

A study on Green packaging through Green Marketing Practices in flexible packaging of FMCG industries

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Abstract - Packaging of FMCG (Fast Moving Consumer Goods) being considered as fifth P of the marketing mix contributes to essential functions of an FMCG. These functions are best possible by flexible plastics derived from synthetic petrochemicals combining with thin metal sheets. Such magnificent flexible packaging are spread everywhere in the surroundings and environment as they are simply thrown after use resulting in massive pollution by establishing threat to the livestock and other streams like water and air due to their non-decomposing nature. They contribute to huge landfills thereby becoming a biggest international and domestic solid waste problem. This understanding is the cause of the present study contributing to the application of biodegradable or bioplastics in FMCG industries resulting in green packaging and its acceptability by the consumers. The current research is carried out to understand FMCG purchase habits by consumers, to determine the awareness regarding flexible packaging and its characteristics, to analyse the environmental impacts caused by flexible packaging, study the perceptions related to environmental aspects on green package opinion among the buyers and value creation due to green packaging.

The detailed literature review shows separate studies of the above aspects but this present study combine these for providing clear focus to approach green packaging for a future safe and clean, plastic free environment.

distributed to 577 upper middle class groups in Hyderabad city on the basis of convenient sampling method, out of which only 520 obtained complete data. Chi-Square tests, regression models, ANOVA, exploratory factor analysis, confirmatory factor analysis and structural equation modelling are used for analysing the data by application of SPSS software package.

Taking own bags for purchasing FMCG is significantly related to their handling after usage and emptying. Packaging influences brand selection of

FMCG. Attributes and printed information on packaging are positively associated with brand selection. Regulatory compliances regarding packaging needs to be fulfilled according to the consumer expectations as respondents feel that adequacy of regulatory compliances are not sufficient on the packages.

Level of awareness of flexible packaging is positive and significant to single use sachets, refill packs and flexible packaging aspects.

First model on environmental concepts through green attitude towards green package preference gets six hypotheses supported. Environmental information overrides other environmental aspects towards preference of green packaging.

Environmental concern mediated by green attitude has strong perception towards green packaging by the respondents. Green attitude mediates and influences green package preference. Knowledge towards the environment needs to be increased among the consumers as they are more concerned about the environment.

Relationship between flexible packaging characteristics and buyer's opinion on green packaging are positively associated to each other. There is positive and significant relationship between consumer opinion on green packaging and opinion on used packages.

Second model of value created due to green packaging shows consumers who are aware about flexible packaging characteristics and its environmental impact have positive attitude and strong intention towards green packaging strategies leading to value creation with reference to FMCG. Review of literature details the standards and regulations regarding packaging and biodegradable packaging in both global and Indian scenario. Green packaging having good biodegradable properties resulting in safe, neat and harmless environment would be the requirement of consumers according to the present study.

1. STATEMENT OF THE PROBLEM

The huge increase of usage of plastics, especially flexible synthetic plastics in FMCG packaging, is

due to the convenience rendered by them, as they hold the product without much volume and weight in packaging material.

Plastic packaging of FMCG has stemmed in causing wide throwing and dispersing of plastics ubiquitously in the environment. Much understanding about the developments and application of this FMCG flexible packaging, proposes reducing volumes of wastage, but got outstretching into another huge problem of non-biodegradable waste. This wastage problem has ruined to create plastic household waste, resulting in one third of municipal solid waste ending up as the biggest environmental problem. Upsurge in these flexible plastics is dominating in exhaustion of natural resources due to their high landfills and litter adding to the cause of environmental degradation problems like water, air and land pollution. Addition of biodegradable materials to the flexible plastic packaging to convert it into bioplastics or green packaging is the need of time. As environment gets ruined by plastics everywhere, green marketing needs to be focused for integrating green packaging or bioplastics in FMCG. The research problem prompts to understand the consumer's perceptions on 'Going Green' by understanding the FMCG packaging, flexible packaging and its impression and threats on the environment and value creation owing to green packaging.

2. RESEARCH OBJECTIVES

1. To define and study about the functions of packaging in FMCG industry
2. To analyze the impact and integration of packaging on consumer buying behaviour patterns
3. To understand the characteristics and nature of flexible packaging materials used in FMCG
4. To understand the consumers perception towards green attitude and environmental concepts and issues towards going green
5. To identify the green packaging and green purchase behavior of FMCG due to value created by green packaging.
6. To study the global standards and regulatory frameworks along with Indian practices with reference to the application of green packaging.

3. SCOPE OF THE STUDY

Considering the remarkable demand for FMCG and flexible packaging in the market, along with the considerable amount of pollution which is unavoidable, this research focuses on discussing the

feasibilities of technological developments in biodegradable or green packaging. They are very much known for reduced disintegration time of used packets in the landfills, thus enticing a safer environment. Thus, this study focuses on

- i. FMCG purchase behaviours influenced by packaging
- ii. Flexible packaging in FMCG, its characteristics and nature along with the impact created on environment
- iii. Consumer's insights and perceptions on environmental aspects and concepts
- iv. Green attitude and green package opinions that arose due to their knowledge and perception on environment
- v. Buyer's opinion on green package and value created due to green package

This paper considers the maximum literature and other secondary data to recognize the gap which involves and implicates further thoughts, concern, contemplation consideration, and accomplishment of action for conceding a nontoxic environment to forthcoming generations.

4. DEFINITION OF MODEL VARIABLES

Environmental Problem

According to the World Trade Organization (WTO), "Most environmental problems result from polluting production processes, certain kinds of consumption and the disposal of waste products." Environmental problem refers to the entire environmental pollution and global warming which effect living beings negatively (Boztepe 2012). Environmental problems of the developing nations are frequently associated to economic development, such as wastewater treatment, deforestation, biodiversity, and population burdens and those environmental standards for developing countries need to reveal their level of growth and certain actual environmental challenges (Jahnke 2000)

Environmental Concern

Environmental concern is defined as 'the level of emotion and commitment towards environmental issues' (Aman et al. 2012). Another definition says that Environmental concern is an attitude that is related to environmental consequences (Paco & Raposo 2010).

Environmental Knowledge

Environmental knowledge can be defined as "a general knowledge of facts, concepts, and relationships concerning the natural environment and its major ecosystems" (Fryxell & Lo 2003).

According to Tanner and Kast 2003, environmental knowledge is all about understanding definitions, root causes, or consequences of environmental issues. Environmental knowledge comprises people's understanding about the environment, significant associations leading to environmental effects, an obligation of entire systems, and combined duties essential for viable growth and improvement.

Green attitude

Green attitude is defined as a psychological tendency expressed by evaluating the natural environment with some degree of favour or disfavor (Milfont & Duckitt 2010)

Buyer's opinion on green packaging

Buyer's opinion on green packaging is the preference towards biodegradable or eco-friendly packaging and its materials which are made up of new generation polymers considered as future packaging materials which are responsible for environmental safety.

Flexible package characteristics

Flexible package characteristics are the functions or properties or uses or application of the packaging materials under various conditions for applications in various industries like FMCG, apparels, home appliances and industrial products.

Green marketing

American Marketing Association (AMA) divides the definition of green marketing in three aspects (marketingpower.com): as "the marketing of products that are supposed to be environmentally safe" (retailing definition) as "the development and promotion of products designed to reduce negative effects on the physical environment or to increase its quality" (social marketing definition) and finally as "the efforts by organizations to produce, promote, package, and regain products in a fashion that is sensitive or receptive to ecological concerns" (environments definition).

Green packaging

"Green packaging is the package where flexibles or synthetic plastics are combined with biopolymers like starch, proteins, lipids derived from plant and animal sources under suitable conditions which will degrade soon and are renewable sometimes" (Range et al. 2011).

Value creation

"Value creation of a product refers to lower eco-costs and at the same time a higher value and eco-efficient is here eco-effective because it aims at an

optimum value rather than minimum costs" – Wever & Vogtlander, 2013.

5.DEVELOPMENT OF HYPOTHESES UNDER DIFFERENT SECTIONS

Based on the detailed and thorough literature review, following hypothesis was developed:

Hypotheses in the Conceptual models

H1a : Environmental problem influences buyer's opinion on green packaging of FMCG positively.

H1b : Green attitude partially mediates the effect of environmental problem on buyer's opinion on green packaging.

H2a : Environmental concern positively influences the buyer's opinion on green package of FMCG.

H2b : Green attitude mediates the effect of FMCG packaging's environmental concern on buyer's opinion on green packaging.

H3a : The knowledge about environmental aspects positively influences buyer's opinion on green packaging

H3b : Green attitude partially mediates the effect of environmental knowledge on buyer's opinion on green packaging.

H4a : The association of environmental information with FMCG packaging positively influences buyer's opinion on green packaging

H4b : Green attitude partially mediates the effect of environmental information on buyer's opinion on green packaging.

H5a : Green attitude is positively and significantly associated with buyer's opinion on green packaging.

H6a : There is a positive and significant relationship between flexible package characteristics and buyers opinion on green packaging with reference to FMCG.

H6b : There is a positive and significant relationship between flexible package characteristics and environmental impact of flexible with reference to FMCG.

H6c : There is a positive and significant relationship between Flexible package characteristics and value creation with reference to FMCG.

H6d : There is a positive and significant relationship between buyers opinion on green packaging and value creation with reference to FMCG.

H6e : There is a positive and significant relationship between environmental impact of flexibles and value creation with reference to FMCG.

6.DATA CAPTURING

Questionnaire is designed to meet the research objectives and data is collected respectively in order to conquer the entire information required by the study. Data pertaining to demographic characteristics and data relating to buying patterns, integration of packaging, general packaging aspects, flexible packaging and the environment and green marketing and green packaging are collected.

7.SOURCES OF DATA

This study uses both survey and secondary data collection styles.

Secondary data that are essential for the study are mainly collected from the Earlier research papers, printed industry reports, textbooks, magazines, websites, newspapers and textbooks are the sources of data collection for this research.

Primary data were obtained from Hyderabad consumers through the administration of designed questionnaire.

8.DATA COLLECTION INSTRUMENT: QUESTIONNAIRE DESIGN

The research has been conducted in order to obtain the information from the consumers regarding buying patterns, packaging aspects, flexible packaging and green packaging. A comprehensive study of the literature had been done in order to design a structured questionnaire for collection of data.

Scales of measurement to the respective question depend on the type of information needed. The constructs developed had been measured utilizing widely accepted multi item scaling. The multi item scales called the Likert scale is much helpful in defining the constructs accurately for collecting details through questionnaire method.

Five point Likert scale has been used to measure the items of the questionnaire. The questionnaire is attached as appendix. The responses are collected using nominal scale.

SAMPLING DESIGN

3.9.1 Population and the Study Area

Selecting respondents falling in the upper middle class who are mostly educated with good monthly income are felt suitable in studying the FMCG purchases, packaging and green packaging. The size of the population is large significant in Hyderabad. In order to make this city more cleaner, green packaging aspects has been surveyed from the consumers along with purchase habits and awareness on environmental aspects.

Sampling Technique

This research used convenience sampling (also known as availability sampling) technique which is supported by Zikmund (1997) as this type of sampling is best for conducting exploratory research. This is a non-probability sampling method where respondents who were easy to reach, were given the questionnaire and asked to fill in the same. This sampling method, used in business research for collection opinions or perceptions is applied to collect primary data required for the study.

Sample Size

The minimum suggested sample size 100 individuals had been chosen for the study. This sample strength was considered satisfactory for descriptive research and questionnaire survey.

DATA COLLECTION

Instrument used to collect data: Questionnaire survey method was used to collect the data. Data has been collected from upper middle class consumers of Hyderabad city by administering the Questionnaire designed using 5-point Likert scales (1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree).

Descriptive statistics

Descriptive statistics is used to analyse the integration of packaging and buying patterns of FMCG such as monthly spending on FMCG, frequency of purchase, packaging as an aspect while purchasing FMCG, handling behaviour when purchasing FMCG, and package influence in brand selection. Descriptive statistics is also used to perform the general packaging aspects. Chi-square tests are performed for understanding the flexible packaging aspects. A chi-square goodness of fit test permits us to test whether the perceived proportions for a categorical variable varying from hypothesized proportions.

ANOVA

Analysis of variance tests are used to find if there exists a significant difference between means. ANOVA is used for testing the hypothesis on flexible packaging and green packaging.

Correlation

Flexible packaging characteristics aspects, environmental impact of flexible packaging buyer's opinion on green packaging and value creation are

tested for correlation. Also, flexible packaging awareness and features are tested for correlation.

Regression

Regression analysis, which is widely used technique in market research, is conducted for flexible packaging aspects and green packaging aspects. Regression analysis helps in finding the relationship between the variables and helps to make predictions.

CONCLUSION

The inspiration behind this research work is to understand regarding green packaging of flexible packaging in FMCG among consumers.

This chapter contains the details regarding conceptual models, definition of variables and development of causal hypothesis, research methodology particulars like data collection method, application of scales, pilot study, sampling design, data collection and the outline for analysis. The following chapter discusses results of analysis.

9.FINDINGS AND CONCLUSION

INTRODUCTION

Packaging being the heart and life soul of an FMCG is a part of every life in today's scenario. Packaging is an essential market component that affects virtually every industry. Each product needs some sort of packaging during its existence for protection during containment, transportation, handling, distribution, storage and use. Also, varying consumer dynamics and buying behaviour patterns are transforming the packaging gently and slowly. It is gaining the ground in innovative packaging applications with a witnessing preference towards plastic films and foils compared to other forms of rigid packaging. Flexible packaging due to its vast advantages over other forms of rigid packaging materials such as glass or thick plastic containers, tins and cans, has gained superiority due to various properties and benefits. But the immense use of these flexibles results in spread of polluted environment everywhere piling up with plastic wastes creating threats to the lives of humans and feedstock. Therefore, landfills and solid waste management due to the plastic packaging especially in the consumer product demand a promising solution in order to protect the environment. Despite research on packaging, flexible packaging, plastics and environment, a study on all the aforesaid in the FMCG is very least. Therefore, this study takes the above insights and presents the findings from the respondents for the data collected from the respondents along with

substantial reference made. Questionnaire survey verifies the hypothesis of the present study. About 520 respondents in Hyderabad gave their complete responses in the present study and their results of the objectives are summarised in this chapter along with conclusions, implications under both theoretical and managerial perspectives, limitations and future recommendations and directions.

SUMMARY OF RESULTS

Four parts of the questionnaire comprises the following headings:

- Integration of packaging and buying behaviour patterns related to FMCG
- Flexible packaging and its traits
- Environmental aspects, green marketing and green packaging and
- Demographics

Their results are summarised below.

Demographic Characteristics

The discrete variables are gender, age, educational qualification, occupation, personal monthly income, family type, marital status, number of family members and type of residence. A by simple descriptive analysis namely frequency and percentage examines these variables. These variables would provide the general information regarding the demographics of the study respondents and the findings are as follows:

Male respondents are slightly more than female respondents. 31-40 years age group respondents lead 21-30 years followed by 41-50 years and the remaining age groups. Graduated and post-graduate respondents are high in numbers followed by professionals. Majority of them work in the private sector and least are retired. Majority of the respondents fall under 11001 to 30000 monthly income followed by earnings more than 70001 by 22.1 percent, 30001 to 50000 rupees and 50001-70000 showing that majority of them fall under high income groups. Nuclear families fall on the higher side of 64.4 percent establishing that Hyderabad city is growing with more and more nuclear families. Maximum numbers of respondents are married. Majority of families have minimum four members in the family. The majority of respondents live in the urban part of Hyderabad.

It is evident and clear that the socially accountable consumers incline to have buoyant demographic characteristics – being well educated and vastly knowledgeable, with good income levels and relatively worthy occupation status. Thus, this study tries to

engage educated respondents with good occupation criteria.

10. Integration of Packaging and Buying Behaviour Patterns related to FMCG

This part summarises the results on monthly spending on FMCG, frequency of FMCG purchased per month, packaging as a criteria in purchase decision, handling behaviour of the products purchased, importance of package influence in brand selection, quantity preferred to purchase per time, attributes in the package that made to buy any FMCG, information observed and read on packaging.

Majority of the respondents spend in between 30001 and 5000 rupees per month for purchasing FMCG. The least number of participants about 9.4 percent spend more than 70001 on FMCG purchases per month.

Maximum percentage of respondents shop during both weekdays and weekends elucidating that they are buying on necessity basis and do not have a regular pattern for shopping FMCG. As stated by Barnes (2010), spending power of the citizens is an important factor in defining the expanding economy and henceforth, this study plays a vital role knowing that spending patterns are more among the respondents in FMCG.

Preparation of list for FMCG purchases is still under practice by the respondents however their age or education or occupation is. This shows that they need to avoid unwanted purchases created by temptations while selecting from the shelves. They still need to fit in the traditional method of purchases but wish to select from the shelves sometimes. In contrast to the literatures which are foreign based, Hyderabad consumers still has not moved towards entire impulse buying. They still follow the traditional method of preparing list before FMCG purchases. A majority of the respondents in the present study take bags for purchasing FMCG purchases comparatively with those who buy in polythene covers. Packaging influences selection of FMCG having much importance in food and beverages followed by personal and health care and home care products.

The respondents prefer 500 grams and one kilogram packets for food and beverages, and less than 200 gram packets followed 500 grams for personal and health care products. Bulk family packs are convenient for respondents per purchase time followed by less than one kilogram and less than 500 grams quantities by the respondents. This shows that

consumption of plastic covers is less by the consumers.

Packaging colour, packaging design, packaging material, shape, size and image are important attributes in making the selection of FMCG package viz. food and beverages, personal and health care packages and home care packages. Colour and design are the least preferred attributes than others in selecting all the three FMCG. As stated by Underwood (2003), packaging material is one of the attributes that helped in brand selection. Shape and size contributed to brand selection in this study also as confirmed by Silayoi & Speece (2007) in their study.

Expiry date and price on the food and beverage packets and home care packets are the least observed printed information in FMCG, although ingredients, sign of opening and use and reuse information are observed on the FMCG packages to a maximum extent by the respondents. All the printed information taken in to account in this study based on the literature projects positive extent on the packaging.

Regarding the adequacy of regulatory compliances on the packaging, majority of the respondent answered that positioning of manufacturing date and symbol of disposal is inadequate and insufficient.

Quantity falls under the adequate criteria, whereas license falls under less adequate or neither adequate nor inadequate category. Overall, respondents feel that positioning of the mandatory regulatory compliances is less adequate on the FMCG packaging.

Consumers cut open one and two covers per day and in the context of all the three categories of FMCG is more than four, five and more than five numbers indicating that flexible packages are an integrated part of everyday life. This indicates that one household empties at least one plastic cover or packet or pouch a day in each category of FMCG, which are made up of flexible multilayer material contributing to household waste.

11. Environmental Aspects and Green Packaging Opinion through Green Attitude

SEM tests the individual relationships of the proposed model, evidencing to provide less stringent assumptions on the multivariate normality of the data. While measuring the overall fitness of the model, SEM (Structural Equation Modelling) is considered more flexible parallel to other statistical methods, as it provides more information on

hypotheses building and its checking. Hence, the SEM model finds its suitability in confirming the results of both the conceptual models.

Table 5.1 Results of Structural Model 1 Hypothesis Path Coefficient p-Value Result

H1a: EP + very related to GP 0.147 0.000 Supported
 H1b: EP mediated by GA + very related to GP 0.060 0.328 Not supported

H2a: EC + very related to GP 0.018 0.685 Not supported

H2b: EC mediated by GA + very related to GP 0.313 0.000 Supported

H3a: EK + very related to GP 0.020 0.681 Not supported

H3b: EK mediated by GA + very related to GP 0.162 0.015 Supported

H4a: EI + very related to GP 0.415 0.000 Supported
 H4b: EI mediated by GA + very related to GP 0.090 0.086 Supported

H5a: GA + very related to GP 0.490 0.000 Supported
 The results of hypothesis reveal support of six hypotheses in the model. Confirmatory factor analysis and structural equation modeling performed in sequence confirms value belief norm theory on the requirement of green packaging through green attitude. Results show that environmental knowledge has no significant relationship with both the observed variables.

Environmental information strongly influences buyer's opinion on green package inclination. Green attitude as a mediating variable has a significant effect on green package inclination. The perception about environmental information by the consumers shows direct effect on green package inclination but not significant when mediated by green attitude. Only environmental information directly influences consumer opinion on green package. Therefore, it is a clear conclusion that green attitude mediates and influences consumer opinion on green package and consumer knowledge towards the environment needs requires reinforcement even though the consumers are more concerned about the environment.

Theoretical Implications

Earlier researches have shown that almost 30 percent of consumers spend up to 10 percent premium on environmentally friendly packaging. Last few years have seen a growth in concern about whatever is eco-friendly and green. This is a style that is most likely to grow, predominantly in view of the effort to educate next generation consumers on the significance of being green. And this will

translate to the implication of green packaging or environmentally friendly packaging. With mounting technological innovations in the ground of packaging, safe and appropriate packaging will be more welcomed by the market.

This goes in support to the demonstrated literature that packaging related litter (Roper 2006; Williams et al. 2008; Williams 2011) and after use solid waste of synthetic packaging materials have increased the approach towards environmental concerns. This has raised the demand of biodegradable packaging materials or bioplastics in order to meet the expectations of high quality products called green products by consumers (Rhim 2007; Iles 2013) by the corporates. Moreover, the developing urbanising world's biggest agenda is environmental protection which has become increasing necessity of the time as per literature (Tantawi & Shaughnessy 2009). This is evidenced by the study done by Moisander (2007) that environmental protection has become the long term objective of the society as it has been considered essential for sustainable development (Akenji 2014; Hung & Tseng 2010).

Likewise, it has been demonstrated in literature that constant improvements in quality of life of present and future generations rely on environmental protection along with many other factors (Pires et al. 2011). Some research studies show that consumers' purchase decision making to buy a product is significantly influenced by the environmental protection rendered by the product (Ko et al. 2013). As has been variously demonstrated in the literature, environmental consciousness, a philosophy of activists, is no more a philosophy of activists, but has become the deed of competitive scenario influencing buying behaviour of consumers. Many studies have explicitly concentrated on the association between environmental attitudes and environmental behaviours. The present study would be one kind associating environmental aspects and concepts and green packaging requirement by consumers behaving towards purchase of products packed using green packaging materials.

Hence, response of consumers with respect to the environment is influenced by environmental attitude as a learned susceptibility ascending from value systems (Rashid 2009). The green packaging initiative in the packaging industry will seek to deliver a world the better place to live

tomorrow. Actual green packaging requirement which facilitates environmental protection in order to reduce environmental effects is an indicator of

environmental involvement by the corporates. One more advantage of green packaging would be, people are nowadays willing to pay more for environmental protection (Nair & Menon 2008) and this is proven in the response by respondents.

The results on attitude towards green packaging carried out by Isa, 2013 shows that consumers does not get influenced for green purchase choices due to its green packaging attributes. But in contrast, this study proves that consumers' green attitude has a positive and significant relationship towards green packaging. The results of this study and earlier studies show that green attitude encourages the consumers to choose products packed using green packages due to the increasing awareness on the environmental issues and aspects. Consumer behaviour is rational as consumer's choice for the products is based on the quality, preferences and beliefs and moreover their preferences are based on attitudes.

12. Marketing Implications

Understanding about environmental elements exhibited in this study will have significant effect on consumer quality expectations towards protection of the environment. Further, any corporate social responsibility expectation reflects environmental protection (Green & Peloza 2014).

Besides, the present vibrant global marketplace demands sustainable initiatives to gain increased aggregate reputation leading to environmental movements by individuals and communities (Cho et al. 2013). The detrimental effects of plastic packaging enables consumers to become aware of environmental elements that have been understood by the consumers due to various environmental elements denoted in this study would create changes on attitude to choose a green package. The green attitude of consumers and involvement in green packaging by consumer product companies would imply on good relationship among them thus increasing the sustainability of marketing through so called green marketing. Green marketing to remember, insists on selling based on environmental benefits, thus incorporating modifications in production, packaging, promotion and handling. This green marketing approach by the corporates would certainly pressurize them to integrate environmental security in reducing harmful impact due to plastic packaging. Managers of the corporates can add practising eco-friendly promotions and advertisements and also encourage consumers by creating awareness about their packaging containing

biodegradable materials thus proving as an environmental friendly company. Managers should highlight in the supermarkets when their products are packed using bioplastics in order to create knowledge to the shoppers regarding green package availability for FMCG. Henceforth, environmental commitment of the corporates would be visibly proved by environment friendly packaging in the mere future, as it is an important part in environmental marketing. This going green would pursuit financial goals of an FMCG corporate along with their social commitment.

13. CONCLUSION

Lack of supply of environmental friendly packaging options in the market, lack of consumer awareness, lack of ability to differentiate between an environmentally and non-environmental friendly package alternatives, increased cost, unavailability of environmental information on the package (Rokka 2008) are driving factors of the present study. An environmental marketing strategy is never perfect, as it needs refinement and improvements from time to time (Nair & Menon 2008). This is due to the fact that no product is a complete environmental product in the true sense, because in the process of production of any environmental product natural resources are used, energy is used and wastage is created (Ottman 1993). The point here is that the environmental marketer should improve everything from resource utilization to the production process, to packaging, to transportation, to waste disposal, every time. Henceforth, green packaging finds its importance in establishment in FMCG industry in order to reduce wastes and using energy very much efficiently. Consumers are also somewhere aware about the energy savings of green packaging. Although flexible packaging ruins as the highly efficient packaging format, sustainable developments such as green additions to it continue. The aims and objectives of the study are thus met due to the detailed research work and the answers are as follows as conclusions.

- Definitions and functions of packaging in FMCG industry with reference to various authors are detailed and this objective helps to explain how important the FMCG packaging and flexible packaging are.
- Impact and integration of packaging on consumer buying behaviour patterns indicate the habits, practices and behaviours on monthly spending patterns, purchase frequencies, impulse buying, handling behaviour of products purchased,

importance of packaging in brand selection, quantity of preference for purchases, attributes and printed information on the packages along with regulatory compliances.

- Characteristics and nature of flexible packaging materials used in FMCG are analysed using multi item scales and these seem to have positive correlation among them. The characteristics and nature of flexibles along with their impacts on the environment helps us understand flexibles are unavoidable in FMCGs but their environmental impact could be reduced by adding biodegradable materials to them.
- Consumer's perception towards green marketing and environmental concepts towards going green shows that attitudes of consumers influence buyer's opinion on green packaging to a greater extent. This objective helps to prove that consumers are aware about the environmental aspects in the form of the conceptual model supporting the hypotheses.
- Green packaging and purchase of FMCG due to value created by green packaging has been studied as a model in this research and the model best fits the objective.
- Finally, global standards and regulatory frameworks along with Indian practices with reference to the application of packaging and green packaging are thoroughly analysed using various journals, official bulletins and regulations. This objective could alone be taken as a research topic in future due to the reason that huge volumes of regulations pertaining to different countries are available without analysing. This objective gives a clear picture of what is happening in the real world scenario in packaging, solid waste management and green packaging in India and abroad.

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