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## **EXAMINING THE RELATIONSHIP BETWEEN PACKAGING AND CONSUMER BUYING BEHAVIOR (CASE STUDY: COMPARISON OF PASTEURIZED 1.5L MILK OF BRANDS ROOZANEH AND MIHAN)**

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### **ABSTRACT**

Today, packaging is one of the necessities of human life. Different types of packaging plays a vital role in the production, storage, distribution and marketing of consumer and non-consumer. For some companies, packaging could cause differentiation from competitors and be considered as a competitive advantage. Packaging is also one of the most important factors that influence the buying decision at the point of sale that's where it turns into an essential part of sales process. Different brands of products use a wide range of packaging features such as colors, designs, shapes, symbols and messages. This will attract and strengthen customer attention and helps the product identification via the image provided. The population of this survey includes consumers of Mihan brand 1.5L milk and Roozaneh brand 1.5 L milk across a number of grocery stores in Shiraz city. The number of sample being analyzed was 193 individuals and the data collection tool was questionnaire. For analysis of the information, statistical tests of correlation, Spearman and regression were used via SPSS software. The results of the study indicate that packaging elements such as color, context image, packaging material, style of writing, cover design, printed information and innovation have positive and significant relationship with consumer buying behavior.

**Keywords:** *Packaging, Consumer Buying Behavior, Competitive Advantage, Packaging Elements*

### **INTRODUCTION**

Packaging has become an integral part of modern society and is one of the most important factors influencing customers' mind at the time of purchase. Packaging acts as the language of product and provides necessary information regarding the product to customers. In other words packaging is the primary means of identifying a product and indicates the superiority of a product in a market. Packaging is an important component of the marketing system of product either at domestic or foreign level which has a very active role in increasing sales, inventory turnover in the company's warehouse and is also responsible for maximizing the revenue of producers. Manufacturers active in this field have long had a special look at this concept in order to increase their competitiveness in national and international markets and step in the course of increasing their market share by the aid of factors such as graphic design and the use of quality raw material (Bone and Corey, 2000).

The role of packaging in our everyday and social life has so increased that is visible all around us as there is virtually no product being supplied into markets without packaging. This role is one of the first requirements of a product for market entry. This factor is so important that in today's business world and competitive market of products, especially in international realm, it has grabbed special attention into itself and has become an important academic discipline in advanced industrial countries. Many experts believe that packaging lies within the tasks of marketers because by having a comprehensive understanding of the interests and preferences of customers in market they could best decide upon the design of fascinating packages. Even though there does not exist much attention to packaging in developing countries lacking strong industry, Packaging industry devoted a significant part of the market value to itself in international transactions.

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### **LITERATURE REVIEW**

#### **Consumer Buying Behavior**

Consumer behavior is the study of purchasing units and exchange processes included in the purchase, use, and disposal of goods, services and ideas. Berkman and Gilson (1981) understand consumer behavior as activities in which people engage in actual or potential use of the various products of market including goods, services, ideas, and the environment of stores. Salmon (1999) consider consumer behavior as “physical, emotional and mental activities which people are engaged with when choosing, purchasing, using and disposing goods and services to satisfy their needs and desires” Hawkins (1992) defines consumer as a decision unit who attempts to collect and process information consciously or unconsciously at present situation and who works for his satisfaction and improvement of his lifestyle.

#### **Packaging**

Packaging includes design and production of container or wrapper for a product (Kotler and Armstrong, 2005). In view of Ampuero and Vila, packages are in direct contact with product, maintain and protect the product and prevent it from being spoiled, cause it to be identified, and facilitate its transport in addition to granting commercial aspects to the product (Ampuero and Vila, 2006). Lee and Lye (2003) have defined packaging as the science, art and technology of protecting products to control, transport, and store them and to display information.

According to Kotler and Armstrong (2008), product packaging includes all design and manufacturing activities of a container or wrapper for a product, which have three major duties: protecting the contents of package, providing information and differentiating the product from other brands via attracting consumer attention. Packaging as art, science and industry of preparing goods for transport and sales, and as a tool for product development is a vital component of product which causes its more flexibility and ease of use. Just as branding, packaging could affect customers' attitudes regarding the product.

#### **Packaging Elements**

Consumer decision making could be defined as a psychological orientation that reflects consumer choice approach (Silayoi and Speece, 2004). In addition, when viewing product package, consumers tend to unconsciously imagine the aspects of the product such as appearance, taste and smell (Underwood et al., 2001).

From the viewpoint of Silayoi and Speece (2007) there are five elements in packaging which affect consumer purchase intention. These five elements are dividable into two categories: visual elements and informational elements. Visual elements include dimensions such as color, size, shape and images placed on packages which are mostly influential on the emotional dimension of decision-making. Informational elements include information about the product and technology used in packaging which mainly affects the cognitive aspect of decision-making.

#### **Packaging and Consumer Buying Behavior**

Having a correct understanding of customers and their buying behavior is of numerous advantages. By understanding customers, managers and marketers of a company could make the best decisions to meet customer needs and achieve the company goals.

- **Identification:** The overview and appearance of a package help consumers to identify the product brand. For example, consumers more easily identify those packages having the same color as the original ones.
- **Attention:** the appearance of package could impact the evaluation of consumers about the product. For instance, when content is not visible, graphics and other features of packaging would have significant impact on consumer attitudes regarding that product (Nancarrow et al., 1998).
- **Impact on Attitudes:** the appearance and look of packaging could have considerable impacts on consumer purchase intention and will. Consumers usually when being under time pressure to buy a product are influenced by non-verbal signals. In such purchasing situations, consumers pay attention to

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look and display instead of performing evaluation and noticing verbal information. . Also under the condition that customers do a sudden and unplanned purchase, they mostly notice the label of product and this group of customers prefers simpler labels (Dobson, 2003). Labeling is a subset of packaging. Retailers should sell their products labeled. Label ranges from small pieces of paper being adhered to the product up to highly complex diagrams that are part of packaging. A label could only contain a brand name or much other diverse information. In some cases law may even require the seller to provide much more information on the tag although he may wish a simple one. The first task is to recognize a product or brand. Packaging could, by the information provided on the package, communicate with buyers and inform them of the usage, benefits, and also the combination and components of the package. As an example, labels of foodstuffs would assist buyers in understanding the nutritional value of products and also the possible allergy posed toward some groups of consumers. However, one of the concerns regarding the information available on packages is that extra information could confuse buyers and give them wrong information (Kotler and Armstrong, 2010).Packaging may not have considerable role in cases such as inexpensive goods, but is of highly significant role regarding some products such as luxuries. Because of this, many of the practitioners of this industry consider packaging as one of the marketing mix elements.

### **Packaging color**

According to the empower-yourself-with-color-psychology. Color of packaging is important and apart one company product from other. Packaging color draw attention of the consumers the more the color attractive the more consumer will like it. Different competitor use different color like white, black use for power, blue for trust, red for energy, green for balance, orange, yellow, purple they have different meaning according to the consumer perception (Shah et al, 2013).

### **Packaging Material**

Material of packaging is important element which prevents the product from loss. High quality material attracts customer then low (Shah et al, 2013).

### **Font Style**

Font is important element of packaging which attract the customer attention. Companies who use best font style have successful in the market (Shah et al, 2013).

### **Design of wrapper**

Ulrich R. Orth (2009) Packaging is used for identification of the product. Play an important role in attracting the consumer. Children are likely more sensitive in case of wrapper design. So company has to make a wrapper design which attracts the children as well.

### **Printed Information**

Printed information contain all the information related to the product quality, price, description which help to identify the brand (Shah et al, 2013).

### **Background-image**

In 1999 Goldberg et al. says that image on the product is important so that they increase the attention and increase familiarity with the particular product. Background image is the image in the mind of the customer which helps to identify the brand of the product.

### **Innovation**

Bringing innovation in the packaging design also increase the value of the product like easy open, easy store, recyclable, child proof, breakability etc. in the consumer mind (Shah et al, 2013).

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### HYPOTHESES

- H1:** There is a significant relationship between consumers buying behavior and the color of packaging.  
**H2:** There is a significant relationship between consumers buying behavior and background image.  
**H3:** There is a significant relationship between consumers buying behavior and the material of packaging.  
**H4:** There is a significant relationship between consumers buying behavior and writing style.  
**H5:** There is a significant relationship between consumers buying behavior and cover design.  
**H6:** There is a significant relationship between consumers buying behavior and printed information.  
**H7:** There is a significant relationship between consumers buying behavior and innovation.

### MODEL

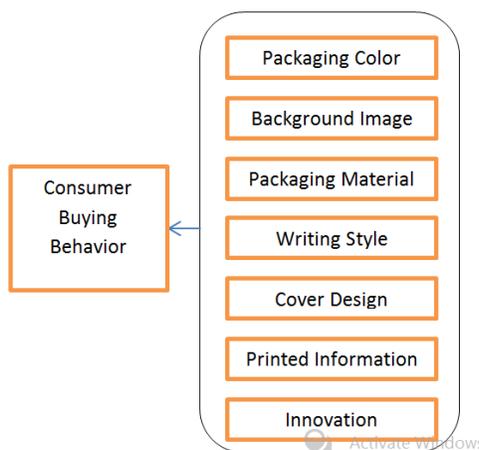


Figure 1: Conceptual Model of Research (Mitul et al. (2012))

### METHODOLOGY

Research is the systematic process of search for determining an undetermined position. So research is a process through which one can explore unknowns and obtain cognition toward them. In this process the manner of collecting evidences and turning them into findings is called methodology (Sarmad, 1997). Methodology is one of the factors affecting the study and its results and often is dependent on the purpose of research, the nature of subject, administrative facilities and research hypotheses (Bazargan et al. 2004). In this study methodology is categorized based on three pillars: this research is considered an applied research regarding the purpose. Applied researches are those conducted about everyday personal, collective, occupational and social life. The aim of these studies is to test theoretical concepts in real situations and problems to improve a process or product (Delavar, 2006). From the aspect of nature and methodology, this study lies in the category of descriptive-co relational studies. On another side, we could divide studies into two types of longitudinal and cross-sectional ones based on being conducted at a single time point or at several time points. Regarding time horizon, this research is considered a cross-sectional study as is conducted in a single specified time point.

### RESEARCH DOMAIN

The research places in the domain of product packaging and consumer buying behavior. The studied subject here is the examination of the relationship between product packaging and consumer buying behavior (case study: comparison of Mihan brand 1.5 L milk with Roozaneh brand 1.5 L milk). The geographical domain of the research was Shiraz city and regarding the time domain, the time-interval of data collection was the first three months of 2014.

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**POPULATION AND SAMPLING TECHNIQUE**

A proper definition of statistical population could be considered as all those hypothetical or actual members whom we wish to extend out the findings of study over them

$$n = \frac{Z_{\alpha/2}^2 P(1 - P)}{\epsilon^2} \approx 196$$

N: population

Z<sub>α/2</sub>: reliability coefficient to sample results

P: estimated proportion of an attribute that is present in the population, here it is considered as 0.5

(1-P): estimated proportion of an attribute that is not present in the population, here it is considered as 0.5

E: the desired level of precision

The questionnaires were distributed according to the sample size and finally 191 sample customers of Mihan pasteurized milk and 193 sample customers of Roozaneh pasteurized milk were assessed by the questionnaires.

**Table 1: Distribution of Questions and Cronbach's alpha**

Constructs	No of Item	Value of Cronbach's α	
		Mihan	Roozaneh
Consumers Buying Behavior	5	0.747	0.754
Coloring	2	0.785	0.741
Background Image	2	0.838	0.797
Packaging Material	2	0.774	0.862
Writing Style	2	0.719	0.743
Cover Design	2	0.783	0.753
Printed Information	2	0.851	0.707
Innovation	2	0.838	0.797
Overall Questionnaire		0.927	0.920

**Survey instrument development (Measures)**

Tool is the means of collecting information. Here we have used the standard questionnaire of Mitul et al. (2012) which constitutes of 19 standardized questions being designed in the form of 5- point Likert scale. Overall the questions were divided into 8 sections and each section was devoted to the measurement of a single characteristic (research variable). A pretest with 30 respondents was conducted to validate the constructs. The Cronbach's alpha for the customers of Mihan pasteurized milk was 0.919 and for Roozaneh pasteurized milk was 0.9371.

**IMPLEMENTATION AND DATA ANALYSIS METHOD**

Data analysis consists of two parts:

- a) Descriptive statistics: in describing collected data, we have used frequency indices, percentage frequency, indicators of central tendency and dispersion.
- b) Inferential statistics: to test the hypotheses of the research we have used path analysis technique and also multi-variable regression equations including independent and dependent variables. Path analysis technique is based on a set of multi-regression analyses and the assumption of having relationships between dependent and independent variables. This method stresses on the innovative use of visual diagrams which are known as path diagrams. Path diagram is used to visually describe the relationships between the set of variables under study (Kalantari, 2003). The calculations were performed using SPSS statistical software.

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**RESULTS OF DATA ANALYSIS**

As could be seen in Tables 2 and 3, correlation coefficients of all data were determined. All the independent variables had high correlation with dependent variables. The notable point present in Tables 2 and 3 is that the research variables are highly correlated with each other.

**Table 2: Results of Pearson Correlation Test between Studied Variables- Customers of Roozaneh Milk**

Variable	Correlation Coefficient							
Consumers Buying Behavior	1.00							
Coloring	0.562	1.00						
Background Image	0.535	0.560	1.00					
Packaging Material	0.495	0.526	0.637	1.00				
Writing Style	0.565	0.583	0.649	0.693	1.00			
Cover Design	0.457	0.472	0.470	0.552	0.630	1.00		
Printed Information	0.446	0.433	0.587	0.553	0.525	0.395	1.00	
Innovation	0.535	0.560	0.895	0.637	0.649	0.470	0.587	1.00

**Table 3: Results of Pearson Correlation Test between Studied Variables- Customers of Mihan Milk**

Variable	Correlation Coefficient							
Consumers Buying Behavior	1.00							
Coloring	0.630	1.00						
Background Image	0.589	0.585	1.00					
Packaging Material	0.547	0.574	0.645	1.00				
Writing Style	0.522	0.633	0.604	0.662	1.00			
Cover Design	0.477	0.498	0.538	0.495	0.511	1.00		
Printed Information	0.459	0.490	0.617	0.525	0.578	0.431	1.00	
Innovation	0.589	0.585	0.762	0.645	0.604	0.538	0.617	1.00

**Table 4: Results of Both Model Regarding Customers of Roozaneh and Mihan Pasteurized Milk**

Independent Variable (From)	Dependent Variable (To)	Roozaneh Pasteurized Milk		Mihan Pasteurized Milk		Conclusion
		Beta Standard Coefficient	- statistic	Beta Standard Coefficient	- statistic	
Coloring	Consumers Buying Behavior	0.321	0.432	0.303	4.345	Hypothesis Confirmed
Background Image	Consumers Buying Behavior	0.146	3.623	0.239	2.882	Hypothesis Confirmed
Packaging Material	Consumers Buying Behavior	0.250	3.676	0.181	2.393	Hypothesis Confirmed
Writing Style	Consumers Buying Behavior	0.154	2.651	0.229	2.932	Hypothesis Confirmed
Cover Design	Consumers Buying Behavior	0.275	3.812	0.200	3.351	Hypothesis Confirmed
Printed Information	Consumers Buying Behavior	0.605	11.188	0.357	4.832	Hypothesis Confirmed
Innovation	Consumers Buying Behavior	0.393	3.689	0.133	1.865	Hypothesis Confirmed

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### **CONCLUSION**

The understanding and study of consumer reactions to different marketing tools in today's dynamic and competitive market is undoubtedly vital and important. Product packaging as one of the most important marketing tools is sometimes even called the fifth element of marketing mix. Due to its unique attractions, packaging could act as a highly effective persuasive tool at the decision-making stage of purchase and thus facilitate decision-making process. This may be the reason why some experts of marketing called it the finisher of sales. The results come out of testing hypotheses of this research indicated positive and significant relationships between packaging elements and consumer buying behavior which specifically showed that packaging color, background image, packaging material, writing style, cover design, printed information and innovation have positive effect on consumer buying behavior and persuading him/her to buy a product with such unique and fascinating features of packaging.

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