

Impact of Packaging Elements of Packaged Milk on Consumer Buying Behaviour

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Abstract

This research paper examines the impact of packaging elements on consumer buying behaviour. The motivation for carrying out this study is to know how packaging elements impact on consumers buying behaviour. Packaging has now changed its traditional role of protecting the product to communicate a complete message about the product, to get the consumer attention on retail stores and to provide convenience for consumers to use the product (Rundh, Linking Packaging to Marketing: how packaging is influencing the marketing strategy, 2013). Therefore it is important for firms, marketers and packaging designers to know how packaging influences consumers' purchase decision. In order to know the impact of packaging on consumers the study was carried out to find the relationship between packaging elements and consumer buying behaviour. The packaging elements were further divided into visual elements and verbal elements. Visual elements included packaging colour, packaging design, packaging material, packaging size and packaging graphics. Verbal elements included nutritional information, product information and country-of-origin. In this study packaging elements are independent variables and consumer buying behaviour is the dependent variable. Five-points itemized Likert rating type scale has been used in this research ranging from (1) strongly disagree to (5) strongly agree. Convenience sampling has been used as a sampling method and the sample size for this research was 384. Pearson correlation, multiple regressions and ANOVA has been used for analyzing the data. This study was limited to Karachi only and the data has been collected from main areas of the city including Defence, PECHS, Gulshan-e-Iqbal, Gulistan-e-Jauhar Malir and North Nazimabad. The findings of the research have revealed that there is a positive correlation

between packaging cap ($r = 0.003$), rectangular packaging design ($r = .062$), and convenience in handling ($r = 0.064$) and consumer buying behaviour in packaging design. However, there is a negative correlation between easy-to-tear pouch packaging ($r = -.057$) and consumer buying behaviour. In packaging material Tetrapak ($r = .084$) and glass bottles ($r = .012$) are positively correlated with consumer buying behavior and plastic bottles ($r = -.067$) are negatively correlated. In packaging colour brand recognition through colour ($r = .020$), association of green colour with packaged milk ($r = .019$), association of blue colour with packaged milk ($r = .011$) and association of red colour with packaged milk ($r = .062$) are positively correlated with consumer buying behavior. Packaging size of 1.5 liters ($r = .044$), packaging size of 1 liters ($r = .100$) packaging size of 500 ml ($r = .006$) and availability of packaged milk in all sizes ($r = .026$) are positively correlated with consumer buying behavior. However, packaging size of 250 ml ($r = -.044$) is negatively correlated with consumer buying behavior. In packaging graphics font style ($r = .263$) and good packaging graphics ($r = .219$) shows a positive correlation with consumer buying behavior, which is significant. Varieties of milk ($r = -.070$) has a negative correlation with consumer buying behavior in product information variable, however, expiry date mentioned on the product ($r = .033$) and manufacturer's name ($r = .231$) are positively correlated. Nutritional information ($r = .655$) is highly correlated with consumer buying behavior, which is significant. Country of origin ($r = .619$), is also highly correlated with consumer buying behavior, which is significant. This research was limited to the household consumers only. It does not include shop owners, who use packaged milk for commercial purposes. Moreover, this research is restricted to the buyers and consumers of packaged milk in Karachi only. In addition, study of new or improved packaging is not included and only packaging elements of packaged milk are studied. Packaging of other dairy products is also not included in this research.

Keywords: Packaging Elements, Varieties of milk, Nutritional Information, Consumer Buying Behaviour.

Introduction

Packaging in modern terms can be defined as the designing and producing containers and wrappers for a product (Keller, 2009). Packaging is so important that most of the marketers believe it is the fifth P of marketing mix with other four Ps of product, price, promotion and place and it is considered to be an important element in product strategy (Philip Kotler K. L., 2008). In today's market it consists of three functions which include logistics, commercial and environmental functions (Rundh, Linking Packaging to Marketing: how packaging is influencing the marketing strategy, 2013). Packaging is also an important factor of brand recognition as well as an important factor in creating positive brand associations (Keller, 2009). In a competitive market, packaging as a marketing tool could be an effective way to achieve marketing objectives and at the same time it satisfies the desires of consumers through its aesthetics elements which include package's size, shape, text, colour, material and graphics and its functional elements as well (Rundh, Linking Packaging to Marketing: how packaging is influencing the marketing strategy, 2013). Packaging as an element of product strategy has become so important that when there seems to be a minute difference in the brands, innovative packaging may provide a competitive advantage (Keller, 2009).

Packaging has developed itself from time to time and the factors that affected it include changing needs and demographics, changing needs of storing and transporting a product and technological advancement (Calver, 2007).

Due to the crowded marketplace of today's world packaging has evolved as an affective communicator to get consumers attention and convince them at the point-of-purchase when compared with other traditional marketing mediums such as mass media advertising (Robert L. Underwood, 1998). Packaging conveys the meaning of a brand in non-durables and becomes a point of difference when other products of similar category just portray the functional benefits, thus eventually establishing a relationship between a consumer and a brand (Robert L. Underwood, 1998). Packaging is an important factor of brand recognition and creating positive brand associations (Keller, 2009). (P R Smith, 2004) identified six packaging elements which include size, graphics, color, text, material and smell. According to (Keller, 2009) aesthetic elements or components of packaging include size, color, text, graphics, material and shape.

Packaging has now many functions from protecting the product, to transporting the product to the end consumer safely preserving quality and to persuade the consumer to buy the product by getting consumer attention while at the same time creating a positive impact at retail stores in a highly competitive environment (Rundh, The multi-faceted dimension of packaging marketing logistic or marketing tool?, 2005). Research has shown that consumers positively evaluate product's packaging if it consistently and coherently conveys the meaning of that product through its packaging elements (Hannele Kauppinen-Raisanen, 2010).

Visual Elements of Packaging

Visual elements of the packaging affect the emotions of consumer the way they transmits the information (Pinya Silayoi M. S., 2004). Visual elements are considered when consumers do not want to make an effort to search for the products and when the products are of low involvement (Pinya Silayoi M. S., 2004).

Size

Consumption or frequency of use of a product increases when packages are redesigned or available in larger sizes (Philip Kotler K. L., 2008). Packaging size depends on products features and the target market (P R Smith, 2004). Larger pack sizes convey better quality (P R Smith, 2004) and increases impulse consumption (Keller, 2009).

An investigation done by (Rundh, Linking Packaging to Marketing: how packaging is influencing the marketing strategy, 2013) on customer requirement of packaging shows that change in the size of household in effect changes the product size. An investigation done on the size attribute of packaging by (Arun Kumar Agariya, 2012) shows that different packaging size is way to extend a product into new markets. Another study on packaging size shows that smaller packaging size are considered by consumer of smaller family and that the large size of packaging communicated the waste of product for them (Pinya Silayoi M. S., 2004). This was also found true in another study that consumer's willingness to buy a product increases if products are presented in smaller packages and if products have shorter expiry date then consumers do not prefer large package sizes (Golnesa Ahmadi, 2013). Market demand also suggests that due to smaller households products are to be bought in smaller packages (Rundh, The multi-faceted dimension of packaging marketing logistic or marketing tool?, 2005).

Graphics

Graphics on packaging make a brand unique, preserve its individuality, helps in emphasizing brand name and stands out on the shelf (P R Smith, 2004). Graphics could add value in the physical appearance of a brand and increases its aesthetics quality. Moreover, in many situations graphics could create a positive mood and could match with or satisfy the lifetime hidden aspirations of a consumer (P R Smith, 2004). An important role of packaging graphics is that they gain attention of consumer (Pinya Silayoi M. S., 2004).

A qualitative study done by (Tobias Otterbing, 2013) on textual and pictorial elements of packaging shows that textual elements of packaging are noticed if they are placed on left side and pictorial elements of the packaging are noticed if they are placed on the right side. This in effect indicates that not only attractiveness of graphics, but the proper placement of pictorial and textual element of packaging is also necessary in order to be noticed by consumers. Graphics help consumers find the brand of their choice by cutting through clutters at retail stores and if they do not have any strong preference of a brand then graphics at least gain their attention to consider a particular product for evaluation (Pinya Silayoi M. S., 2004).

A study done on the relationship of packaging elements with purchasing behaviour of consumers proves that there is a significant relationship between the image of a product and the purchase behaviour of consumers (Parisa Karimi, 2013). Visual elements influence the consumers in making their choice to buy a particular product and graphics were found to be a major influencer in this regard (Pinya Silayoi M. S., 2004). Graphics are important both for high and low involvement products and when consumer do not go for much consideration and decision making process for a product then graphics pushes their choice (Pinya Silayoi M. S., 2004). Images on the packaging of a milk product can increase curiosity as well as interest in a consumer for a particular product (Lynsey Hollywood, 2013).

Consumers can also be persuaded to try the actual product through the usage of graphics on packaging when the combinations of different materials used in graphics and holograms such as lamination with aluminum foil or some different kind of printing can inspire a consumer to touch the product packaging and hence making the consumer to try the actual product (Rundh, Packaging design: creating competitive advantage with product packaging, 2009).

Color

According to (Keller, 2009) color is an essential component of visual elements of packaging to the extent that some designers are of the view that consumers possess color vocabulary due to which they expect certain type of colors for particular products. Colors could bring a point of difference to a brand and the brand can have some color ownership which other brands cannot copy or it becomes difficult for them to have the same look (Keller, 2009). According to (Keller, 2009) color is an important element of visual design of packaging and the information and meaning it conveys should be consistent with what other marketing programs are conveying.

Color perceptions vary across cultures and most of the religions are believed to have their sacred colors (Singh, 2006). Consumers have color memory which they relate to certain brands in which when they recall a particular color they associate it with a certain brand. In addition, changing demographics and trends change the color preferences of consumers (Singh, 2006).

Packaging color of a product has a high intensity to elicit purchase behaviour in consumer (Munyarazdi Mutsikiwa, 2013). Nevertheless, it should be noted that each product has a distinct packaging color and it should be matched with the product category of the product in order to create an impact of packaging color on consumers and to trigger purchase behaviour (Munyarazdi Mutsikiwa, 2013).

Findings of the research done by (Lynsey Hollywood, 2013) reveals that consumers differentiated the milk as whole, skimmed or semi-skimmed if generic colors such as green or blue have been used in the milk packaging. Nonetheless, using standardized colors didn't influence purchase behaviour of consumers because there was nothing new. Products are generally accepted if they have similar colors that are common in particular product class (Hannele Kauppinen-Raisanen, 2010). Radical changes in colors could lead to consumer confusion in search for a brand (Hannele Kauppinen-Raisanen, 2010).

A study on the associative learning form of color by (Randi Priluck Grossman, 1999) reveals that consumers prefer certain colors in particular product category based on the association they have formed in past through experience. The study also suggests that marketers should use color associations while designing packaging for products rather than using general preferences of consumers regarding colors (Randi Priluck Grossman, 1999).

Design

An investigation done on the packaging shape by (Arun Kumar Agariya, 2012) shows that consumers feeling about the packaging is actually transferred into how consumers feel about the product and innovative packaging shapes cut through the clutter in retail stores and this kind of packaging could create an iconic brand image through its different shapes. An investigation done by (Golnesa Ahmadi, 2013) on the design aspects of packaging shows the beautiful packaging designs increases the appetite of consumers and persuades consumers to eat the food and buy the product. In a qualitative study done by (Pinya Silayoi M. S., 2004) on packaging, illustrates that most of the consumers believe that shape of the packaging relates to ease-of-use and carrying of a product. A study done by (Lynn Metcalf, 2012) on the packaging design explains that at first moment of truth aesthetic aspects of packaging maybe liked by a consumer and he may think of packaging as attractive and nice, but at the second moment of truth or after purchase packaging could either satisfy or dissatisfy a consumer.

An investigation done by (Lynsey Hollywood, 2013) on milk packaging suggests that investment in packaging design is a way for long-term survival in this sector. A study done on the visual packaging by (Wang, 2013) reveals that consumer perception of food quality and their brand preference was directly affected by their attitude toward visual packaging.

Material

Like other visual elements of packaging materials also communicate and consumers associate certain intrinsic values with the material of a product (P R Smith, 2004). In addition materials also affect the perceived quality of a product, which means consumer perceptions regarding certain materials could change the perceived quality of a product. Some packaging materials are to be made in a way, so that it could bear the temperature below zero or high temperatures in microwave depending on the product functionalities and the needs of a consumer (P R Smith, 2004).

In one study on milk packaging (Lynsey Hollywood, 2013) three packaging materials were discussed which includes glass, plastic, and cardboard. Findings of the research revealed different perceptions of packaging about different packaging materials. Many advocated the use of glass packaging material in milk packaging, but then said that it was heavy and it used to be

washed after it is used. Secondly, with regard to cardboard packaging consumers had negative views about it and they said that this type of packaging do not keep a product fresh and one also cannot see the product and they referred this kind of packaging to UHT treated milks (Lynsey Hollywood, 2013). Participants in that study advocated the use of plastic containers and agreed that such containers were better than cardboard and glass packaging because their screw top cap prevented the product and were less likely to leak (Lynsey Hollywood, 2013).

Verbal Elements of Packaging

Silayoi & Speece (2004) states that the verbal elements of packaging transmits information which triggers the thought process and is related to cognitive orientation of a consumer as summarized by (Rita Kuvykaite, 2009).

Product Information

As consumers' health concerns and healthy diet are increasing a product should include information, in order to make it easy for consumers to make purchase decisions, which in effect has increased the importance of labeling (Pinya Silayoi M. S., 2004). Labeling definitions differ and labeling may include a simple brand name, graphic or detailed product information (Philip Kotler K. L., 2008). Packaging layout is very important consideration in providing product information because consumers get confused with the information overload and inaccurate information (Pinya Silayoi M. S., 2004). Product information is relatively less important to the consumers with their low involvement with the products. On the other hand, consumers with their high involvement with the products tend to look at product information and make appropriate decisions accordingly and the product information could change their attitude of buying the product (Pinya Silayoi M. S., 2004).

Research has shown that there is a significant relationship between consumer purchase decision and the information on packaging (Parisa Karimi, 2013). A qualitative research has shown that participants in that study tended to judge the performance of food product while reading the label when the products were considered by them carefully (Pinya Silayoi M. S., 2004). This study further suggested that the information which is appropriately delivered can have strong impact on consumer buying behaviour which in effect enhances the credibility of a product. Information on the product could help consumers in making their decisions about product choice. Nonetheless, it could also create confusion for them if the information is not accurate or if it is

misleading (Pinya Silayoi M. S., 2004). Consumers read information on the packing when they want to buy an alternative product of milk, if the one they usually buy were out of stock (Lynsey Hollywood, 2013).

Nutritional Information

Nutrient information is particularly important in packaged milk products. A study done by (Josephine M Wills, 2009) on the consumer attitude towards nutrition information illustrates that nutrient information given on the packaging should be appropriate as it affect consumer food choices, because consumers base their decision on such information given on packaging due to their diet and lifestyle. The Asian Food Information Centre (AFIC) as mentioned in the study done by (Josephine M Wills, 2009), conducted a qualitative research in 2006 which explored the consumer response to the contextual factors impacting consumer responses and nutrition information in Malaysia and China and came up with three conclusions. The first finding says that consumers believed that nutrient information should be on the packaging but the knowledge of consumers about it was rated as low. Second finding suggests that consumers prefer those nutrition claims which define the function of nutrition on the body rather than just simple written nutrition information. Third finding says that consumer's mindset relating to the diet choice which they make are only for short term and the long term impact of eating on health was neglected.

Country-of-Origin

There are few countries in the world, which have created certain kind of expertise in product categories and have built up their particular image (Keller, 2009). Based on this notion, consumers may make decisions to buy products with such national ties in order to portray a self-image and to fulfill the need. In addition, such strong positive associations and beliefs of consumers regarding various brands could create a point of difference regarding the country of origin (Keller, 2009). Many manufacturing firms leverage on these kinds of secondary brand associations to build brand equity (Keller, 2009). At the point of purchase associations with the country of origin may affect the purchase decision (Keller, 2009). Moreover, research has found that product superiority comes first in the individualistic societies of Western world and due to the feel of patriotism; family systems and group norms domestic brands are favored and comes first in collectivist countries mainly of Asia (Keller, 2009). Information on packaging can be

grouped into intrinsic and extrinsic cues in which intrinsic cues include product performance, quality taste and extrinsic cues include brand name, price, packaging and other related information (Gregory R. Elliott, 1994). Because it is difficult to make purchase decision on intrinsic cues, consumers often rely on extrinsic cues on which to base the decision for buying a particular product. So, country-of-origin is also considered to be an extrinsic cue of information. If consumers do not have any prior knowledge of a product then they usually base their purchase decision on extrinsic cues (Cattin et al. 1982) as summarized in the research done by (Gregory R. Elliott, 1994).

A quantitative study was done in Singapore to see effect of country-of-origin on low involvement products by (Zafar U. Ahmed, 2004). Findings of the study suggest that country-of-origin does affect consumer buying behaviour in low involvement products and if the country's image is good and when it is projected on a product then it becomes easy for a manufacturer to enter in the market gaining good market share. On the other hand, if a country has a negative image then the consumers are likely to reject the products. In the presence of other extrinsic cues of information like brand name, then the country of origin does not affect consumer purchase decision (Zafar U. Ahmed, 2004). The notion that negative image of a country impacts the products sold by the manufacturer of that country varies across product categories. If a country is renowned by manufacturing of a certain product then its product could be sold in international market with a positive image of that product and country's image could be combined with it rather than just relying on the country's name while selling the products internationally (Zafar U. Ahmed, 2004).

Consumer Buying Behaviour

Research has shown that consumer's go through a five stage decision making process to buy a particular product or service. Following are the steps of decision making process through which consumers go (Lake, 2009):

- The first step is of problem or need recognition.
- In second step consumers often search for information
- Third step is the evaluation step in which consumers evaluate alternate choices of the products

- Forth step is the step of product purchase, in which consumers actually buy a product or delay the purchase of a product
- Fifth step is the final step in which consumer have already used or experienced the product and evaluates the product. At this step consumer either go with the same product he or she bought if the product has positively been evaluated or the consumer will go to search another product if the product has negatively been evaluated by the consumer

Normally, all the steps are required in high involvement products and usually last two steps are required in low involvement products (Lake, 2009). The decision making steps in consumer buying behaviour shows that packaging should not only gain consumer attention or persuade a consumer to buy a product, rather it should get some positive evaluations after purchase and should function well in terms of its convenience and carrying so that consumers would be willing to make repeated purchases. It was also suggested in the studies (Lynn Metcalf, 2012) that packaging should be designed for consumer convenience, ease-of-use and ease of carrying the product.

Research Gap Filled by This Research

Review of the scientific literature shows the previous researches done on packaging was scattered, which included limited information about packaging. This research has filled the gap by encompassing all the possible and generally accepted packaging elements which includes the visual and verbal elements of packaging. Previous researches either focused on visual and aesthetics elements of packaging or have focused individually on each of the verbal elements of packaging. This therefore, is a comprehensive report, which has included both the visual and verbal components of packaging. Also, this report has specifically focused on the packaging elements of packaged milk, which according to available resources was not found that any comprehensive research had been done on this topic. The research has particularly focused on this topic, so that the results could be made useful.

Descriptive Statistics

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	247	64.3	64.3	64.3
	Female	137	35.7	35.7	100.0
	Total	384	100.0	100.0	

Do you buy Packaged Milk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	342	89.1	89.1	89.1
	No	42	10.9	10.9	100.0
	Total	384	100.0	100.0	

Tables & Diagrams

Pearson Correlation

It measures the strength of the linear relationship between two variables. It can range from -1 to +1. Perfect negative correlation is represented by -1 and perfect positive correlation is represented by +1.

Packaging Design

To see the relationship between packaging design and consumer buying behaviour four elements of packaging design were included in the research. These include packaging cap, easy-to-tear packaging, rectangular packaging design and convenience in handling the packaged milk.

Table 1.11

Correlations

		Buying Behavior	Packaging Cap
Buying Behavior	Pearson Correlation	1	.003
	Sig. (2-tailed)		.950
	N	384	384
Packaging Cap	Pearson Correlation	.003	1
	Sig. (2-tailed)	.950	
	N	384	384

Table 1.11 shows that there is a weaker negative correlation between buying behavior and cap on the packaging design at $r = -.003$. This depicts that using packaging cap in packaged milk design would negatively impact consumer's purchase decision.

Table 1.12

Correlations

		Buying Behavior	Easy-to-tear Pouch Packaging
Buying Behavior	Pearson Correlation	1	-.057
	Sig. (2-tailed)		.263
	N	384	384
Easy-to-tear Pouch Packaging	Pearson Correlation	-.057	1
	Sig. (2-tailed)	.263	
	N	384	384

Table 1.12 shows that there is a moderately negative correlation between easy-to-tear pouch packaging and consumer buying behaviour at $r = -.057$. This result shows that introducing easy-to-tear packaging design would negatively impact buying behaviour of consumers.

Table 1.13

Correlations

		Buying Behavior	Rectangular Packaging Design
Buying Behavior	Pearson Correlation	1	.062
	Sig. (2-tailed)		.228
	N	384	384

Rectangular Packaging Design	Pearson Correlation	.062	1
	Sig. (2-tailed)	.228	
	N	384	384

Table 1.13 shows a weaker positive correlation between rectangular packaging design and buying behavior of consumers at $r = .062$. This reveals that introducing packaging designs in this form would attract consumers.

Table 1.14

Correlations

		Buying Behavior	Convenience in Handling
Buying Behavior	Pearson Correlation	1	.064
	Sig. (2-tailed)		.209
	N	384	384
Convenience in Handling	Pearson Correlation	.064	1
	Sig. (2-tailed)	.209	
	N	384	384

Table 1.14 shows a weaker positive correlation between buying behavior on consumers and convenience in handling the packaged milk at $r = .064$. This result depicts that designing packages that can be handled conveniently would attract consumers to a particular product.

Packaging Material

To check the relationship between packaging material and consumer buying behavior questions regarding different packaging material were included in the research. This research included Tetrapak, glass bottles and plastic bottles as packaging materials.

Table 1.21

Correlations

		Buying Behavior	Tetrapak
Buying Behavior	Pearson Correlation	1	.084
	Sig. (2-tailed)		.102
	N	384	384
Tetrapak	Pearson Correlation	.084	1
	Sig. (2-tailed)	.102	
	N	384	384

Table 1.21 shows a weaker negative correlation between Tetrapak and consumer buying behavior at $r = -.084$. This reveals that if a new brand is launched in the market with the packaging material other than Tetrapak, this may hurt the sales of the packaged milk being sold in Tetrapak.

Table 1.22

Correlations

		Buying Behavior	Glass Bottles
Buying Behavior	Pearson Correlation	1	.012

	Sig. (2-tailed)		.816
	N	384	384
Glass Bottles	Pearson		1
	Correlation	.012	
	Sig. (2-tailed)	.816	
	N	384	384

Table 1.22 shows that there is a weaker positive correlation between glass bottles and consumer buying behavior at $r = .012$. This shows that consumers would accept this packaging material positively if packaged milk is introduced in it.

Table 1.23

Correlations

		Buying Behavior	Plastic Bottles
Buying Behavior	Pearson	1	-.067
	Correlation		
	Sig. (2-tailed)		.193
	N	384	384
Plastic Bottles	Pearson	-.067	1
	Correlation		
	Sig. (2-tailed)	.193	
	N	384	384

Table 1.23 shows a weaker negative relation between plastic bottles and consumer buying behavior at $r = -.067$. It shows that consumers are not attracted towards this packaging material.

Packaging Colour

To check the relationship between packaging colour and consumer buying behavior aspect of packaging colour were included in the research. These aspects include brand recognition through colour and association of green, blue and red colours with packaged milk which are the colours of famous brands in the market. The latter aspect assesses if consumers carry colour vocabulary in this product category.

Table 1.31

Correlations

		Buying Behavior	Brand Recognition through Colour
Buying Behavior	Pearson Correlation	1	.020
	Sig. (2-tailed)		.697
	N	384	384
Brand Recognition through Colour	Pearson Correlation	.020	1
	Sig. (2-tailed)	.697	
	N	384	384

Table 1.31 shows a weaker positive correlation between buying behavior and brand recognition through colour at $r = .020$. It shows that consumers recognize the brand of the packaged milk they buy through colours.

Table 1.32

Correlations

		Buying Behavior	Association with Packaged Milk (Green Colour)
Buying Behavior	Pearson Correlation	1	.019
	Sig. (2-tailed)		.711
	N	384	384
Association with Packaged Milk (Green Colour)	Pearson Correlation	.019	1
	Sig. (2-tailed)	.711	
	N	384	384

Table 1.32 shows a weaker positive correlation between buying behavior of consumers and association of green colour with packaged milk at $r = .019$. It shows that consumers would accept a milk product if it is introduced in green colour.

Table 1.33

Correlations

		Buying Behavior	Association with Packaged Milk (Blue Colour)
Buying Behavior	Pearson Correlation	1	.011
	Sig. (2-tailed)		.827
	N	384	384
Association with Packaged Milk (Blue Colour)	Pearson Correlation	.011	1
	Sig. (2-tailed)	.827	
	N	384	384

Table 1.33 shows a weaker positive correlation between buying behavior of consumers and association of blue colour with packaged milk at $r = .011$. It shows that consumers would accept a milk product if it is introduced in blue colour.

Table 1.34

Correlations

		Buying Behavior	Association with Packaged Milk (Red Colour)
Buying Behavior	Pearson Correlation	1	.062
	Sig. (2-tailed)		.224
	N	384	384
Association with Packaged Milk (Red Colour)	Pearson Correlation	.062	1
	Sig. (2-tailed)	.224	
	N	384	384

Table 1.34 shows a weaker positive correlation between consumer buying behavior and association of red colour with packaged milk at $r = .062$. It shows that consumers would accept a milk product if it is introduced in red colour.

Packaging Size

To check the relationship between packaging size and buying behaviour of consumers questions were included in the research regarding their preferable size of packaged milk and if they want that packaged milk should be available in all sizes.

Table 1.41

Correlations

		Buying Behavior	Prefer 1.5 liters of Packaged Milk
Buying Behavior	Pearson Correlation	1	.044
	Sig. (2-tailed)		.388
	N	384	384
Prefer 1.5 liters of Packaged Milk	Pearson Correlation	.044	1
	Sig. (2-tailed)	.388	
	N	384	384

Table 1.41 shows a weaker positive correlation between consumer buying behavior and packaging size of 1.5 liters at $r = .044$. This reveals that consumers would positively accept the packaged milk in this size.

Table 1.42

Correlations

		Buying Behavior	Prefer 1 liters of Packaged Milk
Buying Behavior	Pearson Correlation	1	.100
	Sig. (2-tailed)		.050
	N	384	384

Prefer 1 liters of Packaged Milk	Pearson	.100	1
	Correlation		
	Sig. (2-tailed)	.050	
	N	384	384

Table 1.42 shows a weaker positive correlation between consumer buying behavior and packaging size of 1 liters at $r = .100$. This reveals that consumers would positively accept the packaged milk in this size

Table 1.43

Correlations

		Buying Behavior	Occasionally prefer 500 ml of Packaged Milk
Buying Behavior	Pearson	1	.006
	Correlation		
	Sig. (2-tailed)	.914	
	N	384	384
Occasionally prefer 500 ml of Packaged Milk	Pearson	.006	1
	Correlation		
	Sig. (2-tailed)	.914	
	N	384	384

Table 1.43 shows a weaker positive correlation between consumer buying behavior and packaging size of 500 ml at $r = .006$. This reveals that consumers would positively accept the packaged milk in this size

Table 1.44

Correlations

		Buying Behavior	Occasionally prefer 250 ml of Packaged Milk
Buying Behavior	Pearson Correlation	1	-.044
	Sig. (2-tailed)		.391
	N	384	384
Occasionally prefer 250 ml of Packaged Milk	Pearson Correlation	-.044	1
	Sig. (2-tailed)	.391	
	N	384	384

Table 1.44 shows a weaker negative correlation between consumer buying behavior and packaging size of 250 ml at $r = -.044$. This reveals that consumers would not readily accept the packaged milk in this size.

Table 1.45

Correlations

		Buying Behavior	Availability in all sizes
Buying Behavior	Pearson Correlation	1	.026
	Sig. (2-tailed)		.606
	N	384	384

Availability in all sizes	Pearson Correlation	.026	1
	Sig. (2-tailed)	.606	
	N	384	384

Table 1.45 shows a weaker positive correlation between consumer buying behavior and availability of packaged milk in all sizes at $r = .026$. This shows that consumers are attracted towards of packaged milk which is available in all sizes for their daily and occasional use.

Packaging Graphics

To check the relationship between consumer buying behaviour and packaging graphics two of the aspects of packaging graphics were included. One is the effect of font style and another is good packaging graphics.

Table 1.51

Correlations

		Buying Behavior	Font Style
Buying Behavior	Pearson Correlation	1	.263**
	Sig. (2-tailed)		.000
	N	384	384
	Pearson Correlation	.263**	1
Font Style	Sig. (2-tailed)	.000	
	N	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

Table 1.51 shows a moderate positive correlation between consumer buying behavior and font style at $r = .263$ which is significant. It shows that stylish and attractive font styles attract consumers.

Table 1.52

Correlations

		Buying Behavior	Good Packaging Graphics Create Positive Feelings
Buying Behavior	Pearson Correlation	1	.219**
	Sig. (2-tailed)		.000
	N	384	384
Good Packaging Graphics Create Positive Feelings	Pearson Correlation	.219**	1
	Sig. (2-tailed)	.000	
	N	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

Table 1.52 shows a moderate positive correlation between consumer buying behavior and good packaging graphics at $r = .219$, which is significant. It shows that good packaging graphics create positive feelings about packaged milk.

Product Information

To check the relationship between product information and consumer buying behaviour varieties of mil, expiry date and manufacturer’s name were included in the research.

Table 1.61

Correlations

		Buying Behavior	Varieties of Milk
Buying Behavior	Pearson Correlation	1	-.070
	Sig. (2-tailed)		.172
	N	384	384
Varieties of Milk	Pearson Correlation	-.070	1
	Sig. (2-tailed)	.172	
	N	384	384

Table 1.61 shows a weaker negative correlation between consumer buying behavior and varieties of milk at $r = -.070$. It reveals that if more varieties of packaged milk are introduced in the market it would create consume confusion about different packaged milks which negatively would impact the product.

Table 1.62

Correlations

		Buying Behavior	Expiry Date
Buying Behavior	Pearson Correlation	1	.033
	Sig. (2-tailed)		.522
	N	384	384

Expiry Date	Pearson	.033	1
	Correlation		
	Sig. (2-tailed)	.522	
	N	384	384

Table 1.62 shows that there is a weaker positive correlation between consumer buying behavior and expiry date mentioned on the product at $r = .033$. This leads us to two interpretations of expiry date of the packaged milk. One is that it should be clearly stated because consumers check it and secondly extended expiry date of a product may get consumers attracted towards that product.

Table 1.63

Correlations

		Buying Behavior	Manufacturer's Name
Buying Behavior	Pearson	1	.061
	Correlation		
	Sig. (2-tailed)		.231
	N	384	384
Manufacturer's Name	Pearson	.061	1
	Correlation		
	Sig. (2-tailed)	.231	
	N	384	384

Table 1.62 shows a weaker positive correlation between manufacturer's name and consumer buying behavior at $r = .231$. This shows that consumers check manufacturer's name which in effect would impact consumer's purchase decision.

Nutritional Information

To check the relationship between nutritional information and consumer buying behavior, the element of nutrient information was included in the research.

Table 1.71

Correlations

		Buying Behavior	Nutrient Information
Buying Behavior	Pearson Correlation	1	.655**
	Sig. (2-tailed)		.000
	N	384	384
Nutrient Information	Pearson Correlation	.655**	1
	Sig. (2-tailed)	.000	
	N	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

Table 1.71 shows a high correlation between buying behavior and nutrient information at $r = .655$, which is significant. This shows that consumers are becoming health conscious and they do check nutrient information on packaged milk.

Country of Origin

Table 1.81

Correlations

		Buying Behavior	Country of Origin
Buying Behavior	Pearson Correlation	1	.619**
	Sig. (2-tailed)		.000
	N	384	384
Country of Origin	Pearson Correlation	.619**	1
	Sig. (2-tailed)	.000	
	N	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

Table 1.81 shows a high correlation between consumer buying behavior and country of origin at $r = .619$, which is significant. This shows that consumers check country of origin while buying packaged milk, which affects their buying behavior. They prefer buying packaged mil based on the credibility of the country of origin of the product.

Multiple Regressions

Multiple regressions have been used to find an equation which would predict the impact of independent variables on a dependent variable. In this study, such equations have been developed for each independent variable to comprehensively find the impact of each of the packaging elements of packaged milk. General equation for the multiple regressions is as follows with regard to this research:

$$\text{Consumer Buying Behavior} = \alpha + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \dots \beta_nx_n$$

Packaging Design

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.115 ^a	.013	.003	1.05039

a. Predictors: (Constant), Convenience in Handling, Easy-to-tear Pouch Packaging, Rectangular Packaging Design, Packaging Cap

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.579	4	1.395	1.264	.284 ^a
	Residual	418.161	379	1.103		
	Total	423.740	383			

a. Predictors: (Constant), Convenience in Handling, Easy-to-tear Pouch Packaging, Rectangular Packaging Design, Packaging Cap

b. Dependent Variable: Buying Behavior

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.863	.303		12.737	.000
	Packaging Cap	.032	.055	.032	.585	.559

Easy-to-tear Pouch Packaging	-.067	.043	-.081	-1.534	.126
Rectangular Packaging Design	.060	.050	.065	1.197	.232
Convenience in Handling	.073	.060	.069	1.223	.222

a. Dependent Variable: Buying Behavior

To find the impact of packaging design on consumer buying behavior, following equation has been developed.

$$\text{Consumer Buying Behavior} = 3.863 + .032x_1 - .067x_2 + .060x_3 + .073x_4$$

Where 3.863 is the constant, x₁ is packaging cap, x₂ is easy-to-tear packaging, x₃ is rectangular packaging design and x₄ is convenience in handling.

Packaging Material

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.109 ^a	.012	.004	1.13756

a. Predictors: (Constant), Plastic Bottles, Tetrapak, Glass Bottles

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.885	3	1.962	1.516	.210 ^a
	Residual	491.738	380	1.294		

Total	497.622	383			
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- a. Predictors: (Constant), Plastic Bottles, Tetrapak, Glass Bottles
 b. Dependent Variable: Buying Behavior

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.878	.289		13.426	.000
	Tetrapak	.087	.054	.083	1.617	.107
	Glass Bottles	.011	.047	.012	.230	.818
	Plastic Bottles	-.063	.046	-.071	-1.365	.173

- a. Dependent Variable: Buying Behavior

To find the impact of packaging design on consumer buying behavior, following equation has been developed.

$$\text{Consumer Buying Behavior} = 3.878 + .087x_1 + .011x_2 - .063x_3$$

Where 3.878 is constant, x1 is Tetrapak, x2 is glass bottles and x3 is plastic bottles.

Packaging Colour

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.063 ^a	.004	-.007	1.17776

- a. Predictors: (Constant), Association with Packaged Milk (Red Colour), Brand Recognition through Colour, Association with Packaged Milk (Blue Colour), Association with Packaged Milk (Green Colour)

ANOVA^b

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	2.116	4	.529	.381	.822 ^a
Residual	525.718	379	1.387		
Total	527.833	383			

a. Predictors: (Constant), Association with Packaged Milk (Red Colour), Brand Recognition through Colour, Association with Packaged Milk (Blue Colour), Association with Packaged Milk (Green Colour)

b. Dependent Variable: Buying Behavior

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.735	.242		11.311	.000
	Brand Recognition through Colour	.007	.053	.007	.138	.890
	Association with Packaged Milk (Green Colour)	.002	.059	.002	.035	.972
	Association with Packaged Milk (Blue Colour)	-.012	.062	-.011	-.189	.850

Association with Packaged Milk (Red Colour)	.058	.051	.063	1.137	.256
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a. Dependent Variable: Buying Behavior

To find the impact of packaging design on consumer buying behavior, following equation has been developed.

$$\text{Consumer Buying Behavior} = 2.735 + .007x_1 + .002x_2 - .012x_3 + .058x_4$$

Where 20735 is constant, x1 is brand recognition through colour, x2 is association of green colour, x3 is association of blue colour and x4 is association with red colour.

Packaging Size

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.129 ^a	.017	.004	1.10072

a. Predictors: (Constant), Availability in all sizes, Prefer 1.5 liters of Packaged Milk, Occasionally prefer 250 ml of Packaged Milk, Prefer 1 liters of Packaged Milk, Occasionally prefer 500 ml of Packaged Milk

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.761	5	1.552	1.281	.271 ^a
	Residual	457.979	378	1.212		
	Total	465.740	383			

- a. Predictors: (Constant), Availability in all sizes, Prefer 1.5 liters of Packaged Milk, Occasionally prefer 250 ml of Packaged Milk, Prefer 1 liters of Packaged Milk, Occasionally prefer 500 ml of Packaged Milk
- b. Dependent Variable: Buying Behavior

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.398	.335		10.151	.000
	Prefer 1.5 liters of Packaged Milk	.042	.048	.045	.883	.378
	Prefer 1 liters of Packaged Milk	.127	.063	.115	2.030	.043
	Occasionally prefer 500 ml of Packaged Milk	-.011	.070	-.010	-.157	.876
	Occasionally prefer 250 ml of Packaged Milk	-.065	.059	-.067	-1.095	.274
	Availability in all sizes	.011	.055	.011	.201	.841

- a. Dependent Variable: Buying Behavior

To find the impact of packaging design on consumer buying behavior, following equation has been developed.

$$\text{Consumer Buying Behavior} = 3.398 + .042x_1 + .127x_2 - .011x_3 - .065x_4 + .011x_5$$

Where 3.398 is constant, x1 is 1.5 liters, x2 is 1 liter, x3 is 500 ml, x4 is 250 ml and x5 is availability in all packaging sizes.

Packaging Graphics

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.294 ^a	.086	.081	1.07809

a. Predictors: (Constant), Good Packaging Graphics Create Positive Feelings, Font Style

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.793	2	20.897	17.979	.000 ^a
	Residual	442.832	381	1.162		
	Total	484.625	383			

a. Predictors: (Constant), Good Packaging Graphics Create Positive Feelings, Font Style

b. Dependent Variable: Buying Behavior

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.647	.276		5.972	.000
	Font Style	.222	.056	.211	3.999	.000

Good Packaging					
Graphics Create	.181	.067	.141	2.686	.008
Positive Feelings					

a. Dependent Variable: Buying Behavior

To find the impact of packaging design on consumer buying behavior, following equation has been developed.

$$\text{Consumer Buying Behavior} = 1.647 + .222x_1 + .181x_2$$

Where 1.647 is constant, x1 is font style and x2 is good packaging graphics.

Product Information

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.111 ^a	.012	.005	1.15284

a. Predictors: (Constant), Manufacturer's Name, Varieties of Milk, Expiry Date

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.300	3	2.100	1.580	.194 ^a
	Residual	505.033	380	1.329		
	Total	511.333	383			

a. Predictors: (Constant), Manufacturer's Name, Varieties of Milk, Expiry Date

b. Dependent Variable: Buying Behavior

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.586	.353		10.161	.000
	Varieties of Milk	-.097	.054	-.097	-1.791	.074
	Expiry Date	.057	.074	.042	.763	.446
	Manufacturer's Name	.077	.061	.068	1.271	.204

a. Dependent Variable: Buying Behavior

To find the impact of packaging design on consumer buying behavior, following equation has been developed.

$$\text{Consumer Buying Behavior} = 3.586 - .097x_1 + .057x_2 + .077x_3$$

Where 3.586 is constant, x1 is varieties of milk, x2 is expiry date and x3 is manufacturer's name.

Nutritional Information

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.655 ^a	.429	.427	.79664

a. Predictors: (Constant), Nutrient Information

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	182.004	1	182.004	286.785	.000 ^a
	Residual	242.431	382	.635		
	Total	424.435	383			

a. Predictors: (Constant), Nutrient Information

b. Dependent Variable: Buying Behavior

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.425	.135		10.589	.000
	Nutrient Information	.621	.037	.655	16.935	.000

a. Dependent Variable: Buying Behavior

To find the impact of packaging design on consumer buying behavior, following equation has been developed.

$$\text{Consumer Buying Behavior} = 1.425 + .621x_1$$

Where 1.425 is constant and x_1 is nutrient information.

Country of Origin

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.619 ^a	.383	.381	.93032

a. Predictors: (Constant), Country of Origin

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	205.191	1	205.191	237.079	.000 ^a
	Residual	330.619	382	.865		
	Total	535.810	383			

a. Predictors: (Constant), Country of Origin

b. Dependent Variable: Buying Behavior

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.169	.154		7.589	.000
	Country of Origin	.656	.043	.619	15.397	.000

a. Dependent Variable: Buying Behavior

To find the impact of packaging design on consumer buying behavior, following equation has been developed.

Consumer Buying Behavior = $1.169 + .656x_1$

Where 1.169 is constant and x_1 is country of origin of the product.

Discussion

In packaging design ease of use through packaging cap and easy of handling the packaged milk has been revealed as the important factors contributing to the buying behaviour of consumers. Findings of the study has revealed there is a weaker positive correlation at $r = 0.003$ of packaging cap and convenience in handling at $r = 0.064$ with consumer buying behaviour. On the other hand, easy-to-tear packaging can only be used for once and cannot be stored in refrigerator because there is a tendency that it would spill over and therefore the research has shown that there is a weaker negative correlation of easy to tear packaging with consumer buying behaviour at $r = -.057$. Tetrapak has been found as a good packaging material and there is a positive correlation at $r = .084$ of Tetrapak with consumer buying behaviour. Consumers generally, do not like plastic bottles and there is a negative correlation at $r = -.067$, but they do prefer glass bottles, as the study has proved that there is a positive correlation at $r = .012$. This study has shown that consumers do recognize a brand by its colour which has been proved by the research that there is a positive correlation of brand recognition through color and consumer buying behaviour at $r = .020$. Consumers carry color vocabulary and they associate familiar colors in the milk product category with packaged milk. Green color at $r = .019$, blue color at $r = .011$ and red color at $r = .062$ have been positively correlated with consumer buying behaviour. This means that consumers do carry color vocabulary in this product category, due to which it would become difficult for a new milk product to be recognized if it's not introduced within these colour ranges. Preferable size of packaged milk is 1 litre, which is positively correlated at $r = .100$. Then packaging size of 1.5 liters which is correlated at $r = .044$ and finally packaging size of 500 ml which is positively correlated at $r = .006$. These packaging sizes are preferred by the consumers, however, packaging size of 250 ml is negatively correlated at $r = -.044$. Generally consumers for their daily and occasional use prefer packaged milk in all sizes which is positively correlated at $r = .026$.

Consumers like packaging graphics to the extent that good graphics of packaging do create positive feelings about the packaged milk brand, which the research has proved that there is a

positive correlation between packaging graphics and consumer buying behaviour at $r = .263$ and is significant. Similarly, font style also has a positive correlation at $r = .219$, which is significant as well. During the survey, one of the retailer said packaging graphics have an impact on our purchase decision because our kids like good graphics in packaging which attract them so we have to buy due to their likeness. He further added that good packaging graphics not only get consumer attention, but it also decorates the shelf.

In product information varieties of milk have negatively been correlated at $r = -.070$, which shows the introducing varieties of milk in this market could create consumer confusion which would affect their buying behaviour. On the other hand, expiry date at $r = .033$ and manufacturer's name at $r = .231$ in product information are positively correlated with consumer buying behaviour. This shows that consumers do check expiry date and manufacturer's name and it would impact their choice of buying a particular product. Nutritional information have highly and positively been correlated with consumer buying behaviour at $r = .655$, which is significant. The study also reveals that consumers prefer buying packaged milk, which shows on the packaging what impact particular nutrients will have on their body. If nutrient information is provided on the packaging, which can easily be comprehended by consumer then it would positively impact the purchase decision of consumer and he would be willing to buy that packaged milk. Country of origin is also highly and positively correlated with consumer buying behaviour at $r = .619$, which is significant. As the research has shown consumers often check country of origin before buying packaged milk. Country of origin has also been highly correlated with consumer buying behaviour. Consumers also prefer buying packaged milk, based on the credibility of country of origin of the product.

Managerial Implications

Based on research findings it is concluded that variables like nutritional information, packaging graphics and country of origin are highly and positively correlated with consumer buying behaviour and marketers should focus on these elements of packaging. On the other hand packaging size, packaging design, packaging material, packaging colour and product information have a weaker positive correlation with consumer buying behaviour and therefore marketers should precisely focus on these aspects so that positive correlation could be increased with consumer buying behaviour. Moreover, some variable aspects found to be negatively correlated

with consumer buying behaviour like plastic bottles in packaging material, 250 ml of packaged milk in packaging size and varieties of milk in product information, so marketers should not spend their time in looking at these aspects of packaging elements.

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