



GREEN MARKETING APPLICATIONS & BENEFITS DERIVED BY THE PACKING INDUSTRY IN SELECT CITIES OF MAHARASHTRA – AN EMPIRICAL STUDY

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Abstract

Green marketing has become so common for the manufacturing and service industries that it is no longer the buzz word, it is the in- word. Common applications of green marketing are mostly observed in the packing industry world wide, as they truly represent the green culture and green identity by implementing green packing. Green packing is the demand of today's business and businessmen, besides having very many applications; green marketing imparts many benefits as well to the packing organizations. The present paper looks at these applications and benefits which not only enhance the image of the packing organizations but also enables them to project their business strategy as one which stands for a cause and conservation. The paper utilizes empirical study approach for understanding the significance of green marketing for the packing industry. The study has been performed on select packing units from few cities in Maharashtra.

Key Words- Green Marketing, Green Packing, Green Positioning, Sustainable Development, Eco-Labeling Etc.

INTRODUCTION

Marketing is the practice of doing business and it involves a set of structured interactions to bring about exchange of goods, services and ideas between people. Green marketing on the other hand is much more in terms of scope and applications than what traditional marketing is, moreover green marketing has been adopted in every way that it can be by every set of interactor involved in marketing and manufacturing processes. Customers have adopted it with changing to green lifestyle, marketers have adopted it in their communication and promotions, manufacturers have adopted it in their processes with green certifications and most importantly packing material manufacturers have adopted green marketing to an extent which has changed the way of doing their business. Packing companies are divided in various groups ranging from those companies that manufacture paper based packing products, others manufacture rubber and synthetic packing products, still others manufacture wooden, glass, cement, polystyrene and so on. They are utilizing modern technology and integrated marketing processes to position and market their products to the larger community. Packing companies in Maharashtra range from Multinational companies to cottage industrial unit manufacturing jute based packing products. In this paper author has surveyed packing companies situated at Nashik, Pune and Navi Mumbai to identify to what extent these organizations utilize green marketing and its concepts for the benefit of the business and enhancement in profits. The number of Packing units surveyed for the research study is 50 and the survey involved detailed observations and recording of information given by the contact person so as to record even the minutest way in which green marketing is being utilized.

Green marketing is defined as “the process of planning and executing the marketing mix to facilitate the consumption, production, distribution, promotion, packaging and product reclamation in a manner that is sensitive or responsive to the ecological concerns – **Robert Dahlstorm(2010)**”. Another definition of green marketing defines it as “all marketing activities designed to generate and facilitate any exchanges intended to satisfy human needs and wants such that the satisfaction of these needs and wants occurs with minimal detrimental impact on the natural environment – **M.J.Polonsky¹& P.J. Rosenberger (2011)**”. Hence it can be seen that the definitions take care not only to explain the green marketing concept but also its objectives. Green marketing thus involves production, packing, distribution, consumption and post-consumption processes which aim at conservation of environment and ecological balance.

Green marketing activity and green management continues to evolve as the firms are incorporating new thinking about green changes to every business operations across the entire shop floor and beyond it. Initially the green marketing efforts were focused only on recycling of products such as cold drink bottles, printer toner cartridges, aluminium cans, plastic substances etc now they are looking to modify the production inputs which would limit the impact of the product consumption on the environment. Companies have saved millions of rupees by adopting simpler, effective and greener processes with efficient output percentage. Many new terms have been coined in the business along with the evolution of green marketing such as

¹Michael Jay Polonsky, Alfred Deakin Professor and Chair in Marketing, Deakin University – Australia

“corporate environmentalism”, “enviropreneurial marketing”² & “environment sensitive marketing”, these words though more or less similar in their meaning but have a wider scope when taken in to consideration for separate industries. India and particularly Maharashtra state has been very active in terms of adoption of greener methods on all fronts. The state government has taken several initiatives right from “Save Fuel Walk a mile” to plantation of trees and promotion & motivation for usage of green products and green gadgets. State has declared that sowing & production of organic products would be one of the core features of upcoming agricultural policy.

PACKING INDUSTRY IN MAHARASHTRA & RESEARCH METHODOLOGY

Though the research study was performed in few select cities of the state but an over all picture can be generated regarding the present status of the packing organizations in the state as the cities selected for the study consist of the highest numbers of the packing organizations, hence these companies can be taken as representative samples of entire population of packing organizations in the Maharashtra state. The packing organizations that were observed varied from the high tech, ultra modern Packing houses to Packing manufacturers, packing agents, packing material suppliers, packing contractors and small packing units. Most of the Packing units are located in the market areas, predominantly they include packing agents, packing contractors and packing suppliers. Packing manufacturers are few in the numbers if the total packing units are taken in to consideration. Packing units thus taken for the study involved –

1. Packing Manufacturers- **12**
2. Packing material suppliers – **09**
3. Packing Contractors- **18**
4. Small Packing Units- **06**
5. Packing Houses³ - **05**

Thus total number of units considered for the survey are **50**. The packing industry in Maharashtra state is still vastly in the developing stage, very few multinational companies have established their offices in the state. The industry has to fight day in and out for basic industrial requirements like water and electricity, except in Navi Mumbai where the basic requirements of water, electricity and infrastructural development was observed to be excellent. Mumbai, Pune and Nashik account for almost 45% of total packing units existing in Maharashtra. Majority of the packing units are medium to small scale companies having almost fixed turnovers with very few market segments to add to their existing portfolio. They specialize in a particular kind of Packing services and hence have limited customer segments. For eg. Wooden Pallets and Corrugated Card board boxes are the highest selling packing products; hence companies cater to all customers demanding these products only as they either do not need to manufacture other products or they don't have enough seed capital to expand their operations. The extensive list of Packing products is as under-

S.No	Packing Products	Raw Material Used
1.	Crates	Wooden, Metallic
2.	Cases	Card Board, Wooden
3.	Pallets	Wooden, Metallic
4.	Foils	Aluminium, Plastic
5.	Strips	Aluminium, Plastic, Rubber
6.	Pouches & Sachets	Plastic, HDPE ⁴
7.	Containers	Metallic, Plastic
8.	Packets	Plastic, Rubber,
9.	Boxes	Wooden, Metallic, Card board
10.	Bottles	Glass, Metallic, Plastic
11.	Gunny Bags & Sacks	Cotton, Jute, Leather
12.	Wraps	Plastic, Rubber, Metallic
13.	Sheets & Straps	Cotton, Jute, Leather
14.	Cartons	Wooden, Plastic, PVC
15.	Drums	Metallic, Plastic, PVC

²Marketing done with the integrated objective of business enhancement with environmental conservation

³Packing Houses perform integrated functions of manufacturing, assembly and transportation

⁴High Density Polyethylene material

16.	Cylinders	Metallic, PVC
17.	Platforms	Wooden, HDPE
18.	Tetrapacks	Card board
19.	Jars	Metallic, Plastic, Glass
20.	Packing Tapes	HDPE, Plastic
21.	Platforms	Wooden, Metallic
22.	Packing accessories	Paper, Rubber, HDPE, PVC, Plastic
23.	Others- mud pots, crystal glass products, designer packing products etc	Earthenware, Crystalware, HDPE, Plastic moulding extrusions, dried agricultural outputs etc.
<i>Source –Indian Institute of Packaging, Mumbai</i>		

Majority of the above products need wood, glass, cotton, plastic, jute and rubber as the raw material. Currently approximately 59% of the total packing products manufactured are synthetic and have chemical and toxic raw materials that is inorganic in nature and acts as a pollutant which includes rubber, rubber by-products, aluminium, plastic, polyethylene and polystyrene which simply means that remaining 41% of the products have to be organic and recyclable but that is not the case, as it is observed that even wooden and paper products are infused with plastic and rubber fibres to increase their shelf life and strength, this simply highlights the fact that many packing products which ideally look organic and green are actually Non green and synthetic; which further implies that many companies are involved in **green washing⁵.i.e providing false green claims with respect to their products.** It has also been observed that most of the packing companies are in requirement of some sort of government grant or subsidies that can enable them to establish themselves and cater to their markets more effectively with wider varieties of products. To get a clear picture we have to understand the packing organizations in greater depth. These organizations have a specialized & select markets to which they service, most of them are third party contractors, they have limited capital resources, they undertake green marketing as a means of cost cutting measure, the packing manufacturers produce selected 2-4 products, they have adopted green marketing but superficially not in the core sense of business. The Indian packaging industry is expected to become the fourth-largest packaging market in the world, with revenues of US\$43.7 billion in 2016. Flexible plastic packaging was the fastest-growing packaging category in India, achieving a CAGR of 16.6% during the review period with Maharashtra being the most industry intensive state. (Source-www.researchandmarkets.com/reports/2000951). The above figures recommend that research studies are apt to be conducted on this sector.

In the present study data has been collected through survey, observation, discussion and questionnaire. For data analysis Chi square Tests and tests of association of variables have been utilized to arrive at conclusions.

OBJECTIVES

1. To study green marketing practices & applications prevalent in Packing Organizations in select cities of Maharashtra state.
2. To identify if there exists any association between implementation of green packing & establishment of green image of packing units in Maharashtra.
3. To identify benefits derived by Packing Organizations through green marketing practices, if any.

Hypothesis

H1- Packing Industry in Maharashtra is implementing Packing related green marketing applications & practices

H2= There is association between implementation of green packing and establishment of green image of Packing units in Maharashtra.

H3= Implementation of green marketing does not result in any benefit whatsoever for the Packing units in Maharashtra.

⁵Providing and promoting misleading green claims about non-green product or service

Data Tabulation – Green Marketing applications & practices in the Packing Industry –

Table No.1 : Showing the opinion of the respondents about the implementation of green marketing practices:

Sr No.	Green Marketing Practices	Yes	No	Total
A) Packing Related Green Marketing Practices				
1	Eco-friendly Product (Recyclable, Reusable, Compostable , Biodegradable &	27	23	50
2	Eco -friendly raw material	25	25	50
3	Eco -friendly Printing (Eco-friendly Inks)	21	29	50
4	Eco-friendly Packing Material	33	17	50
5	No harm to natural habitat & endangered species (during Pre-mfg., mfg. & post-	10	40	50
6	Eco Certified /Eco-friendly Manufacturing Process (Partial Certification)	15	35	50
7	Eco-labelling, Recycle Logo, Green Logo	28	22	50
8	By-product Management	19	31	50
9	Eco-friendly Product Use & Consumption	10	40	50
10	Conscious Efforts towards Consumer health & environment safety	11	39	50
B) General Green Marketing Practices				
11	Use of renewable energy & renewable resource, Energy Efficient Lighting	35	15	50
12	Eco-friendly waste disposal methods	31	19	50
13	Green raw materials/contents/ building material/green textiles	29	21	50
14	Non-renewable resource conservation	25	25	50
15	Employee Education / Community involvement towards environmental cause	11	39	50
16	Green Promotion, green pricing, green communication (to customers & others)	32	18	50
17	Use of Non-Synthetic /Non-Toxic / Non-Chemical Ingredients	30	20	50
18	Water Conservation and Recycling	40	10	50
19	Implementation of Environment Policy/Commitment	10	40	50
20	Controlled Carbon Emission ⁶ / Renewable Energy Certificates	11	39	50
Total		453	547	1000

Table No. 2: Table showing the benefits due to the implementation of green marketing for Packing Industry in Maharashtra.

Sr No.	Benefits of Green Marketing	Yes	No	Total
1	Enhanced Product identity & positioning	28	22	50
2	Enhanced Product image	29	21	50
3	Enhanced customer perception & belief	18	32	50
4	Increase in Sales	21	29	50
5	Enhanced perception of business associates	23	27	50
6	Increased Investor belief	13	37	50
7	Positive message to customers by standing for a social & environmental cause	24	26	50
8	Enhanced Company Image (Green Company)	31	19	50
9	Recognition & Support by Govt. , Environment Protection Agencies & NGO's etc	22	28	50
Total		209	241	450

⁶Carbon Trading Bonds are issued to Organizations & Countries with reduced carbon emission

Hypothesis Testing

- Ha1- Packing Industry in Maharashtra is implementing Packing related green marketing practices

Sr. No.	Observed Frequency (O)	Expected Frequency (E)	(O)-(E)	{{(O)-(E)}^2	$\frac{{(O)-(E)}^2}{E}$
1	27	22.65	4.35	18.92	0.835
2	25	22.65	2.35	5.52	0.243
3	21	22.65	-1.65	2.72	0.120
4	33	22.65	10.35	107.12	4.729
5	10	22.65	-12.65	160.02	7.064
6	15	22.65	-7.65	58.52	2.583
7	28	22.65	5.35	28.62	1.263
8	19	22.65	-3.65	13.32	0.588
9	10	22.65	-12.65	160.02	7.064
10	11	22.65	-11.65	135.72	5.992
11	35	22.65	12.35	152.52	6.733
12	31	22.65	8.35	69.72	3.078
13	29	22.65	6.35	40.32	1.780
14	25	22.65	2.35	5.52	0.243
15	11	22.65	-11.65	135.72	5.992
16	32	22.65	9.35	87.42	3.859
17	30	22.65	7.35	54.02	2.384
18	40	22.65	17.35	301.02	13.290
19	10	22.65	-12.65	160.02	7.064
20	11	22.65	-11.65	135.72	5.992
Total	453	453	0	1832.5	80.896

= 0.05 (Level of Significance)

df = (No. of Rows-1) * (No. of Columns – 1) = (20-1)*(4-1)= 57

Table Value at 5% level of significance is **41.76** .

As Table Value < Calculated Value of Chi square i.e 41.76 < 80.896.

Hence we reject the Null Hypothesis and accept the alternate hypothesis that Packing Industry in Maharashtra is implementing packing related green marketing practices.

- Ha2= There is association between implementation of green packing and establishment of green image of Packing units in Maharashtra.

Correlation		
		GreenLogo_Impart_GreenImg
Enhancing_ProdQual_Comp anyImg	Correlation Coefficient	.090*
	Sig. (2-tailed)	.045
	N	50
*. Correlation is significant at the 0.05 level (2-tailed).		

Since, p (i.e. 0.045) < 0.05, there is evidence of strong positive correlation between implementation of green packing and establishment of green image of Packing units in Maharashtra. **Spearman's correlation coefficient is 0.090 and this is statistically significant (P = 0.045)**. Thus, null hypothesis is rejected and alternative hypothesis is accepted. Therefore, from the result researcher can analyze that there is association between implementation of green packing and establishment of green image of packing units in Maharashtra.

- Ha3= Implementation of green marketing does not results in any benefit whatsoever for the packing units in Maharashtra.

Sr. No.	Observed Frequency (O)	Expected Frequency (E)	(O)-(E)	{(O)-(E)}^2	$\frac{\{(O)-(E)\}^2}{E}$
1	28	23.22	4.78	22.84	0.983
2	29	23.22	5.78	33.40	1.438
3	18	23.22	-5.22	27.24	1.173
4	21	23.22	-2.22	4.92	0.211
5	23	23.22	-0.22	0.04	0.001
6	13	23.22	-10.22	104.44	4.497
7	24	23.22	0.78	0.60	0.025
8	31	23.22	7.78	60.52	2.606
9	22	23.22	-1.22	1.48	0.063
Total	209	209	0.02	255.48	10.997

= 0.05 (Level of Significance

df = (No. of Rows-1) * (No. of Columns – 1) = (9-1)*(5-1)= 32

Table Value at 5 % level of significance is **20.49**

Since Table Value > Calculated Value of Chi square i.e **20.49 > 10.99** hence we reject the alternate hypothesis and accept the Null Hypothesis that implementation of green marketing results in multiple benefits for the packing organizations.

OBSERVATIONS ON GREEN MARKETING PRACTICES OF PACKING UNITS IN MAHARASHTRA-

1. Awareness of Green Marketing practices seems to be very high in Maharashtra state as it has emerged from latest Secondary data resources collected by the researcher.
2. .Green Packing is a Core area with tremendous potential to lead towards reduction in landfill pollution as also it can increase Organizational profits and product quality if implemented appropriately.
3. No serious attention has been paid towards tremendous opportunities that can be offered by improvising upon traditional packaging and custom designing of Green Packing , which is now mandatory for majority of business export.
4. .Green Marketing is holistic in nature and includes almost every business operation that can be converted in to a green operation but the study tries to focus only on one core business area i.ePackaging , where there is tremendous scope of going green , also the concerned sub areas such as Export Packaging, Packaging Norms, processes if converted to green processes would have far and wide impact on Organization, Environment and also on development which would be sustainable in nature.
5. .Despite of extreme environmental deterioration , increased pollution , emissions and increased wastage of natural resources , Indian Packers and esp. Packaging Organizations in Maharashtra have not taken up environmental concerns seriously , the study would assist directing their attention towards such eminent issue .
6. .Eco-Friendly , quality products are the need of the day , inspite of having abundant natural resources, latest technology and huge number of trained manpower , most of the companies in Maharashtra are not able to produce such quality packaging products , the study would enable the researcher to understand reasons behind this situation.
7. Green Marketing includes practices such as Environment Audit , Environmental Certifications, Eco-labeling, Recycling , Clean Development Management etc , the study would generate a clear picture as to how many Organizations are really following above practices thereby contributing to sustainable development and clean environment Most of the packaging organizations heavily rely on traditional packaging made up of Corrugated boxes, paper , card boards, glass, metal, rubber, plastics , thermocol (mostly for inner packaging),polyethylene, styrene, foams, flexible plastic packaging , PVC materials, wood, wooden dust , rexins, leather etc .

8. .Most of the concerned individuals , whether owner or employee of packing firms are confused about exact nature of green marketing and green practices and as such they often consider non-green packaging material as eco-friendly packaging.
9. ix.Most of the packing organizations have been doing bits and pieces of green marketing but on a largely such practices are almost negligible and irrelevant with respect to their contribution towards environment.
10. .Most importantly it was seen that though majority of packaging organizations are interested and willing to adapt and implement green marketing and green packing practices , they are apprehensive about the costs and expenditure that will be incurred and also whether such green changes will lead to any positive output
11. Awareness of green marketing is very high in Packing industry in Maharashtra state.
12. Packing organizations still heavily rely on use of traditional packaging materials, methods and technologies.
13. Owners , associates and employees of packing organizations, although know what are green marketing practices but do not understand its exact nature and boundaries and as such often consider non-green practices as being green , they need to be guided about exact nature and concept of green marketing and green packaging .
14. Awareness about green substitutes of packing is very low and also very less consideration is being given to the impact that green packing would have on the product , consumer and company.
15. Majority of Packing organizations observed are willing to adapt and implement green marketing & packaging practices, which they know would be mandatory in future for survival and growth , but they are apprehensive about costs & expenditure arising thereof and actual benefits from the exercise

CONCLUSIONS

It seems that the study of the packing units in select cities of Maharashtra state which were taken as the representative samples of the entire packing organizations in Maharashtra was an eye opener in many ways. Let us consider the highlights that are important in terms of concluding the study-

1. Most of the packing companies in Maharashtra are implementing & utilizing green marketing .
2. The most popular green marketing practices & applications include green products, green raw material, green packing, eco-labeling, water recycling, efforts for environmental conservation and greening of marketing mix.
3. Though most of the companies are implementing green marketing , but very few organizations have become **Core-green**.i.e adoption of green marketing as a core business strategy. Most of them use green marketing either just for positioning or eye catchy promotion of products.
4. It was repeatedly observed that these packing companies are in dire need of financial subsidies or assistance which would further motivate them to go green.
5. Green packing done by cotton, jute, agricultural outputs and components, paper, wood certainly impart green image to the packing organization, it is fostered by the green logo on the product, as proven by the second hypothesis which is accepted.
6. Impartment of green image to the packing company, enhanced identity of the product (being green) and easy product positioning are the top three benefits derived by the packing company, as proven by the third hypothesis which is accepted.

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