

Emerging Processed and Packaged Food Market in India: Analysis of Consumer's Preference on Packaging Attributes

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Abstract - Packaging plays a crucial role in marketing and distribution of products. Products packaging can be a decisive concern in a consumer's purchase decision at the point of sale, as it can impact the consumer's mindset towards a product by its exposure. Packaging allows to expand the width of exposure for a product by attracting consumer's attention, positioning the product in the consumer's mind, transferring valuable product information and differentiating the product from others. Demand in the packaging industry in India is expected to increase due to the large and growing middle class, growth in organized retail in the country and rapid growth of exports, which requires superior packaging standards for the international market. Therefore, understanding how packaging attributes, like, convenience, size, shape, color, and design, impact consumer realization, evaluation, and behavior towards a product is of theoretical and managerial importance. In this paper attempt has been made to explore and analyse consumer perceptions and preferences towards packaging of food products.

Keywords - Packaging, Packaging Attributes, Packaged Food

I. INTRODUCTION

Packaging is a key element of value addition in processed food industry. It serves an important role in marketing of processed food products. Protection of the quality and freshness of the product with convenience and safety are the primary function of food packaging but when displayed in the retail shelf, it also provide and boost the merchandising value for the product. Packaging therefore, is being seen holistically as a system of improving the product life as well as enhancing the brand appeal. An attractive looking packaging can motivate consumers to try out the product by generating curiosity in their minds. We can also say that packaging act and play the role of a silent salesman [1]. Historically, packaging's main function, or added-value, was to contain the food. Initially primary food packages were burlap bags, barrels and glass jars. After that preservation became another value added by packaging. But times are more complex now. All consumers assume that a package is going to contain and preserve food. So, today's modern food package must do more. The value-added functions of packaging for today's consumer include brand identification, advertising at the point-of-purchase, product transport, at-home storage and task assistance [2]. Further as

discussed by Dobson & Yadav [3] there are three dimensions of packaging communication consumer dimension, competition dimension and economic dimension.

Packaging has become an integral part of the product today and it is an indispensable component of modern lifestyle [4]. Convenience, functionality and indulgence are the key trends, fostering growth in developed packaged food markets. The most successful new product developments suggest that due time-starved modern urban life and the unavoidable limitations on food preparation and shopping time that distress consumers, there is an increasing demand for convenient, portable, easy-to-prepare meal solutions [5]. The structural changes in the market environment (income, education, awareness, technology, competition) have rendered packaging from being merely a residual decision in the beginning of the twentieth century to an important decision today and packaging decisions have moved relatively higher in the hierarchy of importance. The traditional marketing mix which constituted four set of decisions viz., product, price, physical decision and promotion is extended with the inclusion of packaging. Oligopolistic structure of the market, impulsive shopping, self-service stores, effective communication, customer convenience, legal requirement, sales promotion, packaging and product life cycle are some major factors which necessitated increased emphasis on packaging decisions in the overall competitive strategy of the modern competitive firm [6]. Considering, India as an emerging processed and packaged food market, the analysis of consumer's preference on packaging attributes become important. In this paper attempt has been made to analyse the consumer's attitude towards packaging and the importance of the functional characteristics of packaging in their purchasing decisions.

II. DATA & METHODOLOGY

This study is based on a consumer survey carried out using a structured questionnaire covering four three of Western Uttarpradesh, namely, Aligarh, Saharanpur and Moradabad. A total of 402 households were interviewed personally to know their perception on food packaging. The consumer's responses related to preference on various attributes of food packaging on 5 point Likert-type scale (strongly disagree to strongly agree) were recorded in order to analyse the level of importance given to these attributes. The collected data was digitized in SPSS spreadsheet and simple statistical

analysis was carried out. Factor analysis was conducted to identify the underlying dimensions among a set of food packaging attributes. The principal Component Analysis was done using varimax rotation criterion. The Kaiser criterion was used to retain only factors with eigen values greater than 1.

III. RESPONSE ON PACKAGING ATTRIBUTES

In the households surveyed respondents were asked to show their level of agreement or disagreement with a number of statements related to the advantages and disadvantages of food packaging to identify the key packaging attributes as perceived by them. The rank scores for packaging attributes were calculated by adding the multiplications of likert-coefficients with respective number of responses. Rank-coefficients for each attribute were also calculated by

dividing rank scores by total number of responses. In table 1 the overall ranking of the statements on advantages of packaging has been done on the basis of total rank scores. Product protection, convenience, ease in transport, ease in handling and ease in storage are the top five ranked functions of packaging respectively as perceived by respondents in the region. These are followed by packaging makes sure things are not tampered with, packaging makes things attractive to buy, packaging makes things more hygienic, packaging extends the shelf life of perishable goods, packaging gives pleasant appearance to products, packaging makes ease for labelling, packaging makes things available out of season and packaging saves product waste according to their ranks respectively (Table 1).

Table 1: Attitude towards Advantages of Packaging

Packaging Attributes	Rank score & Coeff.	Aligarh	Moradabad	Saharanpur	Total	Over all Rank
Packaging is there to protect the product	Rank Score	170	182	178	530	1
	Rank Coeff.	1.27	1.36	1.33	1.32	
Packaging makes sure things are not tampered with	Rank Score	130	101	111	342	6
	Rank Coeff.	0.97	0.75	0.83	0.85	
Packaging makes things more hygienic	Rank Score	115	85	94	294	8
	Rank Coeff.	0.86	0.63	0.70	0.73	
Packaging makes things more convenient	Rank Score	184	74	112	370	2
	Rank Coeff.	1.37	0.55	0.84	0.92	
Packaging makes ease in storage	Rank Score	123	104	135	362	5
	Rank Coeff.	0.92	0.78	1.01	0.90	
Packaging makes ease for labeling	Rank Score	86	48	72	206	11
	Rank Coeff.	0.64	0.54	0.54	0.51	
Packaging makes things attractive to buy	Rank Score	142	94	87	323	7
	Rank Coeff.	1.06	0.70	0.65	0.80	
Packaging makes things easy to handle	Rank Score	123	133	107	363	4
	Rank Coeff.	0.92	0.99	0.80	0.90	
Packaging gives pleasant appearance to products	Rank Score	94	82	67	243	10
	Rank Coeff.	0.70	0.61	0.50	0.60	
Packaging makes things available out of season	Rank Score	75	46	65	186	12
	Rank Coeff.	0.56	0.34	0.49	0.46	
Packaging saves product waste	Rank Score	74	50	18	142	13
	Rank Coeff.	0.55	0.37	0.13	0.35	
Packaging makes ease in transportation	Rank Score	130	140	99	369	3
	Rank Coeff.	0.97	1.04	0.74	0.92	
Packaging extends the shelf life of perishable goods	Rank Score	97	84	95	276	9
	Rank Coeff.	0.72	0.63	0.71	0.69	

(strongly disagree= -2, disagree= -1, neutral= 0, agree= 1, strongly agree= 2) Source: Field Survey

The analysis of overall rank coefficients for various attributes of packaging suggest that respondents agree with almost all statements except two (Packaging makes things available out of season and Packaging saves product waste) for which they are neutral but there is no strong agreement for any statement as the coefficient is less than 2 for all the packaging attributes. While individual rank coefficients of three districts suggests that the responses are homogenous for all packaging attributes except packaging makes things more convenient, packaging makes things attractive to buy, packaging makes things available out of season and packaging saves product waste. The response for these packaging attributes is stronger from respondents of Aligarh as compared to respondents from Moradabad and Saharanpur.

Analysing the above data it can be inferred that respondents in the region are more concerned about the convenience function of the packaging. Four out of five top ranked functions are related to convenience. Respondents agreed that the packaging provide convenience in the form that it makes things more convenient, it makes ease in transportation, it makes things easy to handle and it makes

ease in storage. Product protection and hygiene are other functions ranked after that.

IV. FACTOR ANALYSIS

In order to broadly categorise the above discussed 13 packaging attributes factor analysis has been done (Table 2). Based on factor analysis, three sets of components/ factors emerged, which explains the 56.167 percent of variance. The total variance explained by factor 1 is 21.802 percent primarily comprising of product appearance and quality attributes of food packaging as indicated by factor loading values. Factor 2 explains 17.894 percent variation and load high on factors related to product preservation. Similarly, factor 3 explains variation of 16.470 percent and correlates high on factors related to convenience in terms of labelling and transportation. This analysis clearly categorizes the packaging attributes of value added food products based on consumer's perspective in to three major categories namely appearance, preservation and convenience, which can be used by food processors and packagers for making appropriate decisions on packaging issues.

Table 2: Factor Analysis to Identify Packaging Attributes

Factors	Factor 1	Factor 2	Factor 3
Packaging gives pleasant appearance to products	0.850	0.107	0.117
Packaging makes sure things are not tampered with	0.655	-0.105	0.388
Packaging makes things more hygienic	0.650	0.212	0.210
Packaging makes things easy to handle	0.643	0.366	0.318
Packaging makes things attractive to buy	0.558	0.433	0.114
Packaging saves product waste	-0.180	0.717	0.086
Packaging makes ease in storage	0.288	0.643	0.357
Packaging makes things available out of season	0.368	0.592	-0.112
Packaging makes things more convenient	0.180	0.529	0.440
Packaging extends the shelf life of perishable goods	0.254	0.528	0.034
Packaging makes ease in transportation	0.142	0.203	0.815
Packaging is there to protect the product	0.209	-0.059	0.793
Packaging makes ease for labeling	0.352	0.234	0.430
Total Variance Explained (%)	21.802	17.894	16.470
Cumulative Variance Explained (%)	21.802	39.696	56.167

Source: Field Survey

V. RESPONSE ON DISADVANTAGES OF PACKAGING

The ranking of consumer's responses on their level of agreement and disagreement on disadvantages of food packaging has been done in table 3. Cost, environmental issues and weight comes out to be the top three ranked

disadvantages of packaging respectively as perceived by respondents in the region. These are followed by packaging adds volume/size to the product, packaging makes it more difficult to get in to a product than really is required and packaging is wasteful and has to be disposed off according to their ranks respectively.

Table 3: Attitude towards Disadvantages of Packaging

Packaging Attributes	Rank score & Coeff.	Aligarh	Moradabad	Saharanpur	Total	Over all Rank
Packaging adds to the cost of the product	Rank Score	121	128	132	381	1
	Rank Coeff.	0.90	0.96	0.99	0.95	
Packaging adds volume/size to the product	Rank Score	41	43	9	93	4
	Rank Coeff.	0.31	0.32	0.07	0.23	
Packaging adds weight to the product	Rank Score	53	41	25	119	3
	Rank Coeff.	0.40	0.31	0.19	0.30	
Packaging is wasteful and has to be disposed off	Rank Score	-5	-31	-76	-112	6
	Rank Coeff.	-0.04	-0.23	-0.57	-0.28	
Packaging waste material is dangerous for environment	Rank Score	114	99	123	336	2
	Rank Coeff.	0.85	0.74	0.92	0.84	
Packaging makes it more difficult to get in to a product than really is required	Rank Score	22	-5	16	33	5
	Rank Coeff.	0.16	-0.04	0.12	0.08	

(strongly disagree= -2, disagree= -1, neutral= 0, agree= 1, strongly agree= 2)

Source: Field Survey

The analysis of overall rank coefficients for various attributes of packaging suggest that respondents are neutral for almost all statements except two (Packaging adds to the cost of the product and Packaging waste material is dangerous for environment) for which they agree but there is no strong agreement for any statement as the coefficient is less than 2 for all the packaging attributes. Analysis of individual coefficients for three districts suggests that the responses are homogenous for all attributes except one (packaging is wasteful and has to be disposed off). Respondents from Saharanpur disagree for this attribute while respondents from Aligarh and Moradabad agree.

VI. CONCLUSION

To remain in the competition it is very necessary for food processing firms to give packaging proper attention in their marketing mix. It is extremely important to understand the consumer's sensitivities and priorities to design the packaging for food products. In the above analysis it comes out that appearance, preservation and convenience are three major functional attributes of packaging as perceived by the consumers in the region. It was also observed that the respondents were persuaded by attractive packaging to try a product for first time. It implies that packaging plays an important role in impulse buying and creates value by helping consumer's decision making process. Therefore to draw attention of the consumer at first sight the product should be tactically packaged in a packaging design which

is outstanding and appealing to the consumer. Further to compete in the market in which there are numerous food products to choose from together with consumer's having limited time to shop it is critical for the processed food companies to pack their product in a way which can attract more attention than competitive products and communicate the intended message regarding the product it contains to passing consumers. The statement that now packaging is an integral part of the product comes true as it has been found that the respondents use to store the food items in their kitchen in the original packing in which they buy it. It is also common in the house holds that they do not consume the whole product at once. So the packaging should be like that it save the product waste and easy to store.

Though respondents in the region are very price conscious and they agree that packaging adds cost to the product but are ready to pay extra cost for packaged food if satisfied that they are getting value equal to that extra cost. So the packaging should be like that which adds minimum cost to the product or convince the consumer that there is a value added for extra cost. The packaging should be environment friendly. The respondents are of the opinion that packaging which is detrimental for the environment may also be not good for the product which they contain. Other important factor which the respondents ranked highly is the weight problem. So the packaging should be light weight and add minimum weight to the product. These outcomes about packaging will help the management and policy makers of

food companies in designing appropriate strategies for improving the packaging of products and satisfying consumers in the best possible way.

VII. REFERENCES

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