GREEN MARKETING STRATEGY AND CONSUMER DURABLES

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ABSTRACT
Corporate entities and business houses have started to think and act seriously on the ill effects of drastic climatic changes such as global warming, heavy floods, accumulation of e-waste, etc. Fast depletion of natural resources, environmental hazards occurring due to the wide use of eco-enemy products, problem created through negative waste disposal methods, etc. were also serious matters which are not to be neglected further. As a result manufactures started to produce and market eco-friendly products, otherwise known as the entry of the green marketing of products and services. Many corporate try to introduce measures such as recycling, channelization of resources, innovation of eco-friendly methods of usage, eco-education, use of renewable energy, cultural conservation, construction of hospitals, sewerage projects, forestry, etc. which promotes environmental sustainability. The present study evaluates the green purchasing behaviour of customers in the selected three districts of Kerala state comprising three regions. 300 samples were collected from customers who bought consumer durables such as television, refrigerators, airconditioners, personal computers, grinders, etc. Ten factors are considered and ranked the respondents which explicit the green purchase behaviour. Mean value is drawn and Friedman’s test is resorted for ranking the factors and their consistency. It was found that technology and product quality is the most important variable considered by the customers while selecting durables. The respondents considered the green marketing awareness the least important factor. There is no significant regional variations found among the factors considered as per ANOVA table. The study is descriptive and analytical in nature. A pilot study was conducted and alpha values are tested before the original study.

Keywords: Environmental sustainability, green marketing, consumer durables, purchase behaviour, recycling, forestry, eco-education, corporate social responsibility.

Introduction
Manufactures during the last decade have started to think and act seriously on the ill-effects of drastic climatic change, fast depletion of natural resources, environmental hazards occurring due to the use of eco-enemy products, e-waste disposal problem, etc. As a result they are trying to produce and market eco-friendly products, otherwise known as the entry of green marketing of products and services. The new Companies Act, 2013 enhanced the role of Corporate Social Responsibility (CSR) to a new realm by introducing section 135. Environmental sustainability will be possible only when people clearly understand the need for keeping the environment in a greenish manner by minimizing the production and use of environmental harmful products. Every corporate has to adopt greenish strategies to reduce their threat to the environment by following good practices in waste disposal, recycling of used products following buy-back strategies, planting trees, using environment friendly packages, etc. Green marketing strategy and the resultant protection of environment is in its growing stage, but many corporate are ushered in this respect, which is a positive sign towards the right meaning of discharging the so-called corporate responsibility.

Significance of the study
Unless otherwise a drastic change has not occurred in the corporate attitude towards maintaining a greenish environment, the problem of rapid depletion of natural resources, deterioration of eco-systems, climatic change, resultant pollutants, etc. would remain an enigmatic issue and the life in future will be in dark conditions. Governments, people and organizations have to think seriously to solve the problem but today it became a concern to a few environmentalists only. The green concept emerged in Great Britain in 1970 had played a remarkable role to create green consumerism in the world. The American Marketing Association also sprang up and had workshops and serious thoughts in 1975. Many Asian countries have shown good signs in favour of natural protection movements either by creating awareness among people or through enacting laws. Environmental sustainability is termed as associated with the use and protection of the nature, eco-systems, and subsystems. Our environment should be made available to the unlimited future generations without much harm. Hence, the study point out some measures to protect the environment in the context of corporate social responsibility.

Objectives of the Study
Following are the precise objectives of the study.
1. To examine the concept ‘green marketing of products’ and major factors motivating the customers in purchasing green products.
2. To look into the environmental protection measures followed by selected corporates.

Research Methodology and Sampling procedure

The study is descriptive in nature. The paper intends to inculcate the knowledge and need of protection of our environment by men and corporate. It examines the green marketing concept precisely and other measures followed by some selected corporate for discharging their responsibility to have a sustainable environment. The paper relied on the primary data and secondary data. The primary data is collected from 300 customers who are using durable products in three districts of Kerala state, namely Thriruvananthapuram, Kottayam and Thrissur. Respondents were selected from urban and rural areas of the three districts by using a structured questionnaire. Secondary data were collected from articles, theses, websites and reports published by companies and books. Statistical tools used in the study are ranking, chi-square and ANOVA.

Emergence of Environmentalism

Many countries in the world have traced the increasing concern on the impact of uneofriendly manufacturing, packaging and consumption patterns even in 1970s. The environmental hazards and impact on life has been debated worldwide. The perception of manufacturers and consumers has started to change and a favorable attitude towards green marketing and consumerism is emerged. As a result manufacturing technologies has improved, new methods of waste disposal systems emerged, eco friendly packages were introduced, recycling and reuse of used materials has been practiced, planting trees, sponsoring projects, etc were started in the corporate walk of life. Environmental responsibility is a critical function of management and will be tool for the evaluation of the success of organizations. Creating drastic change in consumer behaviour towards creating interest in green products, environmental protection measures, helping for recycling process, etc are inevitable functions of every manufacture and seller. Hallin (1995) has a view that people engage in environmental behaviour in resultant of their desire to solve environmental problems, to become role models and to preserve the environment.

Environmental sustainability

Sustainability is the ability to continue a defined behaviour indefinitely. It is measured based on the rates of the renewable resources harvest, pollution creation and non-renewable resources depletion that continues in an area. If pollution creation and excessive usage of non-renewable resources are not controlled, a sustainable growth cannot be attained anywhere. According to Daly, H.E (1990), Sustainable development is sustainable growth, which is an oxymoron. All economic growth today is terribly environmentally degrading. He argued that the rate of harvest should not exceed the rate of generation.

The rates of waste generation from projects should not exceed the assimilation capacity of the environment. The depletion of the non-renewable resources should require a comparable development of renewable substitutes for that resources. Environmental sustainable involves making decisions and taking action that are in the interest of protecting the natural world, with particular emphasis on preserving the capacity of the environment to support human life. A business should take responsible decisions that reduce the negative impact on the environment.

Environmental sustainability ensures the well being of individuals by integrating social development, economic development and environmental conservation and protection. It is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs (www.countrycraft.com).

Green marketing and Environmental Sustainability

‘Green marketing’ refers to holistic marketing concept wherein the production, marketing, consumption and disposal of products and services happen in a manner that is less detrimental to environment with growing awareness about the implications of global warming, non bio- degradable waste, harmful impact of pollutants, etc, both marketers and are becoming increasingly sensitive to the need for switch in to green products and services.

J. Polanski defined the green marketing as “all activities designed to generate and facilitate any exchange intended to satisfy human needs and wants such that satisfying these needs and wants occur with minimal detrimental impact on the national environment”. Leigh Ann Renfro (2010) described that consumers pays more attention to the environmental efforts of businesses and support companies that excel with their green marketing efforts. She developed a concept of ‘green supply chain’ for a business to follow its...
products from design to delivery in an eco-friendly way. The green production methods, packaging and marketing strategies will certainly helpful in the attainment of environmental sustainability concept. Green methods of production will reduce the harmful wastages, emission of toxic gases and excessive use of scarce materials. It also intends to post sales services, buyback of scraps or used products, etc.

Results and Discussions
The study substantiated the topic of study by using the primary and secondary data.

1. The following are the major common environmental concerns created by the corporates.
   - Damaging rainforests and woodlands,
   - Polluting and over usage of natural resources.
   - Polluting the environment and atmosphere through the burning of fossils fuels, plastics, etc.
   - Damaging prime agricultural and cultivated land through the use of unsustainable farming practices
   - Excessive use of non-renewable natural resources
   - Producing environmentally harmful products and gases, etc.
   - E-waste and plastic waste disposal in habitat regions.
   - Reluctance in buy back of used and expired products.

2. Environmental protection measures followed by selected corporates
Following are the major environmental sustainability measures followed by some of the corporates.
   A. Re-construction of existing manufacturing process - use and develop the modern systematic methods of engineering technology reduced the wastes, emission of toxic gases, etc. during the production and usage of products.
   B. Recycling - product materials, packages, waste water, etc.
   C. Channelization of resources for reuse and further sale
   D. Innovation of eco-friendly products, process, etc.
   E. Develop and use of renewable energy such as wind, solar, occasion water, etc.
   F. Cultural conservation of traditional values.
   G. Infrastructure development such as sanitations and sewage facilities.
   H. Health care programs such as construction of hospitals and amenity centres.
   I. Planting trees
   J. Create awareness among people for the use of eco friendly products
   K. Initiation of other social responsibility measures such as conservation of biodiversity.

3. Factors motivating the customers to buy green products - consumer durables
Ten factors which motivate the customers to buy consumer durables were identified by ranking the mean scores ascertained from the nine point scale. The respondents have given scores (1 to 9) for each factor based on their preferences in each factor given. These factors explain 'why' they buy the product and 'what' motivates them to prefer the specific product.

Table 1. Mean Rank of the factors motivating the green customers to buy consumer durables

<table>
<thead>
<tr>
<th>SL.No</th>
<th>Factors motivating to buy consumer durables</th>
<th>Mean values and rank of factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Technology and product quality</td>
<td>6.82</td>
</tr>
<tr>
<td>2</td>
<td>Energy consumption</td>
<td>6.78</td>
</tr>
<tr>
<td>3</td>
<td>Model</td>
<td>6.22</td>
</tr>
<tr>
<td>4</td>
<td>Operation easiness</td>
<td>5.98</td>
</tr>
<tr>
<td>5</td>
<td>Certification of authorities</td>
<td>5.13</td>
</tr>
<tr>
<td>6</td>
<td>Waste production / pollution rate</td>
<td>5.10</td>
</tr>
<tr>
<td>7</td>
<td>Company image</td>
<td>4.97</td>
</tr>
<tr>
<td>8</td>
<td>Sale after usage / scrap sale</td>
<td>4.89</td>
</tr>
<tr>
<td>9</td>
<td>Recommendation of salesmen and friends</td>
<td>4.67</td>
</tr>
<tr>
<td>10</td>
<td>My green awareness</td>
<td>3.59</td>
</tr>
</tbody>
</table>

Source: survey data
While selecting to purchase a consumer durable product, technology and product quality is considered the most important factor which motivates green customers for the purchase of consumer durables. Other factors in the descending order are energy consumption, model of the products, operation easiness, certification of authorities, pollution rate, company image, etc. The green awareness has least mean values and has tenth rank in the selection of consumer durables, means the green awareness has to be
created among users of the products by the government, corporates and media. The following hypothesis is used for testing variations of rank values of variables.

**Hypothesis**

H0: There is no significant difference exists among the variables which motivate in the purchase of consumer durables in green buying.
H1: There is significant difference exists among the variables which motivate in the purchase of consumer durables in green buying.

Table 2. Friedman Test for rank preference for the factors of the customers selecting the durables

<table>
<thead>
<tr>
<th>Source of Variation</th>
<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 - region</td>
<td>39.987</td>
<td>9</td>
<td>7.68</td>
<td>4.781</td>
<td>.061</td>
</tr>
<tr>
<td>Within groups total</td>
<td>49.442</td>
<td>290</td>
<td>.476</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>89.339</td>
<td>299</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey data

Further, the variation in the rank preference is tested by using Friedman test and found that the Chi-square value 435.654 with df 12, p=0.045, which shows a significant difference exists between the rank values of various factors motivate green purchase behaviour of customers.

3. **Regional Variation of Green Purchasing behaviour of customers of consumer durables**

To test whether a difference exists between three districts (Thiruvananthapuram, Thrissur and Kottayam) in the mean values of various factors considering in the selection of consumer durables by green customers, one way ANOVA is resorted with the following hypothesis.

**Hypothesis**

H0: There is no difference between the mean ranks of variables among the districts selected in the green purchasing behaviour of customers of consumer durables.
H1: There is difference between the mean ranks of variables among the districts selected in the green purchasing behaviour of customers of consumer durable.

Table 3. ANOVA table for the mean difference between districts

In the table 3, the ANOVA value calculated is small (4.781) one and the significant level exceeds the accepted 5 percent level of significance (0.61), we accept the null hypothesis stating that there is no significant difference exists among the variables between three districts in Kerala in the factors considered for the purchase of consumer durables in the context of green marketing initiative acceptance by the green customers.

**Major Findings of the Study**

The major findings of the study are given below.
1. Common environmental concerns created by corporates are damaging rainforests and woodlands, polluting and over usage of natural resources, polluting the environment and atmosphere through the burning of fossil fuels, plastics, etc, damaging prime agricultural and cultivated land through the use of unsustainable farming practices, producing environmental harmful products and gases, etc, reluctance in buy back of used and expired products.
2. Major environmental protection measures initiated and started are redevelopment of technology suited to the environment in the usage of products, Recycling- product materials, packages, waste water, etc, Channelization of resources for reuse and further sale, Innovation of eco-friendly products, process, etc, Develop methods for the use of renewable energy such as wind, solar, used water, etc, cultural conservation of traditional values and infrastructure development such as sanitations and sewage facilities.
3. Various factors motivating and considering in the purchase of consumer durables by customers are in the following order (based on mean values).
a) Technology and product quality, b) low energy consumption, c) model of the products, d) Operation easiness, e) Certification of authorities, f) low waste production/emission disposal and g) company image and green awareness.

4. The variation in the rank preference is tested by using Friedman test and found that the Chi-square value 435.654 with df 12, p=0.045, which shows a significant difference exists between the rank values of various factors motivate green purchase behaviour of customers.

5. The ANOVA value calculated is small (4.781) one and the significant level exceeds the accepted 5 percent level of significance (0.61), We accept the null hypothesis stating that there is no significant difference exist among the variables between three districts in Kerala in the factors considered for the purchase of consumer durables in the context of green marketing initiative acceptance by the green customers.

Conclusion

Many corporates initiated modern engineering technology and environmental sustainability measures to protect the environment from the use of consumer durables produced by them. Consumers were given awareness and they have considered all these for their purchase. Tatapower introduced greenolution philosophy – undertakes sustainable development biodiversity in Jojobera. The objective of the project is to create awareness among employees and support system. Casio India company unveiled a range of mercury free projectors at infocom 2013. HCL Info Systems took environmental sustainability programmes by their Ecosafe by assessing their products to several parameters to avoid chemical hazards and reduce the emissions. Timberland (Boot manufacturer) since 2007 has been removing bottles from landfills and recycling them into boots. Cummins India implements a trial program known as 'Zero garbage' in Pune to reduce the amount of waste that ends up in the landfill.

Green awareness is the least motivating factor considered in the buying of consumer durables in Kerala state. This shows the least awareness of customers in the green concept. Planned measures are necessary for the selection and purchase of eco-friendly products, which will be force to implement environmental sustainability measures by the corporate and other business houses.

References

5. www.greenmarketing.com