Eco-friendly packaging and consumer buying behaviour in India: A case study of Mumbai

Vinod K. SHARMA
IGIDR, Mumbai- 400 065, India
Tel: (91-22) 8400919/5653; Fax: (91-22) 8402752/5653: Email: vks@igidr.ac.in

Ritu BABEL
NEERI, Jaipur Zonal Laboratory, Jaipur-302004, India
Tel: (91-141) 651446; Fax: (91-141) 651446: Email: ritu babel@yahoo.com
(Received 2, October 2001 Accepted 7, December 2001)

This study was conducted with the aim of assessing the impact of eco-friendly packaging (EFP) on consumer buying behaviour in India. The data were collected from the respondents selected randomly within the city of Mumbai. The views of the respondents belonging to different age groups, gender, income and education levels were analyzed. The findings of the study revealed that the product packaging was an important parameter for a majority of consumers while selecting a product. They knew that packaging was increasingly becoming a nuisance as it added to the solid waste. However, it was found that awareness level of consumers about EFP was not high. A significant correlation was observed among awareness of EFP, education and income levels. Consumers, in general, feel the need to have EFP but most of them were not willing to pay extra cost for the ‘greener products’ carrying it.

Keywords: Eco-friendly Packaging, Consumer Buying Behaviour, Environment, Mumbai.

I. INTRODUCTION
Packaging is the art, science and technology of preparing goods for transport and sale. Although modern packaging is of fairly recent origin but in fact the art of packaging is as old as mankind itself. As defined by Cathy and Wood (1995), “Packages differ from wrappings in that a package has a sealing device that must be broken to gain access to the contents. And the packaging includes the series of operations involved in the preparation and wrapping of goods for handling, distribution, transport, storage, delivery and sale to the end user and it includes the preservation, packing, making and/or unitisation of goods.” The primary needs in the selection of a package for a product are to identify the properties of product, its sensitivity to environment, the length of life desired the consumer needs and existing regulations. This demands thorough knowledge of product and packaging material and their strong and weak points.

Consumer buying behaviour is the process by which the individuals decide whether, what, when, where, how and from whom to purchase goods and services. It is defined as, “All psychological, social and physical behaviour of potential customers as they become aware of, evaluate, purchase, consume and tell others about products and services.” Consumers have varying feelings about the same object from time to time. Their decision for buying is not always rational, and is often dominated by emotions. Consumers’ decisions are based on their own liking, information gathered from family, friends and product packaging and influenced by advertisements and similar other factors. The modern consumer, as depicted by environmental and consumer groups, is thoughtful, informed and concerned about the products he or she buys.

Packaging accounts for nearly 1/3rd of Municipal Solid Waste (MSW) by weight and much larger fraction by volume. Most of the glass in MSW originates from packaging. In general, of total packaging contents of MSW, plastics and aluminium form 50% share, paper based material is around 33% and steel around 15%. Therefore, efforts to reduce packaging will have a sizeable impact on MSW. In the era of increasing environmental concerns attempts should be made...
to minimize the solid waste that may get generated from packaging. The gradual reduction in the quantum of packaging materials used per unit product, encouraging returnable packaging, promoting recycling of packaging materials and measures aimed at energy conservation in the production and distribution of packaged products are areas that must receive our attention. Recyclability of packaging materials is receiving greater emphasis and “environment friendly or eco-friendly packaging” is the need of hour.

II. BRIEF DETAILS OF THE STUDY

A sample of 150 consumers belonging to different age groups, gender, education and income levels was selected randomly within the Mumbai city. The main objective of the study was to find out the effect of EFP on consumer buying behaviour. A questionnaire in two parts, with mostly close-ended questions and few open-ended questions, was prepared for collecting information from consumers through interview. The first part of the questionnaire comprised of the questions related to the general background of the respondents, such as age, education, buying habits etc. The second part included the questions related to the impact of packaging on buying behaviour of consumers. This part also had questions regarding awareness among consumers about eco-packaging and their opinion about its necessity and socio-economic acceptability. The questionnaire schedule was pre-tested on a sample of five respondents for its easy understandability, accuracy and validity to gather all the information needed for the study. The respondents were interviewed personally, at departmental stores, small shops and at their residences. The responses were then analyzed on the basis of age, gender, and income group and education level. Correlation coefficients were calculated to depict the relationship among various factors. The results were expressed as percentages to arrive at the most awareness level group about EFP in various categories based upon the age, income, education etc. and other opinions of consumers.

III. RESULTS AND DISCUSSION

Impact of Packaging on Consumer Buying Behaviour: The study showed that a large percentage of consumers (95%) felt the need of good packaging with products. About 25% consumers always preferred to buy products with good packaging. The decision of about 57% buyers was affected by packaging sometimes only and that of about 25% buyers was found unaffected.

Regarding the quality of available packaging in the market only 24% consumers were found satisfied. Way of packaging and the materials used for packaging were the main appealing factors to most of the consumers (above 65% in all groups) and quality and convenience are the most preferred factors which consumers generally wanted in a package. However, low-income group and interestingly high education group found re-usability of packaging as an appealing factor. Most of the consumers also felt that good packaging of the products required them to pay more. But they were willing to do that if quality and price of the products are satisfactory.

Awareness about EFP: As high as 86% of consumers knew that packaging is increasingly becoming a part of solid waste. A reasonably good number of consumers (about 45%) was aware of EFP and awareness level was more in higher income groups and education levels. Reusable and recyclable packaging were found more popular among consumers and as high as 68% and 55% of them were aware of these packaging, respectively. To increase consumer awareness, the Government of India launched the ‘Eco-mark’ scheme in 1991 for easy identification of environment-friendly products. The ‘Eco-mark’ label is issued to products, which have little or negligible adverse impact on the environment or health of consumers. The criteria for eco-mark follow a cradle-to-grave approach, i.e. EIA from raw material extraction, to manufacturing, and to disposal. Since eco-marks are new concepts only 18% of consumers were found to be aware of it. Awareness levels of consumers about different types of packaging and eco-mark are shown in Fig.1.

Fig.1. Awareness about packagings.

EFP and Consumer Buying Behavior: This was an important finding of the study. Once told about the merits of EFP, a very high percentage (86%) of consumers felt the necessity of it. Majority of them (about 62%) favoured it over
conventional packaging because it safeguards the environment. Some also wanted it due to its reusability and reduction in solid waste. About over packaging of products, majority of consumers (69%) are willing to reject the over packaged products because they feel it increases solid waste and also the cost of the product. Thus, it seems that proper awareness about EFP may result in significant impact on consumer buying behaviour.

**Socio-Economic Acceptance of EFP:** It was found that about 43% of consumers would choose brands, which provide EFP. But a majority of them (49%) said no to it if it makes products expensive. However, about 44% consumers were found ready to buy products with EFP even if they have to pay extra for it. It also reveals that majority of consumers (84%) prefer reusable packaging provided with products. A good percentage of consumers (58%) are willing to spend on EFP at the expense of their convenience. Correlation coefficients between awareness of EFP and high income and educational levels of consumers depicted a positive and high correlation between awareness and income level (0.97) and awareness and educational level (0.78). Figure 2 indicates the socio-economic acceptance of EFP in the city of Mumbai.

**IV. CONCLUSION**

The environmental awareness in India has started affecting marketing of products based upon packaging. With the growing concerns, demand of retailers and consumers is shifting for more eco-friendly packaging. In general, consumers are likely to buy environmentally responsible products and packs if their expectations on performance, presentation and very important, price are met. The future key for marketing could be to select more ethical and ecological responsible products and packaging which is also convenient for consumers, thus, balancing environmental concerns with commercial considerations.

**REFERENCES**


---

Presented at the 5th International Conference on ECOMATERIALS Oct. 2-4, 2001, Honolulu, Hawaii