Green Marketing: A New Paradigm Of Marketing In The Automobile Industry

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EVOLUTION OF GREEN MARKETING PERSPECTIVE

Today, the philosophy of marketing as well as the market place is radically different as a result of major, and sometimes interlinking societal forces that have created new behaviors, new opportunities and new challenges. Green marketing is a new paradigm shift in societal marketing.

Here, the first attempt is being made to capture briefly the evolution of earlier marketing ideas.

From the time of industrial revolution to the early 1920's, the main philosophy of business was to produce low-cost products and creating supply of them, in return creating the demand. Due to the inelastic/less-elastic demand of products and absence of intense competition, firms were able to sell what they produced. This production philosophy gave birth to mass production. By early 1930s, due to increased competition, firms started the 'Selling Concept' by which, besides producing the products, firms convinced the customers to purchase through promotional activities like advertising, sales promotion, personal selling etc. In this philosophy, all the efforts of organizations were confined to sell the products to offset the competition.

After World War II, with the prevalence of competitive markets, increased standard of living and selective behavior of customers, a new philosophy emerged in 1960s known as 'Marketing'. Here, the customer acted as a king and his satisfaction was supreme (Drucker, 1973). All the efforts of corporations were shifted from production and selling to identifying and serving the needs of customers. This philosophy states that products are designed and manufactured by identifying the needs of customers but ignoring whether they are socially good or not. 1970's witnessed the era of social marketing, where business houses started balancing their corporate profits, customer satisfaction and societal interest. As customers were exposed to variety of products and services, their selective behavior gave birth to 'Relationship Marketing'. Need was recognized in 1970-1980's to satisfy and retain the customers.

The intense competition, race to beat the rivals and flooded markets with plethora of products resulted in depletion of natural resources at a faster rate. In the hunger of getting the quick returns, games were played with nature resulting in adverse consequences like environmental pollution, increasing greenhouse gases, deforestation in tropical areas, acid rain, global climate change, hazardous waste and hole in the ozone layer (Rojsek, 2001). Moreover, due to poaching and destruction of natural habitats, various wildlife species have been pushed to the brink of extinction and the ecosystem has been affected adversely. 'Global Warming' emerged as the burning global issue to be discussed at an international platform. Governments have come forward strongly to regulate the corporations to produce environment-friendly products. Also, customers have started preferring the products of those manufacturers who are showing more concern about the environment. As a result, in the beginning of twenty first century, 'Greenness' was viewed as a benefit and the producers started selling the products based on their environmental benefits. Hence, this may be considered as the evolution of green marketing practices.

Today, the green movement has gained momentum worldwide as people become aware about their actions and various groups have stood up to promote this movement. All the countries around the world are actively participating in it and the policies that are being formulated by the different governments are in favour of this.

'Green Party' is the oldest and continuously active organization in USA and various organizations associated with it are National Audubon Society, Earth First, People For The Ethical Treatment of Animals (PETA), Earth Liberation Front and Sierra Club. In addition to it, various intergovernmental organizations like Commission for Environmental Cooperation (CEC), European Environment Agency (EEA), Intergovernmental Panel on Climate Change (IPCC) and United Nations Environment Programme (UNEP) are formed through international agreements to protect the

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environment. Besides these, organizations, print and electronic media in USA have taken initiatives to promote ideas and tips for living in the green environment. As a result, 86% of the Americans have access to drop-off recycling programs and hence, they recover 50% of the paper they use and more paper is recycled.

In 1990's, one survey indicated that 82% of the Germans, 67% of the Dutch and 77% of the Americans purchase products by considering environmental factors (Zhang, 1996). The Japanese consider the use of recycled paper and green food as a fashion. A study conducted in Australia (1994) reported that 84.6% of sample believed that all individuals have the responsibility to care for the environment and 80% of the sample indicated that they had modified their purchasing behavior due to environmental reasons (Goel, 2009).

By looking at this opportunity, many resorts around the world have come up with the idea of 'ecotourism'. These resorts provide the facilities by which one can experience nature. General Electric (GE) introduced 70 ecomagination products including CFL bulbs, dishwashers, refrigerators and water purifiers (Goel, 2009). Today, the corporates around the world are looking for the eco-friendly label. India also has taken up severe problems facing the country like Chipko Movement, Narmada Bachao Andolan, Project Tiger Scheme, Tiger Task Force and many more [1]. The Indian government has taken the initiatives to cut down the carbon emission by 20-25% by FY 2020. These efforts will gear up the trend of manufacturing green vehicles.

LITERATURE REVIEW

Starting from the concept of green marketing, some researchers have conducted research studies in this area:

- *Polonsky et. al (1998) conducted a research study by using content analysis. The authors investigated the impact of environment information on packaging of dishwashing liquid bottles. The information was classified in seven different categories on the basis of government regulations and availability of environmental advertising literature. They found that majority of the information on packaging is not accurate and hence, is misleading.
- **The Example 2000** Carried out a conceptual study on the increasing trend of green marketing in international business by taking the case of China. The authors discussed the bases of emergence of green marketing and the strategies before and after the entry of green products in the market. The study suggested various ways to China to avail the opportunities and meet the challenges that emerged due to green marketing.
- Rojsek (2001) carried out a research study by taking the case of Solvenia. He investigated the driving forces behind environment management in this country. 100 questionnaires were sent to the most environment-unfriendly industries in Solvenia on the basis of judgment sampling. Majority of the respondents think that whatever is spoken is not done on environment protection. This goal is at the bottom of the hierarchy and the companies are not paying their attention to achieve this goal. The strongest barrier in the way of green marketing is heavy investments and additional costs. Moreover, they think that only strict government legislations will exert a pressure on the companies to behave in an environment-friendly manner.
- *Das and Nath (2006) conducted an empirical study on green packaging practices of Indian industries. They tried to explore the similarities and dissimilarities in the green packaging practices of selected industries and the underlying reasons causing these dissimilarities. With the help of sample of 20 companies (5 each from electrical industry, plastic industry, food industry and automobile industry), they found that in the packaging material, 65% of companies preferred cardboard boxes, whereas 60% preferred polythene packs. 30% of the companies preferred paper bags and tin boxes and 15% preferred thermacole boxes. Only 10% companies preferred jute bags. They further found that Indian companies are considering better durability than the adverse effect of packaging on the environment. The business units are not working hard on green packaging.
- **Goel and Goel (2009)** carried out a conceptual study on green gamble. In this research work, the authors highlighted the need and importance of green marketing. They also highlighted the reasons for adopting and disadvantages of green marketing with suitable examples.
- **Thakar et al. (2009)** conducted an empirical study on consumer awareness with reference to green marketing of automobiles at Indore, Madhya Pradesh. In their research work, they found that the middle aged segment and urban segment reveal more awareness and readiness to buy green products than the younger and rural segment. Further, the findings indicated that acceptance of green products is higher in four wheeler owners and marketers should reduce

their profit margins in pricing strategy of products.

The above mentioned studies indicate that the previous researches have laid emphasis on advantages, disadvantages and barriers in green marketing. However, majority of the authors are silent about the concerning practices.

Thus, researchers have started working on the topic-green marketing, but it can be said to be just the beginning and still, there are miles to go so as to assume good life for individuals and sustainable corporate development. Hence, there is need to conduct fresh studies in this area.

This paper is step in this direction. The main source of data used in this paper is secondary data. Annual reports of the companies were considered. The paper is divided into five parts. First and second parts are devoted to evolution of green marketing and review of literature respectively. The third part of study encompasses drivers of green marketing. Green initiatives in automobile industry are available in fourth part and the last part concludes the study.

DRIVERS OF GREEN MARKETING

Green marketing encompasses the business practices that protect the environment as well as human and animal rights. Environmentalism took birth in 1970's, where the threat was to protect the environment. That time, this idea had not received much attention from the society. Business was perceived as a problem because of its major contribution in deteriorating the environment. The desire of zero growth prevailed and the focus was on getting the solution for local problems like pollution. But the 1990's represented the 'Green Era', where the focus broadened from local to global issues like global warming (Zhang and Zhang, 2000). This idea received much support on a global platform. The perception towards business shifted from problem to solution by forming more partnerships. The strategy of sustainable development emerged as a powerful strategy of human development. It focuses on increased standard of living and enjoying materialism, but not at the cost of growth and development of descendants. It includes the use of natural resources at the rate at which these can be refilled and producing waste and pollution at the rate at which it can be absorbed without damaging the viability of environmental systems (Peattie and Charter, 2003).

Some view points consider green marketing as the extension of social marketing, but actually, green marketing is the result of green movement. Green marketing is a long term perspective emphasizing on global issues rather than those of particular societies.

- "Green or Environmental Marketing consists of all the 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" (American Marketing Association) (Goel, 2009). Various factors which acted as a catalyst to promote this concept are enumerated as follows:
- **Sustainable Development:** Due to ecological deterioration, the need of sustainable development was felt and green marketing was the appropriate way for various countries to make the efforts effective. Akash Ganga, a Chennai based company innovated a machine in February, 2010, which grabs the humid contents from air and then converts it into water. It is the only machine in the world which cannot only purify/recycle water, but can also produce it (The Economic Times, 2010).
- **Increasing Trend Of Green Consumption:** People started rethinking about their behavior of spoiling the environment and with the increased awareness, markets witnessed the rising trend of green consumption. Consumers started preferring green food and green products that were phosphate free, recyclable, refillable, and environment-friendly.
- **Government Regulations:** Governments of developed countries have set up 'Green Barriers' against international trade. Exporting nations not only have to produce the modern technology, but they also have to meet the environmental standards. U.S banned the imports of Tuna fish from Mexico as the procedure of procuring the fish threatened the survival of precious species. Moreover, government agencies issued green marks. These marks certify that a certain product/service meets the environmental standards (Zhang and Zhang, 2000).
- **© Corporate Social Responsibility:** As industries pose the biggest threat to the environment, to compensate it, they started behaving in a responsible manner believing that with the profit objectives, they must achieve environmental objectives also. Coca-Cola does huge investments in recycling activities and modifying their packaging material. Walt Disney World and Tata have extensive waste management systems. Moreover, Videocon has redesigned its logo which symbolizes the environment consciousness of Videocon.

© Competition In The Market: To offset the competitive pressures in markets, firms engage in green marketing. The environmental activities of other players forces firms to change its own activities. To beat the competition, Xerox had to introduce '100% recycled paper'.

GREEN INITIATIVES IN THE AUTOMOBILE INDUSTRY

Automobile industry has changed its perspective i.e from being a profit seeking industry to a socially responsible industry. Today, the trend is towards manufacturing the green vehicles. For instance, three giant auto producers have redoubled their efforts to make green cars in U.S (Zhang, 1996). The legislation has direct impact on the technologies used because today, the up gradation of technology is also required to meet the legislation.

Car manufacturers are focusing on producing vehicles emitting least amount of CO₂, offering the range of bio-fuel cars and electric or hybrid cars. Global auto giant Toyota enjoyed the sale of 4,29,400 hybrid cars globally in FY 2007 (Goel and Goel, 2009). Tata Motors, Mahindra & Mahindra, Ashok Leyland, Bajaj Auto, TVS Motors and Hero Honda have already started manufacturing green vehicles by implementing advanced indigenous technologies. Maruti and Hyundai have introduced LPG and CNG based variants of Wagon-R and Santro respectively. Reva is the first electric car of the world manufactured by Reva Electric Car Company (RECC), India followed by Honda Civic Hybrid. RECC has its vehicles in various countries like India, UK, Malta, Japan, Romania, Switzerland, Norway and Ireland.

Businesses are increasingly considering the corporate social responsibility as their principal corporate duty. A survey by Mckinsey & Co. reported that 92% of the CEOs and top executives of 400 US organizations consider environmental challenges as a central issue and 83% of the respondents feel that companies must be responsible for the products produced by them (Gupta, 1995; Rojsek, 2001). One more survey conducted on 1000 U.K companies in 1996 indicated that 70% of the respondents reported that environmental issues were more important than a year ago and 58% said that their actions went beyond the requirements of law (Roarty, 1997; Rojsek, 2001). So, the companies are taking the initiatives for the welfare of society.

The different approaches of green marketing followed by auto giants is explained in the forthcoming paragraphs:

Toyota : Toyota obtained ISO 14001 certification in 2001. Toyota relies on manufacturing the technically advanced but environment friendly products. Various measures have been implemented to reduce CO₂ emissions by restricting energy consumption in all areas of business activities and in all stages - from product designing to sale. Under its fourth environment action plan, Toyota's main focus is on reducing CO₂ emissions in global operations and to produce the best fuel efficiency vehicles in each country and region.

Toyota is expanding recycling activities to minimize waste and to promote reusing in development, production, usage and disposal. In Toyota city, Toyota has developed the 'Forest of Toyota' and also provides financial assistance to the practical environmental projects. Toyota 'Shirakawa- Go Eco- Institute' and 'Toyomori Institute Of Sustainable Living' have been established to provide environmental education.

In addition to nationwide program, 'Together Green' (United States), Toyota is taking many initiatives in energy conservation like Rainforest Restoration (Philippines), Toyota China Youth Environmental protection Aid Program (China), Ecodriving (Europe), EcoYouth (Malaysia/Indonesia), Toyota and Mata Atlantica (Brazil) and Toyota Community Spirit (Australia).

In India, recently, Toyota started 'Greenathon-Lighting a billion lives' in collaboration with NDTV. In the first year, funds to provide solar power to over 55 villages in India, which were without electricity for a decade or more, were raised [2].

Tata Motors: Tata Motors is signatory to the United Nations Global Compact and is actively participating in the development of the community. To make their products environmentally sound, a number of measures have been introduced. These are reducing hazardous material in vehicle components, developing extended life lubricants, fluids and using ozone friendly refrigerants. Emission check and control is checked by world's most advanced equipments. Besides upgrading the four and six cylinders in over 70 export markets, Tata Motors is working on alternative fuel engine technologies like CNG. Its CNG version of passenger car is *Indica*. Also, to reduce CO₂ emission, a shuttle bus moves in the plant and ferries people from one place to another so as to avoid the movement of vehicles.

Tata is working on the theme of 3R's, i.e.- Reduce, Reuse And Recycle. A perfect water management system has been put into place in which the industrial water waste is conditioned through an effluent treatment system. At the Pune Plant, a Lake House comprising of two manmade eco-lakes has been constructed, which is known for its natural beauty and is a favorite place for migrant birds. In addition to this, in Jamshedpur, through lift irrigation programme, water is made available throughout the year to those farmers who have to depend upon the monsoon. Tata Motors also carried upon 36 irrigation projects and 135 ponds have been constructed. Besides planting 80,000 trees in townships, more than 2.4 million trees had been planted in Jamshedpur region [3].

- *Mahindra & Mahindra: Mahindra vehicles are designed to meet the emission and safety regulations of the markets it serves. Mahindra introduced the theme of 'Green warriors' by producing alternative energy vehicles, ranging from the hybrid Scorpio to the hydrogen three wheeler. In Year 2007, Mahindra & Mahindra was awarded the coveted Golden Peacock Eco-Innovation Award for an innovative, all-electric, zero emissions vehicle named 'Bijlee'.

 M&M's auto division recently received the 'Green vehicle' award at the NDTV Car and Bike awards, for Micro Hybrid vehicle. Mahindra & Mahindra is the first developer to receive platinum ratings for some of their projects.

 Mahindra & Mahindra is taking initiatives to protect the environment by the ways of natural resource conservation, water management and green IT. It had planted one million trees across the nation by October, 2008. As a part of the 'Green Bombay' movement, it has developed and maintained three municipal gardens. Besides this, Mahindra & Mahindra tries to raise awareness on using power saving techniques. Activities like waste management workshops, tree plantation and maintenance and clinical drives are taken care by Mahindra. M&M has received many awards on energy conservation, water management and corporate social responsibility [4].
- **Maruti Suzuki:** Maruti is continuously in the process of conducting researches to learn the new ways of improving ecological balance and reduce automotive emissions. It is adopting energy saving techniques and is also encouraging its customers and suppliers to act upon environment friendly approach. By monitoring its power and water consumption, it was able to lower power consumption by 30%, water consumption by 61%, CO₂ emission by 38% and energy consumption by 26%. Maruti has received awards for environment management and energy conservation. The company is practicing a 3R approach i.e Reduce, Reuse And Recycle. The company is promoting 100% recyclable and reusable parts. For instance, Maruti's A-Star is designed to meet European norms, which conform that the car is 85% recyclable [5].
- **Honda:** Honda has been at the forefront in implementing the initiatives to protect the environment. To meet with the U.S. Clean Air Act, Honda introduced combustion technology like CVCC engine, hybrid technology and other clean-emission technologies, Honda is not only reducing the vehicle emission, but also has reduced CO₂ emission all the way through business activities. In Year 2009, Honda established two green factories in North America producing 15% less CO₂ than any plant of the same size and which was also 30% more energy efficient. In transportation, 81% of the transportation is done by rail in U.S. and 61% of trucks transporting Honda vehicles are EPA smartway certified. In also introduced 8 hybrid diesel-electric trucks to carry out the transportation. In addition, Honda is involved in green purchasing by ensuring that the suppliers reduce CO₂ emissions and landfill waste and products supplied to them are of ISO14001 certification. By March 2009, 2282 dealers had been certified as green dealers due to their promotion of energy conservation techniques and contribution to community development.

Honda is practicing 3R's, reducing by making the body frame, engines and transmission lighter and smaller. Further, 100% of the waste water is recycled with zero effluent and a solar generation system is installed in the Asian region. Honda received many prestigious awards including 'National Environment Friendly Project Award' and 'Award for Excellence in Environmental Conservation'. In Year 2008, Honda's Indiana plant started the commercial production of Civic Sedan at zero-waste-to-landfill facility [6].

Hyundai: Hyundai Motors India is working with Environment Management System (EMS) in its manufacturing plant in Chennai. It is supporting its vendors to implement EMS. Hyundai established Climate Change Convention Task Force Team (TFT) in 2005, which carries out R&D with development of environmentally friendly vehicles, energy efficiency and practices that stay in line with Kyoto protocol on climate change. To reduce the greenhouse

emissions, and better energy efficiency, Hyundai is manufacturing the Fuel Cell Electric Vehicles and Hybrid Electric vehicles. It has also developed environmentally friendly diesel engines that offer higher fuel efficiency by emitting low levels of CO₂ Hyundai opened its new environment friendly R&D centre in South Korea, which itself was built from environment friendly material and processes like natural light system with the help of solar reflectors, vacuum toilet systems saving 1500 tonnes of water annually and due to the usage of environment friendly products, CO₂ emission will be reduced by 1000 tonnes. Hyundai is client of Aqua Designs India Limited, a Total Water Management Engineering Company which handles recycling and purification of water operations of Hyundai [7].

CONCLUSION

From the last few decades, need is being felt to work on the sustainable approach. To introduce and promote this approach, governments around the world have taken many initiatives. By formulating various strict regulations, they forced the companies to produce environment friendly products. This paper has revealed that the automobile giants are becoming environment conscious and they have been making efforts in the interest of the environment.

But it is not a smooth sailing of the ship carrying green products and services in the sea of intense competition. The boat can encounter an iceberg of increased cost and prices and inflated claims of 'greenness'. The prices of green products are generally higher than the other products due to more efforts and inputs that are required in developing these products.

Oyewole (2001) argued that environmental justice cannot be done without the impact of direct or indirect cost to the consuming public. These type of costs are named as "costs with positive results". According to this study, the willingness to pay more for the green products is a function of people's awareness of risks and their sociodemographic characteristics and it varies from person to person.

Thakar et al. (2009) indicated that acceptance of green products is higher in four wheeler owners and marketers should reduce their profit margins in pricing strategy of products.

Further, if the organization is inclined towards short term benefits and is just practicing 'green washing', then the products may suffer pathetic ends as the exaggerated claims will go unsubstantiated. One more disadvantage is that the recyclable and renewable material is neither easily accessible nor economical. So, these technologies demand huge investments on the part of organizations. But, despite of disadvantages, the advantage is that the 'green' corporations are taking the advantage over their rivals. More and more societies have started feeling concern about the environment and there is trend of 'green purchase' preference, so it presents opportunity for corporations to leverage the under leveraged USP of 'greenness'. Federal governments of various countries have also introduced green barriers to provide the 'pass' to only environment friendly products.

To grab the opportunity of 'green' USP and to cope up with the challenge of green barriers, the automobile industry is working on the development of more advanced technologies like combustion technology, hybrid technology and other clean-emission technologies, resulting in more energy efficient and environment-friendly products. Apart from putting Environment Management System (EMS) into operation, the companies are focused upon reducing the use of hazardous material in vehicle components, decreasing the level of CO₂ and using ozone friendly refrigerants. The companies are also engaging in waste and water management and in turn, reuse and recycle activities.

The FY 2010 budget of Indian government also shed light on the future of green products. Ground source heat pumps used to tap geo-thermal energy are exempted from basic customs duty and special additional duty. The critical parts or sub-assemblies of electric cars are exempted from basic customs duty and special additional duty - enjoying a concessional CVD of 4 per cent. Moreover, funds are being provided to establish clean energy technologies and production of solar power.

Attention is being paid towards the growth of renewable energy sector. 'Mission Clean Ganga' and restoring beaches in Goa are some other green initiatives taken by the Indian government [8]

In a nutshell, it could be stated that despite numerous barriers in the way of green marketing, its future in general as well as in the automobile sector in particular, seems to be 'green' as it emerged out of the global green movement and corporates around the world have started playing the green flute, singing green rhymes.

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