

The effect of packaging design on customers' perception of food products' quality, value, and brand preference (Case study: Pegah pasteurized cheese, in Isfahan city)

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Abstract: This study aimed to investigate the effect of visual packaging design on customers' perception of food products' quality, value, and brand preference. In this regard, by providing a conceptual framework and using statistical tests like structural equation modeling and Friedman test through SPSS and Lisrel software, hypotheses were examined. This was an applicable-practical research in terms of its purpose, a correlational research in terms of its nature, and a descriptive- survey research which used field methods. Data were collected through library resources and field resources using questionnaire. Questionnaire validity and reliability were confirmed through content validity using supervisor professor's opinion and Cronbach's alpha coefficient (0.926), respectively. Statistical population consisted of customers of Isfahan Pegah pasteurized cheese packaging products with at least an experience of purchasing this product from Isfahan stores, from which 210 people were considered using simple random sampling. Structural equation modeling results indicated the significant effect of positive attitudes toward food packaging design on customers' perception. Furthermore, Isfahan stores customers' perceived quality of food products had a significant effect on their perceived value. On the other hand, customers' perceived quality of food products and their perceived value had a significant effect on their brand preference. Moreover, structural equation modeling results indicated the significant effect of positive attitudes toward food products packaging design on customers' brand preference. According to Friedman test, the most and the least mean ranks related to perceived quality and brand preference, respectively.

Key words: Packaging; Perceived quality; Perceived value; Brand preference

1. Introduction

Nowadays, expanding markets, attracting new customers and retaining existing customers have been the concern of many companies. Due to severe competitive pressures, companies and organizations implement different practices of marketing and sales promotion to persuade customers or even compel them to purchase their product among various brands. According to their activities, companies implement various practices, such as high quality, reasonable price, good services and proportional behavior with customers to satisfy them. Using high-quality and stylish packaging is one of these practices (Faze and Salahshur, 2010).

Practically, advertisers compete with each other to promote their position in the market, increase efficiency and interact customers' attention, i.e. marketers and advertisers need to worry about how to attract customers and what they do not like. In this case, they can receive a strong brand preference for their own brand and win the competition (Alerck and Settle, 1999).

Most impulse buying occurs because of product display, and attractive packaging plays an important role in product display (Ghani and Kamal, 2010).

Packaging is an important tool in national and international marketing, which plays a key role in this regard. To strengthen their competitiveness in domestic and foreign markets, enterprises attend to packaging for many years, while taking advantage of packaging design, graphics, color and using appropriate packaging to increase their market share in comparison with their competitors. A good packaging can play its role as a silent salesman, while marketing managers, whose common decision with product managers can be effective in implementing appropriate and attractive packaging practices, need to use it to make a relationship with customers, induce requirements to them and encourage them to purchase. The research of large companies in marketing context and sales promotion practices suggests packaging has the greatest effect on attracting customers and sales practices in domestic and foreign markets.

In this regard, several studies have been carried out, for example, Wang (2013) has suggested that positive attitudes toward visual packaging has directly influenced consumers' perceived quality of food product and brand preference. Moreover, perceived quality of food product has also directly and indirectly (through product value) affected brand preference. Mohd et al. (2010) have also concluded that perceived value has significantly

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influenced the purchasing intention of food products, and Mallinckrodt and Mizerski (2007) have concluded that consumer's perceived value has directly affected their brand preference. Furthermore, Venter et al. (2011) have suggested that product visual packaging is a key marketing tool that affects how consumers perceive product quality, as Chung et al. (2006) have indicated that product visual packaging is a tool for managers to reflect their product value, quality and brand differentiation. Finally, Ranjbarian et al. (2012) have shown that perceived quality affects perceived value, customers' satisfaction and repurchase intention, at chain stores.

The purpose of this study was to investigate the effect of food products (Pegah pasteurized cheese) visual packaging design on customers' brand preference. In this regard, we investigated the importance of effective factors on food product packaging such as design, quality, value and brand preference, which played an effective role in sale promotion.

2. Theoretical framework and hypotheses development

2.1. Theoretical framework

Customer orientation is definitely a key factor in new marketing philosophy, as dissatisfied customers can negatively affect company's performance. Accordingly, this research aimed to examine one of the factors which led to customers' satisfaction and their brand performance. Undoubtedly, one of the most important factors in marketing is visual packaging design which refers to a cover, container, or shield made of various materials that protects a product and conserves its quality during manufacturing process, handling, transportation, storage and distribution until it is delivered to consumers, by considering various technical principles and requirements (Jafari, 2011). It is

obvious that people, with various cultures in different societies, have different attitudes toward packaging. As customers' attitude toward visual packaging design influences their purchase behavior significantly, companies seek various purposes which affect their visual packaging design. On the other hand, quality is a degree to which a set of inherent characteristics fulfills requirements or demands (ISO 9001, Standard, 2008).

Unfortunately, this is not followed and used optimally in our country, as, sometimes; qualified products are presented in poor packaging, which leads to different market responses. In contrast, in some cases, proper packaging design covers product poor quality, which leads to consumers' bad experience about packaging design. Since these cases make customers' attitude doubtful and distrust, marketers of organizations and commercial companies encounter profound challenges. Moreover, perceived value refers to the ratio of quality to price. Since different consumers and customers have different interpretation of value, companies should discover their target customers' values and trace it (So and Sculli, 2002). Customers' perceived value leads to their brand preference and affects their behavior. Brand preference refers to a relative preference for choosing and using a specific brand over other brands (Vazquez et al., 2003). On the other hand customers' behavioral intention refers to physical, emotional and mental activities which one performs during a service/product selection, purchase and consumption as well as disposing of a product to satisfy their demands and needs.

According to the context, the following conceptual model (Fig 1) could be used, which investigated the effect of positive attitude toward visual packaging design on consumers' perceived quality and their brand preference. Furthermore, it was assumed that perceived quality affected brand preference through affecting perceived value.

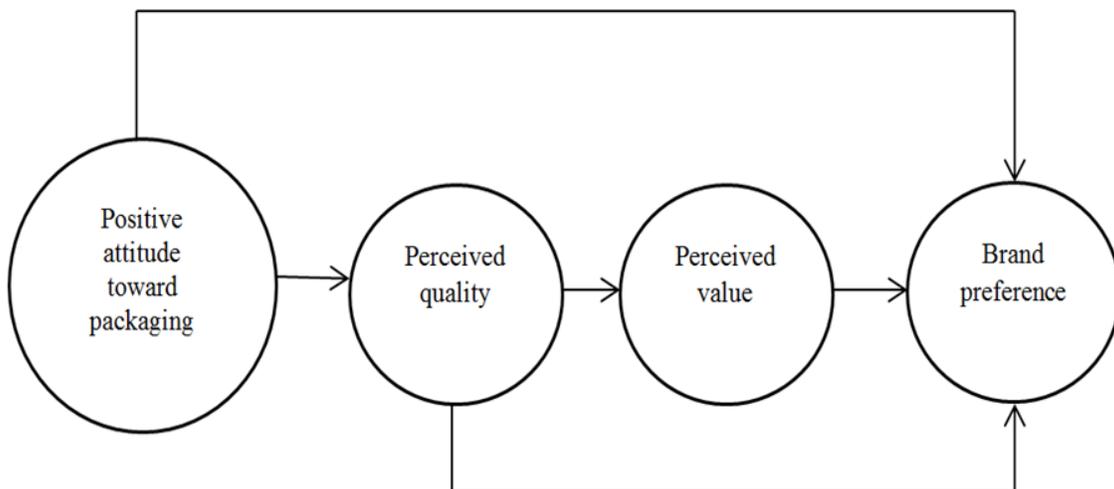


Fig. 1: The conceptual framework (Wang, 2013)

2.2. Hypotheses development

2.2.1. Packaging and perceived quality

Since customers should have a clear image of products' characteristics including quality, speed, low/high price and variety in their mind, the purpose of marketing is to create an image of a product to make it attractive. The image is indeed a general combination of all things which customers think they know about a company and its products. Perceived quality can be defined as customers' perception of overall quality or a service/product superiority according to their expected purpose in comparison with other options. Eventually, perceived quality is a general intangible sense of brand. By the way, perceived quality is usually based on key dimensions including products' characteristics such as reliability and performance, which somehow links to brand. To understand perceived quality, it would be helpful to identify and measure its main dimensions, but it should not be forgotten that perceived quality is, indeed, a general impression (Aker, 1991). As Venter et al. (2011) suggested that visual packaging design affected customers' perceived quality, we may hypothesize that:

H1: Positive attitude toward visual packaging design of food product has a significant effect on customers' perception of its quality.

2.2.2. Packaging and brand preference

The value of a brand is a "noun, expression, design, symbol or a combination of these factors which determines the identity of a service company and distinguishes it from its other competitors", which is judged by customers' wisdom, logic, senses and emotions. Indeed, a brand determines the origin of a service/product manufacturer, allocates responsibilities to them, creates commitment, reduces searching cost, and eventually illustrates product quality (Jalalzadeh and Ekhtiary, 2009). Guber (1999) indicated that the same products with different colors and packaging design attracted customers' attention; on the other hand Underwood (1998) proved that when customers were not familiar with a brand, the packaging design affected them significantly. McDaniel and Gordon (??) suggested that a unique symbol on a product like a constant color, material or the form of a packaging reminded of a brand. According to previous studies packaging design affects customers' purchase selection, which implies the formation of a set whose elements are different factors of a packaging type. That packaging is associated with a product and brand value is very important. Therefore, we may hypothesize that:

H2: Positive attitude toward visual packaging design of food product has a significant effect on customers' brand preference.

2.2.3. Perceived value

Marketing activities are mainly based on customers' value. Marketing perceived value is defined as customers' assessment of costs and benefits of purchasing a product or service. The results of previous researches suggest that perceived value increases customers' satisfaction, and further purchase intention. Perceived value is a factor which comes after perceived quality and it can be considered as a pre-condition variable for value. The researches about the relationship between customers' perceived quality and perceived value in traditional retail and online shopping provided that perceived quality affects perceived value strongly. Accordingly, we may hypothesize that:

H3: Customers perception of the quality of food product has a significant effect on their perceived value.

2.2.4. The relationship between perceived quality, perceived value and brand preference

Zeithaml (1998) defined perceived value as customers' perception of the superiority of a service/product quality in comparison with competitors, which did not include technical dimensions. He also indicated that perceived quality was a part of brand equity. Therefore, high perceived quality leads consumers to selection of a brand than the other one, i.e. the higher perceived quality by customers, the higher brand equity. Consumers' perceived quality is associated to information assessment and loyalty to a brand, which has a significant effect on consumers' purchase intention (Gil et al., 2007). On the other hand, Ranjbarian et al. (2012) indicated that perceived quality affected perceived value and customers' satisfaction as well as repurchase intention. Therefore, we may hypothesize that:

H4: customers' perception of food products quality has a significant effect on their brand preference.

H5: customers' perception of food products value has a significant effect on their brand preference.

3. Research methodology

3.1. Instrument development and data collection

An empirical investigation of the effect of packaging design on customers' perception of food products' (Pegah pasteurized cheese) quality, value, and brand preference was conducted in Isfahan city. The questionnaire consisting of two parts was used. The first part solicited demographic information such as age, gender and level of education. The second presented questions pertaining to the proposed model including 28 questions which were measured on a five-point Likert scale from 1 (very low) to 5 (very high). To address face validity, supervisor professor's opinion was used. The pre-

test examination was conducted by distributing 35 questionnaires, which provided us reasonable assurance of the validity of the scale items and helped us to refine the questionnaire. The target population was all customers of Pegah pasteurized cheese in Isfahan city that made a purchase at least once. Using simple random sampling and Cochran formula, sample size was obtained equal to 215 people among which questionnaires were distributed. However, 210 of them were useable. Cronbach's alpha coefficient was calculated using SPSS software, so that questionnaire reliability was 0.926 which indicated questionnaire high reliability.

3.2. Demographic data

Among all respondents, the majority of them (62.4%) were female, which indicated that female played a stronger role in the consumption basket of family; therefore the stylish packaging design attracted them to purchase a product. The age range of 25% of respondents was under 25 years old, 30.5% were between 26 to 35, 23.3% were between 36 to 45, and 21% were above 46 years old. The level of education of the majority of respondents (31.9%) was diploma, which might be due to the fact that educated people made a purchase at certain times, especially at weekend. Table 1 provided research variables descriptive indexes such as mean value and standard deviation.

Table 1: Descriptive statistics of research variables.

variable	Mean value	Standard deviation
Product packaging design	3.09	0.60
Perceived quality	3.28	0.73
Perceived value	3.07	0.79
Brand preference	3.03	0.74

4. Structural equation modeling and hypotheses test

4.1. Structural model

Statistical data analysis was done through structural equation modeling and using software Amos. Analysis of covariance structures, causal modeling or structural equation modeling are main

Table 2: Indexes for estimating model goodness of fit.

Model	χ^2	P	RMR	GFI	AGFI	RMSEA
Default model	26.49	0.060	0.037	0.940	0.920	0.074

P-value tests whether model fit is good or not. In this study P-value= 0.060 indicated a perfect model fit RMR index is used to measure the average residuals, and can be changed only with connection to variances and covariance. The smaller this index is (next to zero), the better the model is fitted. In this study RMR=0.037 which indicated a rather good model fit. The more AGFI and GFI indexes are near to

methods for complex data structures analysis. Since so many variables in this research were independent, which their effects on the dependent variable must be examined, it would be necessary to use structural equation modeling. Path coefficient of our conceptual model was presented in Fig 2.

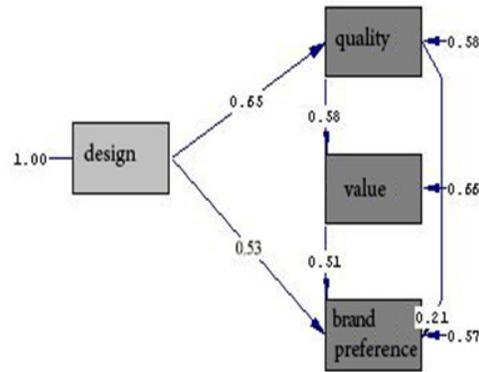


Fig. 2: Structural model analysis results (path coefficients).

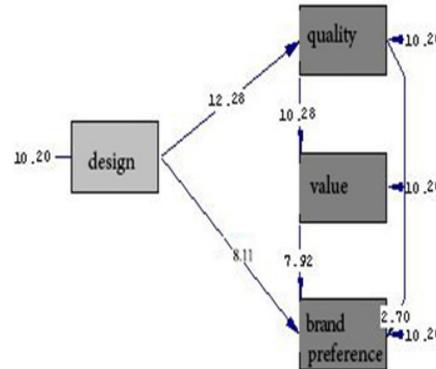


Fig. 3: Structural model analysis results (T-values).

4.2. Measurement model

Given the model, several indexes were used to estimate its goodness of fit. Table 2 presented the indexes of model goodness of fit.

1, the model goodness of fit to observed data is better. Here, AGFI=0.920 and GFI=0.940 which indicated a good model fit, i.e. the model was confirmed. RMSEA index is less than 0.05 for a good model fit; the higher values up to 0.08 indicate a reasonable error for approximation in the community. Thus, given the RMSA=0.074, the model is fitted almost well. According to the suggested

indexes, it can be said that model was fitted rather well.

4.3. Hypotheses test

Fig 2, Fig 3 and Table 3 presented the results of our study with overall explanatory power, estimated path coefficients and associated t-values of the paths. As shown in Fig 2, Fig 3 and Table 3, structural model results provided strong support for all of the hypotheses. The significance level was calculated less than 0.05, and t-value was calculated more than 1.96 for all hypotheses. Therefore, as the effect of customers' positive attitude toward visual packaging design on their perceived quality was calculated 0.65 and T-value was 12.28, which was more than 1.96, the first hypothesis was supported; i.e. customers' positive attitude toward visual packaging design had a significant effect on their perceived quality (supporting H1). Second hypothesis suggested that

positive attitude toward visual packaging design had a significant effect on customers' brand preference. Considering the effect of positive attitude toward visual packaging design on customers' brand preference (0.53), this hypothesis was also supported (supporting H2). On the other hand, the effect of customers' perceived quality on their perceived value and brand preference were 0.58 and 0.21, respectively; i.e. customers' perceived quality had a significant effect on their perceived value (supporting H3) and brand preference (supporting H4). Furthermore, this research also investigated the effect of customers' perceived value on their brand preference. The effect of customers' perceived value on their brand preference was calculated 0.51 which indicated that customers' perceived value had a significant effect on their brand preference (supporting H5).

Table 3: Hypotheses testing results.

Hypotheses	Path	Path coefficient	T-value	Result
H1	PAP → PQ	0.65	12.28	Supported
H2	PAP → BP	0.53	8.11	Supported
H3	PQ → PV	0.58	10.28	Supported
H4	PQ → BP	0.21	2.70	Supported
H5	PV → BP	0.51	7.92	Supported

Not: PAP= positive attitude toward packaging, PQ= perceived quality, BP= brand preference, PV= perceived value.

4.4. Friedman test

In this section, the mean values of variables were compared using Friedman test. According to table 4, research variables did not have the same importance, with regard to respondents' opinion. Furthermore, since significance level is less than 0.05, it was concluded that there was a significant difference between four variables.

Table 4: Friedman test results

Sample size	210
Chi-squared test	35.252
Freedom degree	3
Significance level	0.000

Table 5 presented variables mean rank. According to Friedman test, the most and the least mean ranks related to perceived quality and brand preference, respectively.

Table 5: variables mean rank

Variables	Mean rank
Product packaging design	2.31
Perceived quality	2.93
Perceived value	2.47
Brand preference	2.29

5. Conclusion and discussion

Investigating and seeking for consumers' needs, analyzing customers' behavior procedure and prioritizing the effective factors on this procedure Is the main task of marketing managers? It can be concluded that the taste of target market, which is different in terms of age, income, taste, the level of education, etc., needs to be recognized and an appropriate product/service should be provided for them. Many marketing and advertisement professionals look forward to an effective and efficient planning to advertise their products/services. Therefore, they consider methods to persuade their customers to make a purchase. Packaging is one of the most important marketing tools in selling many products, especially consumable products. As most of purchases, especially in large and chain shops, are made without previous schedule, the role of packaging in attracting buyers is very important. A packaging which is designed beautifully and attractively can attract customers successfully. Packaging can be a distinguishing factor from competitors which is a kind of competitive advantage. A creative packaging can even change customers' perception toward a product and make a new situation in purchase.

According to the results, customers' positive attitude toward visual packaging design of food products had a significant effect on their perceived quality, which was along with Wang (2013) and Venter et al. (2011) findings. On the other hand, as Wang (2013) and Chung et al. (2006) suggested, this

research supported the significant effect of customers' positive attitude toward visual packaging on their brand preference. The significant effect of customers' perceived quality on their perceived value and brand preference was also supported, which was consistent with Wang (2013), Ranjbarian et al (2012) and Gill et al. (2007), respectively. Finally, the results indicated the significant effect of customers' perceived value on their brand preference, which was along with Wang (2013), Mohd et al. (2010), Mallinckrodt and Mizerski (2007).

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