOLOGY

Our research study sought to examine the impact of green marketing tools on sport products consumer purchasing behavior, by using analytical model investigation, a questionnaire and regression analysis. This is an applied research; we aim to solve existing problems within organizations. The study is also commercial and the results aim to improve the process of providing a product or a particular method of product. The number of samples is obtained as follows:

\[
N = \frac{z^2 \cdot 1 - \frac{\alpha}{2} \cdot \frac{p \cdot q}{e^2}} = \frac{1.96^2 (0.5 \times 0.5)}{0.05^2} = 384
\]

\(z\) ¼ Standardized value corresponding to the confidence level

\(p\) ¼ Estimating observed attribute variable in the community

\(q\) ¼ Estimation of different objects that are not observed

\(e\) ¼ Allowable error in the measurement range of observations

The society sampling in access includes the information aggregation of the society of higher education students and faculty members of Hamedan Islamic Azad University which is simply accessible for achieving its information (Sekaran, translated by Saebi and Shirazi, 2012). The method of sampling is cluster sampling. The population
site is divided into four areas, North, South, East and West, and we chose the northern and western areas. The questionnaires were distributed in chain stores in these areas. Minimum specimen volume is 384 people, at 95% reliability.

The data was collected using a questionnaire. These were collected from customers in chain stores in the Northern and Western parts of the university. We use closed questions with five options on a Likert scale. The responses range from, strongly disagree to strongly agree, and were set so as to help individuals quickly select one option. Thus, researchers can easily extract and analyze the information. There are two variables in this study. Each of the hypotheses listed factors that are considered as independent variables (green marketing tools). Consumer purchasing behavior is chosen as the dependent variable, see table 1. All these variables were used in the formulation of the questionnaire.

**Table 1: Summary of questionnaire, showing the balance of questions related to topic**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number of questions</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent variables:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(green marketing tools)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eco labeling</td>
<td>6</td>
<td>Rahbar and Abdul Wahid</td>
</tr>
<tr>
<td>Eco-brand</td>
<td>4</td>
<td>Rahbar and Abdul Wahid</td>
</tr>
<tr>
<td>Environmental advertisement</td>
<td>6</td>
<td>Rahbar and Abdul Wahid</td>
</tr>
<tr>
<td><strong>Dependent variable:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer purchasing behavior</td>
<td>4</td>
<td>Rahbar and Abdul Wahid</td>
</tr>
</tbody>
</table>

If the questions related to the measuring tools, are the representative of attributes and particular skills that aim to measure them, the test has reliability for content (Sarmad et al, 2007).

The questionnaire is composed of five sections. The first part focused on the demographic characteristics of respondents. Perception towards environmental advertising was measured in the second part of the questionnaire, following the Chan (2004) study. Four items, measuring the perceived impact of environmental advertisement on consumer’s actual purchasing behavior, were used on a five-point Likert scale (1 ¼ strongly disagree, 5 ¼ strongly agree).

The third part measures perception of eco-label of green marketing tools as a guide to consumers to for recognizing environmentally-friendly products. It was adapted from Nik Abdul Rashid (2007), the original study consisted of three components to evaluate consumer’s cognitive behavior towards the eco-label. The three components are: awareness, knowledge and trust. The fourth part of the questionnaire was designed to measure the impact of eco-brand on consumer purchase behavior. The last part of the questionnaire includes sport products purchase behavior as the dependant variable. In this study, the variable is measured by the level of the priority given when respondents decide on their actual product purchase of green products with ecological features, versus non-green products.

The display of both group A and group B products were followed by related statements on consumer purchase behavior. The researchers have closely followed Nik Abdul Rashid’s method, but the two groups of products were created following Yam-Tang and Chan’s study (Yam-Tang and Chan, 1998) and classification of environmentally sensitive products. Statistical techniques were used to process the data included, namely Spearman correlation coefficients and multiple regression analysis.

Following data collection and getting a sufficient response rate, the Cronbach’s alpha coefficients for each tool was computed. All values indicated the reliability of the instruments. There were two control questions in the eco-brand and eco-label, but in final analysis these were excluded. In this study, according to similar questions, each variable was designed. Moreover, experts regarding questionnaire, advised on appropriate recommendations. Finally, due to the above mentioned sentences, it can be claimed that the data and questionnaire is both reliable and valid.

The location of this study is Islamic Azad University of Hamedan, Iran. The participants of this study are all the academia’s and higher education students studying in this...
university. Therefore, it can be concluded that the research results cannot be generalized in other universities and other parts of Iran, since far different results can be expected in other areas. The method of sampling is cluster sampling. The population site is divided into four areas, North, South, East and West, and we chose the northern and western areas.

RESULTS

Generally, it is not possible that one method always outperforms all other methods in every situation. This usually depends on the characteristics of the training patterns and unfortunately it is difficult to know in advance exactly which technique or algorithm is best for the problem at hand (Kim et al, 2003).

Table 2: Descriptive statistics of the variables

<table>
<thead>
<tr>
<th></th>
<th>Eco-labeling</th>
<th>Eco-brand</th>
<th>Environmental advertisement</th>
<th>Customer purchasing behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>13/05</td>
<td>11/58</td>
<td>14/57</td>
<td>14/53</td>
</tr>
<tr>
<td>Middle</td>
<td>14</td>
<td>12</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Mode</td>
<td>16</td>
<td>10</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Variance</td>
<td>17/11</td>
<td>12/5</td>
<td>16/91</td>
<td>19/038</td>
</tr>
<tr>
<td>First quarter</td>
<td>10</td>
<td>9</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Second quartile</td>
<td>14</td>
<td>12</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Third quartile</td>
<td>16</td>
<td>14</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>Domain</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Minimum Limit</td>
<td>4 20</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Maximum Limit</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Skewness</td>
<td>0/222</td>
<td>20/036</td>
<td>20/932</td>
<td>20/735</td>
</tr>
<tr>
<td>The traction test</td>
<td>0/661</td>
<td>20/541</td>
<td>00/0980</td>
<td>200/351</td>
</tr>
</tbody>
</table>

Descriptive statistics examined demographic variables are presented in Table 2. Multivariate regression analysis, see Table 3, indicates that the green marketing tools as variables, predict the amounts of variance in purchasing behavior. Standardized beta values for each variable are presented in Table 3, and the importance of each predictor variable has been interpreted.

Table 3: Green marketing tools: regression results on consumer purchasing behavior

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Standardized regression coefficients</th>
<th>T level</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0/848</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Environmental advertisement</td>
<td>0/6</td>
<td>14/98</td>
<td>0/000</td>
</tr>
<tr>
<td>Eco-labeling</td>
<td>0/24</td>
<td>548/8</td>
<td>0/000</td>
</tr>
<tr>
<td>Eco-brand</td>
<td>0/077</td>
<td>2/33</td>
<td>0/02</td>
</tr>
</tbody>
</table>
It can be seen that the significance level for the environmental advertisement, eco-labeling and eco-brand is significant at the level of 95 percent. R-squared is a statistical measure of how close the data are to the fitted regression line. It is also known as the coefficient of determination, or the coefficient of multiple determinations for multiple regressions. 0% indicates that the model explains none of the variability of the response data around its mean in which its level in none of the above hypotheses is not equal to 0%.

CONCLUSION

Correlation test results show that the correlation coefficient values predicted by the model, green marketing tools are equal to 0/814. The square of the correlation coefficient is equal to 0/663. This suggests that green marketing tools predicted 66/3% of the variance change in customer purchasing behavior. The results of the multivariate regression model revealed that the environmental advertisement has the largest share in predicting purchasing behavior (Beta:0/6). The eco-labeling variable is next (Beta:0/24), and eco-brand shows the least impact on forecasting purchasing behavior. The first hypothesis examined the relationship between green marketing tools and customer purchasing behavior, and shows that environmental advertising has the largest effect on purchasing behavior and eco-brand the least impact. Recommendations offered in this field should continue to inform the public on environmental matters, for example, how to keep it safe, and provide a continued awareness of products that do less harm to the environment.

This is a new phenomenon in our country, which is required for training, information, building culture and new technologies. We need public officials, people and producers to assist in this area, to help each other move towards a healthy production and cleaner future. In addition, environmental products should come with more advertising, increased variety and lower prices so to be fully appreciated.

The second hypothesis, examined the relationship between eco-label and customer purchase behavior. The conclusion is that we must use trained graphic artists that specialize in this area to design better eco-labels. With the increased awareness on eco-labels, it would help in promoting green product consumption among consumers. However, government should monitor the credibility and trustworthiness of messages in eco-labels. Government should endeavor to inform citizens about the meaning and availability of the new eco-labels and eco-brands, and the benefits of using eco-labeled and eco-branded products on environment (Rios et al, 2006).

The third hypothesis examined the relationship that exists between eco-brand and customer purchase behavior. Eco-brand is a new topic and has an impact on purchasing behavior. More investigations into the ‘eco-brand’ are needed. Information and articles on this topic are scarce, and it is also one of the limitations of this research. We hope that other researchers will investigate this area in the future.

The fourth hypothesis, examined the relationship that exists between environmental advertisement and customer purchase behavior. It has been shown that advertising has the greatest effect on consumer purchasing behavior; as a result we can utilize this opportunity to increase familiarity with environmental products today.

One of the factors contributing to the failure of applying environmental advertisements to enhance purchase behavior is due to the low credibility of green advertisements among consumers (Kilbourne, 1995).

Whitson and Henry36 note that only a few studies (eg. Nik Abdul Rashid, 2006; D’Souza et al., 2004; D’Souza, 2006) have been done on consumer purchase behavior and environmental labeling. Not all consumers are strongly influenced by green marketing. Thus, there is a need to identify and concentrate promotion of goods on those market targets that are environmentally concerned. These segments tend to be younger and more affluent members of the population (Lampe and Gazda, 1995).

SUGGESTIONS

There are some recommendations for future studies in this area. First, other green marketing tools can be examined. Any discussion of gender differences can also be considered. The confidence of the eco-brand and eco-label can be worked on. The novelty of this study is the ‘feeling’ towards the health benefits of a brand. People buy products that are less damaging to the environment so that they feel better.

REFERENCES