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# The Role of Packaging in Brand Communication

Arun Kumar Agariya, Ankur Johari, Hitesh K Sharma, Udit N S Chandraul, Deepali Singh

Abstract— Packaging is considered as an integral part of the 'Product' of marketing mix. Along with basic objectives (protection and preservation, containment, convenience and communication) packaging serves as a promotional tool. Packaging is an important part of the branding process as it plays a vital role in communicating the image and identity of an organization. The objective of this study is to find out role of packaging in brand communication and determining the elements/attributes of packaging for communicating the brand value to customers. To pursue these objectives the authors have developed a research framework for packaging which furcates the main objective into four sub-objectives namely dependence of packaging design upon the buyer attraction, communication to buyer, convenience in handling and using, saleability of product and green aspect; relationships between liking for package and brand, country of origin, colour connotation, symbol connotation and size; relationships between communication through the package and independent variables like information, shape, brand image and symbols/logos; relationship between usability of package and ease of handling, disposability and protection. Data is collected through questionnaire along with the measurement of pulse rate of respondents with the help of pulse oxy-meter. Reliability test is carried out for questionnaire's consistency and then multiple regression analysis is done to formulate relationship between dependent variable and independent variables. This research reveals the importance of buyer attraction in package design and unimportance of environmental considerations. Similarly customers are more likely to give weightage to branded product than to the package and shape of package is the significant attribute of communication through product packaging.

Keywords - Brand communication, Brand Image, Buyer attraction, Marketing Mix, Package Design, Packaging, Pulse rate.

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#### 1 Introduction

"Packaging is the container for a product encompassing the physical appearance of the container and including the design, colour, shape, labelling and materials used". Most marketing textbooks consider packaging to be an integral part of the 'product' component of the 4 P's of marketing: product, price, place and promotion. Some argue that packaging serves as a promotional tool rather than merely an extension of the product. Keller [21] considers packaging to be an attribute that is not related to the product. For him it is one of the five elements of the brand - together with the name, the logo and/or graphic symbol, the personality and the slogans. While the main use for packaging can be considered to be protection of the goods inside, packaging also fulfils a key role in that it provides us with a recognizable logo, so that we instantly know which product is inside the package. From the consumer perspective, packaging plays a major role when products are purchased - as both a cue and as a source of information. Packaging is crucial, given that it is the first thing that the public sees before making the final decision to buy.

Packaging is now generally regarded as an essential

component of our modem life style and the way business is organized. Packaging is the enclosing of a physical object, typically a product that will be offered for sale. It is the process of preparing items of equipment for transportation and storage and which embraces preservation, identification and packaging of products.

Packaging is recognized as an integral part of modern marketing operation, which embraces all phases of activities involved in the transfer of goods and services from the manufacturer to the consumer. Packaging is an important part of the branding process as it plays a role in communicating the image and identity of a company. Kotler [24] defines packaging as all the activities of designing and producing the container for a product. Packaging can be defined as the wrapping material around a consumer item that serves to contain, identify, describe, protect, display, promote, and otherwise make the product marketable and keep it clean. Packaging is the outer wrapping of a product. It is the intended purpose of the packaging to make a product readily sellable as well as to protect it against damage and prevent it from deterioration while storing. Furthermore the packaging is often the most relevant element of a trademark and conduces to advertising communication.

#### Arun Kumar Agariya is currently a research scholar in marketing at ABV-Indian Institute of Information Technology and Management, Gwalior, India, Ph-+91-9479317466. E-mail: arunagariya@gmail.com

India, E-mail: deepalipsingh@gmail.com

#### 2 LITERATURE R EVIEW

Product packaging is a "Cross-functional and multidimensional aspect of marketing that has become increasingly important in consumer need satisfaction, cost savings and the reduction of package material usage leading to substantial improvements in corporate

Ankur Johri is currently working as Senior Business Consultant, HCL, New Delhi, India

Hitesh K Sharma is currently a research scholar in marketing at ABV-Indian Institute of Information Technology and Management, Gwalior, India, E-mail: mail.hiteshsharma@mail.com, hitesh@iiitm.ac.in
 Udit N S Chandraul is currently a student in Integrated Post Graduate

Udit N S Chandraul is currently a student in Integrated Post Graduate Programme at ABV-Indian Institute of Information Technology and Management, Gwalior, India, E-mail: <u>udit200688@gmail.com</u>

Management, Gwalior, India, E-mail: <u>udit200688@gmail.com</u>

■ Deepali Singh is currently working as professor of marketing at ABlyser © 2012

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profits" [5]. The role of packaging is changing from that of 'protector' to 'information provider' and 'persuader' [2]. Whereas the original function of packaging was to protect the product, it is now being used as an important sales tool to attract attention, describe the product and make the sale [23]. Through identifying brands, conveying information in respect to price, quantity and quality, and providing information regarding ingredients and directions, product packaging now plays an important role in product promotion [2]. When the dimensions of packaging are analyzed then the corporate social responsibility of the packaging also plays a vital role in brand consolidation or brand attrition. With increasing competition in the marketplace, certain non-socially responsible packaging practices have been noted that may result in a negative brand image for the company, including: deceptive and misleading product packaging, and environmentally friendly packaging. As consumers become more aware of the social and environmental impact of their consumption, they are demanding more ethical product alternatives [40]. Industry has also recognized the need for acting in a more socially responsible fashion, which also includes improving the environmental impact of the firm, its products and services. CSR benefits to business can include more motivated employees, reliable supplier relations and an extended base of loyal customers and improved reputation [36]. Packaging is also a medium to build a brand image as Keller [21] describes brand image as "perceptions about a brand as reflected by the brand associations held in consumer memory". Studies have shown that brand image is an important cue that consumers use to infer information regarding the quality of the product and motivates their consumption tendencies [21]. In an emotional manner, consumers are presumed to seek a relationship between their selfconcept and the brand image of the product. Research suggests that the total sensory experience of a brand (including the packaging) creates an image in the minds of consumers that can inspire loyalty, build trust and enhance recognition [30]. Therefore, if a product's packaging is to effectively entice consumers to purchase the product, then, not only is the total sensory experience of the brand an important factor, but also the congruity between a consumer's self-image and the especially image, for socially environmentally conscious consumers. CSR benefits to business can include an improved reputation and improved brand image, which can help create an extended base of loyal customers [36]. The consumers have the instinct to align themselves to the products that they use and a product invokes their emotional senses as well. The individual's self-concept plays a major role in choosing certain products. In fact, these products are symbols that represent the buyer's self to others [31]. According to Mehta [29], individuals have a tendency to develop preferences to particular brands in which they feel match or enhance their self-image, in other words, products that provide a means for selfexpression. Therefore the effective packaging of

products is vital with the point of view of conveying the brand image to the consumer. It has also been found that the interaction of the buyer's personality and the image of the purchased product often influence consumer buying behaviour [15]. The literature on packaging also examines the deceptiveness of different brands to leverage their sales. The cases of passing off have also been found in case of many brands. Passing off occurs when there is the potential for consumers to find associations between brands and products that, in reality, have no relationship [8]. Research suggests that there is an increase in companies developing their own private brands that exhibit packaging attributes, such as the shape, sizing, colouring, lettering, or even, the logo similar to those of already established brands [3]. Then the hidden changes in size and value have also been reported in product packaging. Misleading labels are another form of deception that results in the consumer receiving incorrect information about the product [8]. Forms of misleading labels include environmental claims and origin claims. In another case, batteries that were imported from Europe labelled "recyclable" were found to be misleading because they were only able to be recycled in Europe and not in Australia [8].

The pack should instantly trigger brand memories, automatically bringing thoughts, knowledge and feelings about the brand into the shopper's consciousness. While it is important that the packaging reflects the values and positioning of the brand, the key role of packaging is not necessarily to communicate but to trigger the communications that have already happened around that brand prior to the shopper entering the store. In order to achieve this, it is vital that packaging is integrated with other forms of brand communication. Many studies suggest that around twothirds of purchasing takes place in "default" mode, where the shopper gives little serious consideration to choosing between brands. This is often because shoppers already know which brand they want to buy before they walk into the store. Here finding ability is a key. Any difficulties encountered by a shopper when trying to find the brand they want may open them up to other potential choices. Brown [6] writes about the role of packaging in retail sector and global factor also. With so much competition in the retail sector a brand must break through the visual clutter and grab a shopper's attention. A beautifully designed pack may be lost once displayed on a shelf alongside its competitors. Consideration should be given to how the packaging works in quantity. For example, in the U.K., tea brand PG Tips has a leaf pattern across its pack and when the packs are displayed in a row, the leaves become a continuous banner. Not all packaging travels well. For example, the colour, graphics and imagery of packaging that works well in one country, won't necessarily work in another. And, depending on where you are in the world, the importance of the different roles of packaging will shift. For example, in India, because those on lower incomes are paid daily, smaller pack sizes are needed to make products affordable; nearly 40

percent of shampoo sales are single-use size. In more developed markets green issues are playing a greater role in consumers purchase decisions. Packaging is no longer considered to be an important aspect of the product. Instead, it is increasingly being perceived as an unwanted and unnecessary source of waste material [12], as well as contributing unnecessary volume to landfills and the resulting greenhouse gas emissions. Nearly 80 percent of consumers believe that products use too much packaging [35]. In 1990, 68 percent of marketers had already begun to make environmental related changes in their packaging [35]. This reflects the fact that 67 percent of American consumers claimed that they would switch to a product that had environmentally safe packaging. This figure is even higher in other countries, such as Italy and Spain with 84 percent and 82 percent, respectively, claiming they would switch products [35]. The selection of appropriate package design research methodology depends on the type of information required to make design decisions. The available methods are classified into ocular or verbal tests [33]. Ocular tests are used to determine exactly what a person's eyes see, how long she/he dwells on each element of what she/he sees, and to which new element she/he looks at.

#### 2.1. Elements of a good Package Design

A package designer aims for the following goals: (1) to attract the buyer; (2) to communicate message to the buyer; (3) to create desire for the product; and (4) to sell the product .[13]

Attraction of the Buyer: Package must have enough shelf impact to stand out among a myriad of packages. The package must draw attention to itself. This can be done through the effective choice of colour, shape, copy, trademark, logo, and other features.

Communication to the Buyer: Every packaging element communicates something, so the image projected by the package must converge with the image being sought for the product [34]. The package design must show at once the intended use, method of application and intended results. A container of talcum powder should not look like as if it contains scouring powder, nor should face cream jars resemble shoe polish containers [16]. All necessary information must be clearly visible or implied through the design. This communication may either be direct or subtle. Direct communication describes the product, its benefits and how to see it. Indirect communication uses colour, shape, design forms and texture to convey intrinsic attributes like purity, value, fun, elegance, femininity or masculinity. Here colour is seen to be the primary aspect involved in subtle consumer communication. This is the reason cosmetic products are usually in pastel colours, black or gold to communicate classic elegance. Pharmaceutical products use light colours or a white background to denote cleanliness, purity, and efficacy. In cigarettes, white packaging suggests low tar while red packaging

suggests a strong flavour. Companies targeting Asian markets have to be careful in choosing packaging colours and logos. Failure to consider cultural factors may be disastrous. Still another communication role of packaging is providing information to the consumer through the label or immediate package. Information on contents, instructions on use and information required by law should assist rather than confuse the customer. Manufacturers and marketers are guilty of placing instructions that are often hard to read without a magnifying glass. When the instructions are readable, they are frequently vague and ambiguous. Thus, instructions should be tested for understanding since lack of instruction clarity leads to errors that might become a reason for no repeat purchase [34].

Creating a Desire for the Package: The package can convince the consumer that the product could fill the need or satisfy an inner desire. Packages usually add value like the convenience now being offered by microwaveable packaged foods. A shampoo or lotion bottle can shaped in such a way that its normal position is inverted (less time to remove a viscous product), or it can be easily hung on the shower handle. Special pump dispensers have promoted the liquid soap form over the traditional bar soap. Convenience must also consider the ease of disposability of the package. Advances in packaging technology have kept pace with the demand for convenient packaging. In addition, rising consumer affluence appears to show that consumers are willing to pay more for convenience, appearance, dependability, and prestige of better packages [24].

**Selling the Product:** Package must not only sell the product but also should create desire for repeat purchases. This can be in the form of reusable features, special giveaways or easy dispensing devices which promote repeat sales and add value.

#### 2.2 The role of Packaging

The primary function of packaging is to protect the product against potential damage while transporting, storing, selling and exploiting a product [11], [26], [51] and to ensure the convenience during performance of these activities. Sogn-Grundvag & Ostli [47] have indicated the importance of packaging in the case of grocery, when consumers buy unbranded products. Seeing that most consumers tend to touch products before purchasing, they treat product packaging as a tool for protecting consumers from contamination, for allowing them to touch products without restraint & without any need to avoid smudging their hands. They propose to use packaging with a "window", in order to allow consumers to evaluate product by its appearance at the same time reducing "consumer uncertainty regarding quality by branding the product and labelling it" [47], i.e. to communicate to consumer adequate message about product. It could be stating that in length of time a function of identification and communication became vital important especially for consumer

products in the group of convenience goods. Packaging as a tool for communication was investigated and finally suggested [1], [7], [11], [37], [42] [46], [48], [50]. Taking into consideration that impulsive buying is an aspect applicable to many consumers. It could be maintained that "the package may be the only communication between a product and the final consumer in the store" [11]. Consequently the role of package in marketing communications increases: it must attract consumer's attention and transmit adequate value of product to consumer in the short period right in the place of sale. Therefore there is a necessity to explore package and its elements in more detail, in order to understand which of these elements are the most important for consumers purchase decision.

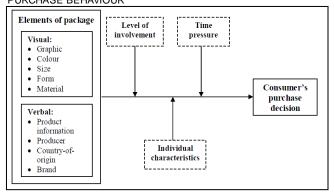
#### 2.3. Elements of Packaging

There are many different schemes for classification of elements of package in scientific literature. According to Smith & Taylor [46], there are six variables that must be taken into consideration by producer and designers when creating efficient package: form, size, colour, graphics, material and flavour. Similarly, Kotler [25] distinguishes six elements that must be evaluated when employing packaging decisions: size, form, material, colour, text and brand. Vila & Ampuero [50] similar to Underwood [48] distinguished two blocks of package elements: graphic elements (colour, typography, shapes used, and images) and structural elements (form, size of the containers, and materials). It should be noticed that these two blocks, similar to classification of Smith & Taylor [46] do not include verbal elements of package. Rettie & Brewer [38] stressed out the importance of proper positioning of elements of package, dividing the elements into two groups: verbal (for example, brand slogans) and visual (visual appeal, picture, etc.) elements.

Analysing consumer's decision making process they distinguish between non-verbal elements of package (colour, form, size, imageries, graphics, materials and smell) and verbal elements of package (product name, brand, producer/ country, information, special offers, instruction of usage). Their classification includes brand as a verbal component, whereas Keller [22], considers packaging as one of the five elements of the brand, together with name, logo, graphic symbol, personality, and the slogans. Silayoi & Speece [42], [43] divide package into two categories of elements: visual elements (graphics, colour, shape, and size) and informational elements (information provided and technology). According to Silayoi & Speece [42] visual elements are related with effective aspect of consumer's decision making process, while informational elements are related with cognitive one. Summarizing, two main blocks of package elements could be identified as: visual and verbal elements. Relying on literature analyzed graphic, colour; size, form, and material are considered as visual elements, while product information,

producer, country-of-origin and brand are considered as verbal ones. The performed literature analysis let us maintain that package could be treated as a set of various elements communicating different messages to a consumer. The type of message communicated depends on two major elements i.e. Visual elements of package transmit information which affects consumer's emotions, while verbal elements transmit information which has an effect on consumer's cognitive orientation [42]. In such way, referring to [7], Based on theoretical studies of Silayoi & Speece [42], Bloch [4]; Grossman & Wisenblit [14], Butkeviciene [7]the research model (see Figure below) was developed in order to reveal impact of visual and verbal package elements on consumer's purchase decisions. In this case graphic, colour, form, size, material are analyzed as main visual elements, whereas product information, producer, country-oforigin and brand are treated as the main verbal elements of package.

FIGURE 1: ELEMENTS OF PACKAGE AND CONSUMER'S PURCHASE BEHAVIOUR



According to the literature analyzed [42], [14], [7] the impact of package elements on consumers purchase decisions can be stronger or weaker depending on the consumer's involvement level, time pressure or individual characteristics of consumers. The importance of consumer's involvement level for choice of products was confirmed. On the other hand, food and other FMCG are usually treated as low involvement products [14], however [42 referring to other researchers pointed out that some consumers may view food shopping not as a low involvement action. Supporting this point of view we maintain that consumer's involvement in purchasing convenience goods (food and other FMCG) can vary from low to high level, depending on particular consumer. It should be taken into consideration that pattern of consumers behaviour is changing due to increasing role of ecology, rising interest in a healthy lifestyle.

Based on literature analysis performed it could be confirmed that visual elements of package have stronger effect on consumers when they are in the level of 'low involvement', in contrast to those who are in 'high involvement' level. Conversely, verbal elements of package have stronger effect on those consumers who are in the level of 'high involvement'. In the latter

situation consumer show more interest in product and its package, taking into consideration the information about product, expressing loyalty to a particular brand, etc. Also with reference to the results of the researches of Silayoi & Speece [42], Butkevicien [7] it was assumed that time pressure is another important factor which influences the impact of visual and verbal package elements on consumer's purchase decision. According to the results of previous researches it was assumed that visual elements of package have stronger influence on product selection when consumers are under time pressure and, conversely, when consumers are not under time pressure, verbal elements of package have stronger influence.

#### 3 RESEARCH FRAMEWORK

Pursuing the aim of this study, the importance of various visual and verbal elements of package for consumer's decisions was surveyed in literature. When all functions and environments are considered simultaneously, packaging becomes a socio-scientific endeavour. When viewed this way, packaging is not just a means to protect or contain the product, but has the potential to impact the decisions of consumers, and the lives of those interfacing with it.

One of the researchers has synthesized this concept into a tool referred to as "The Packaging Matrix." Based on the careful investigation of available literature the study would circle around the following framework.

Table 1: Framework for Packaging

Package design	Liking for package	Communi- cation through package	Usability of package
Attraction of buyer	Brand	Color	Ease of
Communicat ion to the buyer	Country of origin	Symbols/ logo	handling Disposability
Convenience in handling	Color connotation	Information about Product	Moisture Protection
and using Symbol Saleability of Connotation		Brand image	Protection from
product	Size	Shape Size	ultraviolet radiation
Green aspect		Size	

#### 4 RESEARCH METHODOLOGY

In the current study work after exhaustively surveying the literature above framework was devised. In the above framework the dependent and independent variables were jotted down and the questionnaire involving dependent and independent variables was administered to the representative set of population. And the data collected through survey was analyzed by using multiple regression analysis. The questionnaire was rated on the five point Likert scale. The ratings of

questionnaire ranged from strongly agree to strongly disagree. The strongly disagree was allotted the scale of 1 and strongly agree was allotted the scale of 5. The respondents were asked to fill the questionnaire which involved 20 parameters that comprised package design, liking of package, communication through package and usability of package. The questionnaires were administered online as well as offline to seek responses. In addition to the questionnaires the 20 respondents were also tested for their change in pulse rate when they saw variations in different packages. The pulse rate was measured by the instrument called as pulse oxy-meter. It is a portable instrument which can be clipped on respondent's finger. It detects the pulse rate because of the infrared beam passing through the nail of respondent. Different packages were shown to the respondents to measure their pulse rates. The packages contained the appeals of design, attractiveness, usability and brand.

#### 4.1 Sampling Design

**Sampling Population:** Sampling population consisted of the different users of packaging who use the packaging in their day to day life.

**Sampling Elements:** Individual respondents were the sampling elements.

**Sampling Size:** 103 respondents for questionnaire and 15 respondents for pulse rate

#### 4.2 Data Collection

Self designed questionnaires were administered to gauge the preferences of respondents. The questionnaires were rated on the 5 point likert scales with 1 for strongly disagree and 5 for strongly agree.

#### 4.3 Tools used for Data Analysis

Following tools were used for data analysis:

- a) Reliability test to measure the reliability of questionnaire.
- b) Multiple regression analysis
- c) Pulse rate measurement by portable pulse oxy meter. Raw data were captured in spreadsheet software (Microsoft Excel) and then Imported to software statistical package (SPSS 16 for windows)
  - Using reliability analysis one can determine the extent to which the items in the questionnaire are related to each other and we can get the overall index of repeatability or internal inconsistency of a scale as a whole. Also we can identify the Problem items that should be excluded from the scale. Alpha reliability test of the administered questionnaire was carried out. Alpha (chronbach) is a model of consistency based on average inter-item correlation.
  - Multiple regression analysis was used to find out the statistical relationships existing between dependent and independent variables. Form the framework of research following dependent and independent variables were identified:

 Packaging design is dependent upon the buyer attraction towards a package, communication to the buyer, convenience in handling and using, saleability of product and green aspect.

#### Hypotheses for relationships between package design and buyer attraction, communication to the buyer, convenience in handling, saleability of product, green aspect.

H0: Significant linear relationship does exist between package design and buyer attraction.

H1: Significant linear relationship exists between package design and buyer attraction

H0: Significant linear relationship exist does not exist between package design and communication to the buyer

H1: Significant linear relationship exists between package design and communication to the buyer.

H0: Significant linear relationship exist does not exist between package design and convenience in handling.

H1: Significant linear relationship exists between package design and convenience in handling.

H0: Significant linear relationship exist does not exist between package design and saleability of product.

H1: Significant linear relationship exists between package design and saleability of product.

H0: Significant linear relationship exist does not exist between package design and green aspect.

H1: Significant linear relationship exists between package design and green aspect.

## Hypotheses for relationships between liking for package and brand, country of origin, colour connotation, symbol connotation and size.

H0: Significant linear relationship does not exist between liking for package and brand

H1: Significant linear relationship exists between liking for package and brand

H0: Significant linear relationship does not exist between liking for package and country of origin.

H1: Significant linear relationship exists between liking for package and country of origin.

H0: Significant linear relationship does not exist between liking for package and colour connotation

H1: Significant linear relationship exists between liking for package and colour connotation

H0: Significant linear relationship does not exist between liking for package and symbol connotation

H1: Significant linear relationship exists between liking for package and symbol connotation

H0: Significant linear relationship does not exist liking for package and size

H1: Significant linear relationship exists between liking for package and size

# Hypotheses for the relationships between communication through the package and independent variables like information, shape, brand image and symbols/logos.

H0: Significant linear relationship does not exist between communication through the package and information.

H1: Significant linear relationship exists between communication through the package and information.

H0: Significant linear relationship does not exist between communication through the package and shape.

H1: Significant linear relationship exists between communication through the package and shape.

H0: Significant linear relationship does not exist between communication through the package and brand image.

H1: Significant linear relationship exists between communication through the package and brand image.

H0: Significant linear relationship does not exist between communication through the package and symbols/logos.

H1: Significant linear relationship exists between communication through the package and symbols/logos.

## Hypotheses for the relationship between usability of package and ease of handling, disposability and protection.

H0: Significant linear relationship does not exist between usability of package and ease of handling.

H1: Significant linear relationship exists between usability of package and ease of handling.

H0: Significant linear relationship does not exist between usability of package and disposability

H1: Significant linear relationship exists between usability of package and ease of disposability

H0: Significant linear relationship does not exist between usability of package and protection

H1: Significant linear relationship exists between usability of package and protection.

The above listed hypotheses are tested for their level of significance for the acceptance and rejection of hypothesis.

#### **5 RESULTS AND DISCUSSIONS**

Cronbach Alpha statistic was calculated to assess the reliability of the questionnaire and to find the inter item reliability. The Cronbach Alpha value comes out to be 0.703 which is greater than 0.7 so it can be concluded that questionnaire was reliable enough as an instrument to test the preferences of the respondents.

TABLE 2: RELIABILITY STATISTICS

Cronbach's	Cronbach's Alpha Based	N of
Alpha	on Standardized Items	Items
.703	.719	20

TABLE 3: ITEM STATISTICS FOR ATTRIBUTES

		Std.	
	Mean	Deviation	N
Package Design	4.09	.702	103
buyer attraction	2.67	1.061	103
Communication	4.03	.692	103
Convenience	2.84	1.194	103
Saleability	2.83	1.061	103
Environmental factors	2.72	1.451	103
Likingness	2.42	.891	103
Brand	3.81	.929	103
Country of Origin	3.67	.706	103
Colour	3.71	.956	103
Symbols/Logos	3.82	1.144	103

Size	2.63	1.102	103
Communication	3.73	.819	103
Shape	3.81	.768	103
Brand Image	4.02	.852	103
usability	3.35	.801	103
Ease of handling	2.54	1.092	103
Information	3.35	1.289	103
Disposability	3.81	1.164	103
Protection	4.22	.839	103

The table above shows that package design, communication through the package, brand image and protection are the factors that were given the highest weightage by the respondents. Also the inter item correlation matrix shows that package design is highly correlated to convenience in handling of package and usability of package. It is also found that package design is negatively correlated to saleability and brand which indicates towards the case that a branded product can be given less weight age on package design and also if product is highly saleable then less importance can be given to package design.

Also it was learnt from the inter item correlation matrix that liking for a package is highly correlated to buyer attraction and usability of the package which suggest that the reuse of the package like the water bottles prompts user to chose that package. Communication through the brand is highly correlated to shape of the package. Similarly the matrix showed that usability of the package has highest correlation to the ease of handling of the package and also the practical findings reveal that in case of creams or viscous products the shape of opening had been broadened for the product to flow easily thus increasing the ease of handling. Table below shows the coefficients obtained:

TABLE 4: MODEL SUMMARY FOR PACKAGE DESIGN

Model	R	R	Adjusted
		Square	R Square
1	.824(a)	.679	.621

Predictors: (Constant), Environmental Factors, Communication, Convenience, Saleability, Buyer Attraction

b. Dependent Variable: Package Design

The adjusted R2 value tells us that this model accounts for approximately 68% variance in the package designrelatively good model.

TABLE 5: ANOVA FOR PACKAGE DESIGN

	Sum of		Mean		
Model	Squares	df	Square	F	Sig.
1 Regression	54.443	5	10.889	40.936	.000(a)
Residual	25.770	97	.266		
Total	80.213	102			

a. Predictors: (Constant), Environmental Factors, Communication, Convenience, Saleability, Attraction

b. Dependent Variable: Package Design

The above table reports an ANOVA, which assesses the overall significance of our model. As p<0.05, the model is significant.

TABLE 6: COEFFICIENTS FOR PACKAGE DESIGN

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.254	4.921	.000
	Buyer Attraction	.313	3.019	.003
	Communication	.171	1.892	.061
	Convenience	.295	3.185	.002
	Saleability	260	265	.791
	Environment Factors	.106	1.179	.241

a. Dependent Variable: Package Design

The standardized Beta coefficients give a measure of the contribution of each variable to the model. A large value indicates that a unit change in this variable has la large effect on the dependent variable. The t and sig. value give a rough indication of the impact of each predictor variable. The table above shows the statistical relationship between the dependent variable package design and independent variables. The relationship can be established as

Package design = 2.254 + 0.313 Buyer Attraction + 0.173Convenience in handling

As per the table shown above significance value or p value for buyer attraction < 0.05 and also the value is beta is significantly positive so null hypothesis is rejected and alternate hypothesis is accepted thus showing that significant linear relationship exists between package design and buyer attraction. Yoghurt pots: one plain pot and one bright/cheerful looking pot. The mothers were told that both pots contained the same healthy ingredients, but that the bright pot was slightly more expensive. Despite the price premium, 88% of the mothers said they would choose the bright pot as their children would be more likely to eat it [10]. The significance value for communication is > 0.05 at 95% confidence level so null hypothesis could not be thereby showing that no linear relationship exists between package design and communication. The table also shows that significance value for convenience is <0.05 at 95%confidence level and it suggests the rejection of null hypothesis and acceptance of alternate hypothesis which conveys that significant linear relationship exists between convenience and package design suggesting that packages must be designed so that they are convenient to handle. From the table shown above it can be seen from the value of coefficient that package design and saleability of product are negatively related so it can be concluded that highly selling product can be compromised on its packaging also since the significance level of saleability is >0.05 then the null hypothesis can be accepted suggesting that

no significant relationship exists between package design and saleability.

It is evident from the table that significance value of environmental factors >0.05 so it suggests the nonrejection of null hypothesis that depicts that no significant relationship exists between package design and environmental factors. Also the value of coefficient for environmental factor is 0.106 which is too less to have an impact thus suggesting that Indian context the people are less inclined towards the environmental issues. On the basis of the multiple regression model shown above for package design it can be concluded that buyer attraction is the most significant aspect of package design and from the analysis above it can be summarized that people place environmental factors at relatively lower level of significance. If we think something tastes or works better because of its packaging, is there any difference than if it really does? Perception of a food product, for example, has been shown to be affected by a variety of factors including taste, odour, information from labelling and images, attitudes, memory from previous experience, price, prestige, nutritional content, health belief, familiarity and brand loyalty. If the halo effect created as a result of visual factors truly does modify subsequent product perceptions, then packaging is not just a form of protection or promotion but also serves as a means of improving the overall product experience. When the pulse rate of 15 respondents were measure by showing them packages then 9 out of 15 people has high pulse rate when shown the attractive shoe package and innovative polybags by Pantene and nail biter nail paint which corroborates and align with the findings of multiple regression analysis.

## Multiple Regressions analysis and discussion for Liking for Package

TABLE 7: MODEL SUMMARY FOR LIKING FOR PACKAGE

Model	R	R	Adjusted
		Square	R Square
1	.805(a)	.648	.609

a. Predictors: (Constant), Size, CountryofOrigin, Symbols\_Logos, Brand, Colour

b. Dependent Variable: Likingness

The adjusted R2 value tells us that this model accounts for approximately 65% variance in the liking package - relatively good model.

TABLE 8: ANOVA FOR LIKING FOR PACKAGE

	Sum of		Mean		
Model	Squares	df	Square	F	Sig.
1 Regression	58.435	5	11.687	34.783	.000(a)
Residual	32.614	97	.336		
Total	90.049	102			

a. Predictors: (Constant), Size, CountryofOrigin, Symbols\_Logos, Brand, Colour

b. Dependent Variable: Likingness

The above table reports an ANOVA, which assesses the overall significance of our model. As p<0.05, the model is significant.

TABLE 9: COEFFICIENTS FOR LIKING FOR PACKAGE

Model	Standardized Coefficients	t	Sig.
	Beta		
1 (Constant)	2.362	4.134	.000
Brand	313	-3.186	.002
CountryofOrigin	054	538	.592
Colour	.194	1.652	.028
Symbols/Logos	.000	002	.998
Size	.367	3.785	.000

a. Dependent Variable: Likingness

The multiple regression model for liking for package can be given as:

*Liking for package* = **2.362-0.313** *Brand* + **0.194** *Colour* + **0.367** *Size* 

From the table shown above the significance value for brand<0.05 at the 95% level of confidence so the null hypothesis is rejected and alternate hypothesis is accepted thereby corroborating that significant linear relationship exists between liking for package and brand. But at the same time it shows that liking for a package and brand are negatively related to each other. It can be interpreted that if products are branded then customers do not give much weightage to package. Also during pulse rate measurement respondents showed significant shoot up in pulse rate by watching the coca cola bottle. Country of origin had the significance value>0.05 so null hypothesis could not be rejected that no significant relationship exists between country of origin and liking for package. As far as the colour is concerned we can see that the significance value is < 0.05 so null hypothesis is rejected and alternate hypothesis which postulates that significant linear relationship exists between liking for package and colour so customers will like the colourful products. Symbols and logos do not seem to have an impact over the liking for package and also the significance value is >0.05 which suggests the non-rejection of null hypothesis which postulates that no significant relationship exists between symbols/ logos and liking for package suggesting that customers get more attracted by colours and size rather than symbols and logos.

In the regression model shown above the size of package had significant impact over the liking for package and it is positively related to liking. Also the significance value for size is <0.05 at 95% confidence level so null hypothesis is rejected and alternate hypothesis is accepted thereby stating that significant linear relationship exists between liking for a package and size of package which indicates the popularity of miniaturization of products in the form of shampoo

sachets or deo sticks etc. From the pulse rate table also it is evident that brand showed significant impact on the pulse rates of people as it shot up in 11 out of 15 respondents when they saw the coke bottle. Packaging in different serving sizes can extend a product into new target markets or help to overcome cost barriers. In developing markets such as South Africa, the pack size can mean the difference between the success or failure of a brand in the informal sector. Smaller packages and portions are usually priced at a lower absolute level making the product more readily affordable to a greater proportion of the population. Some examples of success in this regard include smaller Sunlight and Omo packs servings which have increased the penetration of these brands substantially. The popularity of single cigarettes and smaller packs for analgesics has proven that "good things really do come in small packages". Where smaller packages are not available, entrepreneurial individuals often buy the product and transfer it into smaller non-branded packaging for resale which completely nullifies all the branding benefits of the original pack.

In more developed countries, brands that don't offer smaller or single-size servings make themselves immediately unsuitable for those living in smaller or single households that do not desire family-size packs. On the other hand, larger packs can extend the category to a more social environment. For example, the 5l juice bottle expanded the fruit juice category from individual and home consumption to social and catering purposes. The popularity of quart size beers is another example to this the larger size means that the cost per volume is cheaper and more affordable for the masses.

## Multiple Regression Analysis for Communication through the Package

TABLE 10: MODEL SUMMARY FOR COMMUNICATION THROUGH PACKAGE

Model	R	R	Adjusted
		Square	R Square
1	.864(a)	.746	.714

a. Predictors: (Constant), Symbols/Logos, Information, Shape, Brand Image

b. Dependent Variable: Communication

The adjusted R2 value tells us that this model accounts for approximately 75% variance in the communication through - relatively good model.

TABLE 11: ANOVA FOR COMMUNICATION THROUGH PACKAGE

			Mean		
	Sum of		Squar		
Model	Squares	df	e	F	Sig.
1 Regression	59.483	4	14.871	77.052	.004(a)
Residual	18.905	98	.193		
Total	78.388	102			

a. Predictors: (Constant), Symbols/ Logos, Information, Shape, Brand, Image

b. Dependent Variable: Communication

The above table reports an ANOVA, which assesses the overall significance of our model. As p<0.05, the model is significant.

TABLE 12: COEFFICIENTS FOR COMMUNICATION THROUGH PACKAGE

17(6)(7(6)2				
		Standardized		
Model		Coefficients	t	Sig.
		Beta		
1	(Constant)	2.214	4.311	.000
	Information	.178	1.522	.031
	Shape	.300	3.121	.002
	Brand Image	.019	.158	.022
	Symbols/Logos	057	561	.576
	Shape Brand Image	.300 .019	3.121 .158	.002

a. Dependent Variable: Communication

The multiple regression model for communication aspect of packaging can be given as:

Communication through package = 2.214 + 0.178 Information + 0.300 Shape + 0.019 Brand Image

From the table shown above it is evident that information is positively correlated communication and the value of significance is less < 0.05 at 95% significance level so the null hypothesis is rejected and alternate hypothesis is accepted thereby stating that significant positive relationship exists between communication through the package and information furnished by the package but at the same time it can be seen that value of coefficient for information is relatively less than shape and brand image which suggests that information should not be too much to cause the clutter on the package. Furthermore, Grossman and Wisenblit [14] found that informational elements tend to be less important than visual in low involvement product decisions: "so graphics and colour become critical" [38] so it can be inferred that information plays a vital role in a packaging of products but it should be at the optimum level. The shape has the most profound impact on communication through the package as it is evident from the value 0.300 which is highest among all dependent variables. Also the significance value suggests the acceptance of alternate hypothesis thus establishing a positive linear relationship between the communication aspect of package and shape of package. Brand image of product also has significant impact over the communication through the package which is evident from the value of coefficient for brand image which is 0.019. Also the significance value is < 0.05 which suggests the acceptance of alternate hypothesis and rejection of null hypothesis. The package thus communicates to the customers through its brand image. Symbols and logos don not have significant relationship with communication aspect as it is evident from the value of significance which is >0.05 and also the coefficient of symbols / logos is negative so it does not impact the customers to the greater extent.

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The findings of multiple regression analysis were further corroborated when the 10 out of 15 respondents showed significant shoot up in pulse rate when attractive shape of shoe packaging was showed to them.

### Multiple Regression Analysis for Usability of the Package

TABLE 13: MODEL SUMMARY FOR USABILITY OF THE PACKAGE

Model	R	R	Adjusted	Std. Error of
		Square	R Square	the Estimate
1	.850(a)	.722	.681	.698

a. Predictors: (Constant), Protection, Disposability, Ease of Handling

b. Dependent Variable: Usability

The adjusted R2 value tells us that this model accounts for approximately 68% variance in the Usability of the package – relatively a good model.

TABLE 14: ANOVA FOR USABILITY OF THE PACKAGE

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	47.232	3	15.744	85.565	.000(a)
Residual	18.186	99	.184		
Total	65.417	102			

a. Predictors: (Constant), Protection, Disposability, Ease of handling

The above table reports an ANOVA, which assesses the overall significance of our model. As p<0.05, the model is significant.

TABLE 15: COEFFICIENTS FOR USABILITY PACKAGE

	Model	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.818	3.911	.000
	Ease of handling	.477	5.371	.000
	Disposability	.063	.720	.473
	Protection	.118	1.322	.039

a. Dependent Variable: Usability

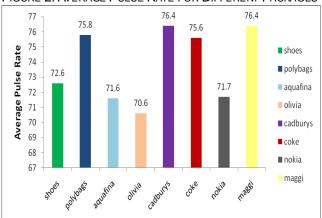
The multiple regression model for liking can be given as:

Usability of Package = 1.818 + 0.477 Ease of handling + 0.118 Protection

From the multiple regression table shown above it can be seen that significance value for ease of handling of package is< 0.05 at 95% significance level so the null hypothesis is rejected and alternate hypothesis is accepted which postulates that the significant relationship exists between usability of product and ease of handling. Also the value of coefficient which is

highest among dependent variables shows that it has got highest impact on usability which further suggests that the marketers now a day devise the packages in such a way so that the handling of product inside package becomes easy. Example can be the larger diameter caps for creams, face wash and tooth pastes that are viscous in nature. Also from the table above the significance value for disposability is >0.05 at the confidence level of 95% so the null hypothesis is accepted which postulates that significant linear relationship does not exists between usability of package and disposability which is related to environmental factors. So it can be interpreted in Indian contexts that disposability is not given due weightage when usability is weighed against disposability. The significance value for protection is <0.039 which is lower than 0.05 so null hypothesis is rejected and alternate hypothesis is accepted thereby reaffirming that significant linear relationship exists between usability of package and protection which suggests that the products such as medicines are packaged in such a way so as to protect it from damage from light or environment.

FIGURE 2: AVERAGE PULSE RATE FOR DIFFERENT PACKAGES



The graph above shows that the average pulse rates of 15 respondents were higher for the brands like Cadburys that had purple coloured package, maggi package, innovative polybags and coca cola. Coca cola suggests the liking for package based on brand, maggi suggests the liking based on attractiveness and information on the packages through visuals and colours, package of Cadburys was also significant in pulse rate test. Certain packaging colours are associated with particular tastes or qualities e.g. pink and red indicate sweetness - white and blue suggest purity and refinement - green is synonymous with mint flavoured goods, although mint ice cream is only mint coloured by virtue of food colouring. Purple, gold and black are used to indicate exclusivity, expensiveness, luxury and quality, dependent on the nature of the product. Colour is also used by manufacturers to plant specific ideas in our minds about their products, for example using white, blue and grey packaging to indicate the freshness and purity of white flour and sugar. Adding red to these three colours denotes a powerful product such as

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bleach. Orange and yellow is used on packaging for cereals and vitamins to convey the healthy energy these products are supposed to give so maggi uses yellow colour for its product packaging and respondents during pulse rate testing seem to associate yellow colour with taste and health hence this would have resulted in the shoot up of pulse rate.

#### **6 CONCLUSION**

Packaging plays an important role in the marketing context. The right packaging can help a brand carve a unique position in the marketplace and in the minds on consumers. Packaging has a better reach than advertising does, and can set a brand apart from its competitors. It promotes and reinforces the purchase decision not only at the point of purchase, but also every time the product is used. Packaging in different serving sizes can extend a product into new target markets or help to overcome cost barriers. Packaging can even drive the brand choice (especially in the context of children's products). As the market becomes more competitive and shelf space is at a premium, products need to be able to stand out from the crowd and packaging needs to provide more than just functional benefits and information. Under time pressure and in low involvement purchases, less time is spent looking at the detail and information provided on packaging - this is especially true in the FMCG category.

The research conducted on packaging attributes in the current research work shows that buyer attraction was a important factor in the package design and the companies are innovating new ways and means to attract customers through its attractive package design. Respondents also seem to give weight age to the communication and convenience in handling of the package. Respondents did not give due weight age to the environmental considerations and disposability of the package which indicates that awareness needs to be created among people so that they prefer packages that are easily disposable and are environmental friendly. Also research indicated that if the branded products are given to the people in ordinary packaging they are more likely to accept it because the branded products reduce the Caveat Emptor of the customers and they are more likely to give weightage to branded product than to the package. Symbols and logos did not have significant impact on liking for package and size of the package showed significant buoyancy which indicates towards the miniaturization of product packaging in the form of shampoo sachets and deodorant sticks etc.

The shape of the package was the significant attribute of communication through the package and an innovative pack design can help to set a brand apart from its competitors. The marketing world is full of examples of brands that have used packaging to carve a unique

position in the marketplace. Pringles potato chips cylinder and Absolute vodka bottle are widely cited international examples, while in a South African context, recent examples include L'Aubade water bottle (up market coloured plastic bottles that are suitable for virtually any restaurant table), Clover milk easy pour packs (long-life screw top packs) and Country Fresh ice-cream tubs. The popularity of Ouma rusk tins is another testimony to packaging adding value to the product.

The findings also shows that ease of handling the packages and protection are also weighed highly by respondents and thus it indicates towards the reasoning that most of the tooth pastes have become soft plastic tubes rather than that old tin tube toothpaste used by companies like forhans and colgate. Also the soap dispenser is innovations for the ease usage of liquid soaps. The respondents gave due weighted to the protection aspect of packaging also and it suggests that most of the syrup bottles are colored either dark brown or dark green so as to protect it from sunlight. The pulse oxymeter test showed that the respondents were more inclined towards the packages like coke, maggi, attractive shoe packages and attractive polybags. It also suggests that respondents may more likely to be attracted towards the edible items and their packages.

### 7 PACKAGING STRATEGY BASED ON RESEARCH FINDINGS

The packaging today has become the vital tool to make the products the "Face in the crowd rather than face of the crowd". It has become the most significant aspect to position the products in the market in a effective manner. The multiple regression analysis of different packaging attributes resulted in surfacing of very important information regarding the packaging parameters. The buyer attraction emerged as the important factor which signals towards the scenario when the packages need to be attraction driven rather than information driven. "In most cases, our experience has been that pack designs are more likely to influence the consumer perception of the brand than advertising". When the pulse rate of respondents was measured it showed that when bright colured packages like maggi were shown to them then their pulse rate escalated .The communication aspect of package was marginally significant so the package as a means to communication as per this research does not carry that significant weight so the more importance should be given to the attracting capability of the package. It was said by Jugger [20] that "Brand purchases are being made or broken in the 'final five seconds'. So it is very important to decide which attributes of packaging needs to be highlighted and which needs to be downplayed. The study revealed that in Indian context the respondents were not environment conscious to a great extent and the environmental factors pertaining to package design were of less significance so the packages must be designed in such a ways that more effort should be ISSN 2229-5518

made to produce more environmental friendly packages so balance the low environmental concern. Anonymous [2] said that the role of packaging is changing from that of 'protector' to 'information provider' and 'persuader'. Size emerged as a very important factor thus indicating towards the variation of packages sizes available for a particular product. We can take examples of shampoo sachet, deodorant sticks, small sized toothpaste packages or even more of FMCG products. We find that variation of size make the affordability of product adjustable as per the income level and standard of living. Packaging in different serving sizes can extend a product into new target markets or help to overcome cost barriers. In developing markets such as South Africa, the pack size can mean the difference between the success and failure of a brand in the informal sector. Smaller packages and portions are usually priced at a lower absolute level – making the product more readily affordable to a greater proportion of the population. The popularity of single cigarettes and smaller packs for analgesics has proven that "good things really do come in small packages". Where smaller packages are not available, entrepreneurial individuals often buy the product and transfer it into smaller non-branded packaging for resale - which completely nullifies all the branding benefits of the original pack. In more developed countries, brands that don't offer smaller or single-size servings make themselves immediately unsuitable for those living in smaller or single households that do not desire family-size packs. On the other hand, larger packs can extend the category to a more social environment For example; 51 Coca Cola bottle expanded the beverages category from individual and home consumption to social and catering purposes. The popularity of quart size beers is another example where the larger size means that the cost per volume is cheaper and more affordable for the masses.

Shape is also very important attribute as it is evidenced form this research and this signals towards the fact that previous shape of package can become important marketing tool. In case of coca cola or other soft drinks, the bottle is the package so the shape of the bottle becomes its brand identity. If we analyze the shapes of different soft drinks like pepsi or sprite or fruit juices, we can see that different companies have got different shape of bottle. So the shape of package can become an innovative marketing tool creating an iconic brand image through different shaped packages. Instead how we feel about the package is often transferred to how we feel about the product itself. In essence, for consumers the product is the package and the product combined. In this manner the shape of the package must be designed in such a way so as to enable the product to cut through the clutter on shelf space and create its own distinct identity.

The ease of handling also emerged as a very important tool in packaging attributes. The replacement of tin pack of toothpaste with flexible, soft plastic pack, broadening of caps of facewash, shaving cream so that the package can stand upside down, innovation of liquid soap dispenser is the testimony to the fact that more and more effort should be focused on making the package easy to handle and use by the customer. The protection was also given weightage by the respondents so the packages must be designed in such a way that protection from external factors like ultra violet radiations or sunlight is retained and product preservation can be maintained.

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