Impact of Packaging on Consumers' Buying Behaviour: A Case Study of Mother Dairy, Kolkata

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ABSTRACT

This study seeks to examine the impact and role of product packaging on the buying behaviour of consumers for the dairy of products of government owned Mother Dairy. It has been observed that packaging elements such as color, background image, wrapper design and innovative ideas, have significant impact on consumers' buying behaviour. The study also makes the conclusion that the visual appeal is more important than the qualitative aspect of packaging in the study area. In the case of Mother Dairy, the quality of materials used in packaging and the information printed on packaging of the products, do not have any significant bearings on the consumers.

Keyword: Packaging, consumer behaviour, sales promotion.

Introduction

In the fiercely competitive market, aesthetic elements of packaging have occupied an important and unique position in delivering the product/service to the end users. It has become important tool of differencing the product/service from the similar kinds of products/ services available in the market (Wells, 2007). Rundh (Rundh, 2005) has clearly observed that the packaging attracts consumers' attention to particular brand, packaging enhances the product image and influences consumers' perception about the product or service. The appearance of the package is believed to have a strong impact on influencing consumers' purchase decision than advertising (Mutsikiwa and Marumbwa, 2013). Givee (Givee, 2011) have established that an appealing and successful packaging design with relevant design, pictures and decorations is more successful in attracting consumers. However, an obvious question arises that does this phenomenon applies to all categories of product and services, viz. daily necessities, luxuries commodities, cosmetics products, food items etc. Moreover, though there is abundance of literature on this particular issue in general, there is dearth of quality literature on the issue of role of packaging particularly in the dairy products on the consumers' purchasing decisions. Under this backdrop, this paper tries to examine the following specific objectives:

i. to determine the effect of package colour on consumers' purchase decision;

ii. to examine the effect of background image used in packaging on consumers' purchase decision;

iii. to examine the impact of packaging materials on the consumers' purchase decision;

iv. to examine the influence of products package typography on consumers' purchase decision; and

v. to examine the impact of information printed on the packaging on consumers' purchase decision.

The present study is planned into five sections. The After the introduction in section I, section II deals with the literature survey of the research problem. Data and methodological aspects of the study are outlined in section III. Section IV consists of results and discussion of the study, while the final section V summarises the conclusion and policy prescription emanating from the overall analysis.

REVIEW OF LITERATURE

There are numerous literatures available on this particular issue of impact of packaging on consumer purchase decisions. (Kuvykaite, 2001), (Underwood, 2001), (Speece, 2007), (Wells, 2007), (Marumbwa, 2013), (Givee, 2011) to name a few of them. (R.L. Underwood, 2001), (Speece, 2007) have clearly established that packaging has great impact on product marketing as 2004), works as a tool for differentiation, i.e. helps consumers to choose the product from wide range of similar products and thus, stimulates customers buying behaviour.

Garber (L.L. Garber, 2000) has observed that though the package design is an integrated element of the promotional mix, it is also an important carrier of brand equity in the store.

Packaging communicates brand personality through many elements, including a combination of brand logo, colours, fonts, package materials, pictorials, product descriptions, shapes and other elements that provide rich brand associations (Underwood, 2003). A study performed by CM Research (cited in Gautier, 1996, p.37) demonstrated that consumers 'did not consciously believe they were purchasing products because of the packaging alone… There are strong indicators, however, of the subconscious influence of the packaging on the purchasing processes.

While some research was conducted by Wisenblitz (Wisenblitz, 1999) on colour choices with packaging in fast moving consumer goods, they also highlighted the need for more research into colour as a stimulus when they stated that 'colour research in the field of marketing still appears to be in its infancy' (p. 86). Underwood (R.L. Underwood, 2001) highlighted the importance of both colour and packaging as a brand communication vehicle.

The focus of colour as a stimulus is related to its ability to aid companies who are looking for ways to improve their sales and obtain a dominant market share (Kotler, et al. 1998). While some colours have the ability to make goods stand out from their competitors among the clutter of the goods and promotional material at the point of purchase (Heath, 1997, and Key, 2000) other colours do not have this effect (Key, 2000).

DATA AND METHODOLOGY

The present study is purely based on the primary data collected through the structured questionnaire from the respondents. In total 150 filled questionnaires were collected from the districts of Howrah, Hooghly and Burdwan of the state of West Bengal during the months of June-July, 2015. However, after scrutiny of the data, 18 filled questionnaires were not included in the final study and thus, total number of observations reduces to 132.

The main theoretical framework of this study focuses on the finding of relationship between dependent variable (consumer's decision about buying the dairy products) and independent variables (different elements of packaging such as packaging colour, background image etc.). It is hypothesised that consumer's purchasing decision of dairy products is a function of the different packaging elements. These set of packaging elements either jointly or individually may influence the consumer's purchase decision. Accordingly, the following theoretical framework is sought for.

$$\text{Consumers' buying behaviour} = \begin{cases} \textit{packaging colour,} \\ \textit{background image used in packaging,} \\ \textit{quality of packaging materials,} \\ \textit{font style \& size in packaging,} \\ \textit{wrapper desing,} \\ \textit{packaging information} \end{cases}$$

The associations between the dependent variable and independent variable have been analysed individually with the applications of Chi-square test. Accordingly, the following set of hypotheses have been framed keeping in mind the objectives of the study.

Hypothesis I:

H_0 : *there is no relationship between buying behaviour and packaging colour*
against
H_1 : *here is relationship between buying behaviour and packaing colour*

Hypothesis II:

H_0 : *there is no relationship between buying behaviour and background image of packing*
against
H_1 : *there is relationship between buying behaviour and background image of packing*

Hypothesis III:

H_0 : *there is no relationship between buying behaviour and quality of packaging*

against

H_1 : *here is relationship between buying behaviour and quality of packaging*

Hypothesis IV:

H_0 : *there is no relationship between buying behaviour and font style of* information

against

H_1 : *there is relationship between buying behaviour and fontstyle of* information

Hypothesis V:

H_0 : *there is no relationship between buying behaviour and wrapper design*

against

H_1 : *there is relationship between buying behaviour and wrapper design*

Hypothesis VI:

H_0 : *there is no relationship between buying behaviour and* printed information *on the pack*

against

H_1 : *there is relationship between buying behaviour and* printed information *on the pack*

For the entire hypothesis, the dependent variable is the consumer's purchasing behaviour. The dependent variables are the different elements of packaging viz. Packaging colour, background image used in packaging, quality of packaging materials etc. Each of above mentioned dependent variables was measured by using the 5 points itemized rating type scale ranging from (1) strongly disagree to (5) strongly agree [Likert's Scale].

RESULTS AND DISCUSSION

Demographic Characteristics of the Respondents: The sex distribution shows that 69 percent of the respondents were male, while 31 percent were female. The age distribution shows that only 2 percent of the surveyed population belongs to the age group of below 18 years, 37 percent belongs to the age group of 19-35 years, 31 percent belongs to the age group 36-50 years, 18 percent belongs to the age group of 51-65 years while the age group 66 years and above captures the remaining 12 percent of the sample observations. With respect to occupational standard of the respondents, 43 percent of total respondents were service holders, 27 percent were business and the remaining 30 percent were from others occupation

(students, housewife, etc.). As far as the income levels of the respondents are concerned, it has observed that 44 percent belongs to lowest income category (Less than Rs. 10000 per month). Each of the income categories, Rs. 10000-20000 and Rs. 20000-30000, constitutes 20 percent of the surveyed population while the highest income category (income more than Rs. 30000) constitutes 16 percent of the surveyed population.

Again if we look at the consumption frequency of the surveyed population, it has been observed that 72 percent of them are daily consumers, 8 percent of them consumer milk on alternative day. Another 14 percent of the population is weekly consumers of milk and the rest 6 percent consume milk for other purposes.

Reliability checking of the analysis: Any empirical research work should qualify the reliability analysis for checking of the internal consistency of the questionnaire and reliability of the primary data. As such the Cronbah alpha statistic is found to be 0.57 which is quite acceptable.

T-test for Testing the Perception of Packaging in Mother Dairy's Products:

Firstly, an attempt has been made to assess the customer perception about the packaging of products of Mother Dairy, Kolkata. For this, the respondents have been asked to rate the different products of Mother Dairy on a 5-point Likert scale. The greater the value of the rating, the more is the satisfaction level. Now on a 5-point Likert scale, the median value is 3. So, if a particular consumer rates his satisfaction level 3 or more, it implies that he is satisfied with the packaging of Mother Dairy's products. The following table shows the mean satisfaction levels of different aspects of packaging in Mother Dairy.

It is evident from the results that customers of Mother Dairy is, in general, satisfied in packaging colour, 'background image' of packaging, quality of packaging materials, wrapper design, printed information, packaging innovation. However, they are not satisfied with the typographic style of packaging as the calculated t-value is much higher than the critical t-value and the corresponding p-value is smaller than the level of significance (0.05).

Table 1: Tests for the perception of Packaging Mother Dairy's products

Packaging elements	Mean	t-value	df	Sig. level (p-value)
Packaging colour	3.01	2.61	131	0.000
Background image	3.09	1.007	131	0.158
Packaging materials	4.01	10.64	131	0.000
Typographic	2.92	0.928	131	0.822
Wrapper design	3.40	4.178	131	0.000
Printed information	3.84	9.494	131	0.000
Packaging innovation	3.26	2.736	131	0.000

Source: Authors' calculation based on primary data.

Chi-square test for testing the association between Consumer buying behaviour and packaging elements: Having examined the customers' demographic profiles and their perception about the different aspects of product packaging, we are in a position to see the degree of association between consumer buying behaviour and packaging elements of products of Mother Dairy, Kolkata. For this purpose, we have used Chi-square test of association. The results are shown in table 2.

Table 2: Chi-square test of association between packaging elements and consumers' buying behaviour.

Variables examined for association	χ^2 - test statistic	Critical value of χ^2	Remarks
Packaging colour and buying behaviour	44.34 (16)	26.29	Null hypothesis is rejected and there is association
background image and buying behaviour	28.76 (16)	26.29	Null hypothesis is rejected and there is association
Packaging materials and buying behaviour	17.59 (16)	26.29	Null hypothesis is accepted and there is association
Font style and buying behaviour	14.97 (16)	26.29	Null hypothesis is accepted and there is association
Wrapper design and buying behaviour	26.29 (12)	21.09	Null hypothesis is rejected and there is association
Printed information and buying behaviour	17.82 (16)	26.29	Null hypothesis is accepted and there is association
Packaging innovation and buying behaviour	56.77 (16)	26.29	Null hypothesis is rejected and there is association

Source: Authors' calculation based on survey data.

The above results show that the independent variable such as packaging colour, background image, wrapper design and packaging innovation have proper association with the dependent variable (i.e., consumer buying behaviour). However, no association has been found in cases of packaging materials, font style and printed information in marketing of dairy products. Therefore, it is evident that if the elements of packaging are improved then the sales of the dairy products may improve to a certain extent.

After finding the association between the dependent variable (consumer buying behaviour) and the set of independent variable, we go for Carl Pearson's co-relation test in order to find out to what extent and strength of association between the independent variables and the dependent variable in dairy product packaging. The results of the co-relation analysis is shown in the table below.

Table 2: Co-relation between Consumers' buying behaviour and Elements of packaging

Dependent variable	Independent variable	Co-relation Coefficients	t-statistic
Buying behaviour	Packaging colour	0.42	4.33
	background image	0.35	4.26
	Packaging materials	0.11	1.22
	Font size	0.07	0.83
	Wrapper design	0.38	4.66
	Printed Information	0.02	0.26
	Packaging innovation	0.01	0.15

Source: Authors' calculation based on survey data.

It is evident from the above results that packaging colour, background image and wrapper design of dairy product have moderate and significant association with the consumer buying behaviour. However, the other dimensions of packaging such as materials used in packaging, font size, printed information, innovative ideas in packaging etc., and the correlation coefficients were found to be very weak and as such there is no such effects on consumer buying behaviour. Thus, both the Chi-square association test and co-relation study produce the same results as far as packaging of dairy products is concerned and its effects on consumers' buying behaviour.

CONCLUSION AND SUGGESTIONS

Thus, we find that packaging could be treated as one of the valuable marketing weapons with respect to making proper communication between an organisation and its consumers. The study makes it clear that the overall perception of the consumers about the different elements of packaging of Mother Dairy's products is satisfactory. A right choice of packaging color, background image, wrapper design, innovative ideas when imparted to a product's packaging will create a happy feeling in consumers' mind. All these packaging elements contribute an important effort to catch consumer's attention and interest. As far as the association between dairy product packaging and impact on consumers' buying behaviour is concerned, it is clear that visual appeal is more important than the qualitative aspect of packaging. This is implied from the significant association between packaging colour, background image, wrapper design and innovation in packaging and the higher positive correlation among these elements of packaging with consumers' buying behaviour, whereas no significant association was observed between

consumers' buying behaviour and quality of materials used in packaging, information printed on packaging etc. and very weak or no correlation among them. The present study also indicates the lacuna of Mother Dairy in terms of packaging its products. However, there are certain areas such as typographic factor in packaging, colour used in packaging, background image where Mother Dairy should give more attention to improve and thereby try to retain the existing consumers and attract new consumers.

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