



## Structured model Consumer-based Brand Equity based on Promotional-mix elements (Case Study: Food Active Industries)

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**Abstract:** This paper aims to examine the relationships among Promotional-mix elements and Customer-based Brand Equity. Then, a model is developed to examine the relationships Promotional-mix elements and Customer-based brand equity in Food Industries of Tehran. The sample size is 240. Data are collected by questionnaire designed. The collected data is estimated using Lisrel and SEM method. The tests results show that four dimensions of brand equity (brand awareness, perceived quality, and brand loyalty and brand Image) positively effect on Customer-based brand equity and all promotional-mix elements (except sales promotion) positively affect the Customer-based brand equity. In addition, among dimensions of brand equity, image brand has the most positive effect on brand equity and among elements of Promotional-mix; sell promotion has the most negative effect on brand equity. In the end, among the brands, Kalleh brand has the most Brand Equity and MiMas brand has the least Brand Equity.

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**Keywords:** Customer-based brand equity, Promotional-mix, Food Industries and SEM.

### 1. Introduction

In the last decade we have witnessed an explosion of communication tools by companies to sell products to customers (Keller, 2010, 60). Incentives sale programs and public relations are used by the companies to create a favorable mental image (Katler& Armstrong, 2000). The reason that why companies use multiple relationships is that each of these tools play different roles and put different effects on each of their clients ( Keller, 2010, 60). On the other hand, financial experts agree that brand can provide value over traditional values, so that Oursoff (1993) and Crawford (1993) in their study showed that the price of introducing a new brand in the market is equal to \$100 million dollars, while the probability of success is %50 ( Kim and Kim, 2005, 549). Therefore a product with brand has higher value than a product without brand, and significant value inferred as brand equity. In the present study, the role of promoting – mix to create customer – based brand equity has been considered. Limited researches on relationship between promotion – mix and brand equity have been done recently. Furthermore, these studies have shortcomings, which are as follows: first according to Valette – Florence and colleagues (2009), and of course Barwis quotes

(1993) limited empirical studies to understand and measure the process of creating brand equity through resource testing and it's antecedent have been tried. Second, although in contrast with the previous studies, Yu and colleagues (2000) have representing a more systematic relationship between marketing – mix and providing brand value, but main limitation of their study, as they noted themselves, was that they processed brand equity model was tested with limited marketing activities. Third, according to the Dawar and parker (1994) and Yu and Donthu (2002) studies, views and attitudes of customers in different regions differs from one another and majority of these studies have been in western countries, so their findings without executing empirical tests would not be able to generalized ( Tong and Hawley , 2009, 567). Finally, because of the importance of brand equity, as long as there is no effective scale for customer-based brand equity, it will be difficult for the researchers and experts to determine the impact of promotional –mix activities ( Baak, B.S.B.A, 2006, 23). Thus the importance of the study is to make valuable information for marketers to establish more marketing strategies and promotional programs. On the other hand, based on two main reasons, it can be stated that food industry buyers prefer renowned

brands to not so famous brands. First of all, they may not be familiar with the product categories because of their variety. Second, the defect of product will create many problems for buyers and companies (Kim and Hyun, 2010). Hence, the brand is an asset to food industries because customer experiences of the product can help to reduce uncertainty and perceived risks of associated with new products. Therefore, brand image is crucial for better adoption of products. Due to the number of companies that are active in this field are numerous, to gain more market share and competitive advantage, companies should determine the component, which creates brand equity in customer's mind. Because of lack of knowledge about the resources which impact on the brand equity, and inability in identifying and separating sources with higher priorities in brand equity. Particularly in food industries that because of its connection with wide range of community, the negative effects will spread rapidly through the social networking systems such as word of mouth that can have devastating effects on the company's market share and therefore its lateral consequences. So the main issue with the study is that what elements of promotional- mix causes the creation of more customer – based brand equity. Then determining the customer – based brand model based on promotional – mix in active companies of Tehran market.

## 2. Theoretical foundation and literature

The most popular definition of brand equity by Yoo and Donthu (2001) is: brand equity includes various clients' reactions between product with brand and product without brand when both of them have the same level of marketing incentives and product specifications, Yoo and Donthu, 2001, 1). According to the brand equity such as: company, customer, distribution channels media and other stakeholders like financial markets and analysts, depending on the type of company ownership there are various stakeholders, but ultimately it is the customer choice which determines the success or failure of the company. Customer knowledge about the brand, the perceived differences and their effects on customer behavior and decisions are at the heart of brand equity (Roll, 2006). So customer- based brand equity

is one of the main concepts of brand equity as “the impact of different brand knowledge on customer response to marketing activities” (Atilgan et al, 2005, 238). However Aaker (1991) describes the customer – based brand equity as multidimensional construct that includes brand awareness, perceived quality, brand association, brand loyalty and other assets of brand ownership (Chattopadhyay et al, 2010, 1). Keller (1993) defined the brand knowledge based on two components: first, brand awareness which shows the amount of accessibility of brand in memory and refers to recall and negotiation of brand by product and second, mental image of brand which refers to a series of associations which customer creates in his or her mind with brand (Towsend, 2005). Keller proposed six dimensions of brand equity that take place in four levels, transparency take place in the lowest level, performance and mental image located next in order, judgment and feeling take place at penultimate level and coordination placed in at the highest level (Kim and Hyun, 2010, 1). To measure the brand equity Yoo (2000) has raised “ the overall scale of brand equity” which includes the dimensions of perceived quality, brand loyalty, brand awareness and brand associations, Berry (2000) presents a model of service branding that the components of it includes proposed company brand, brand awareness, brand meaning and brand equity (vatjunasaregagul, 2007, 57). Pappu and Quester (2006), have conducted a retail brand equity measurement study based on four concepts, retail knowledge, retail association, perceived quality of retail and retail loyalty (Higgins, BS, 2006). Lasser and others (1995) have measure the brand equity with five dimensions, performance, value, social image, trust and commitment (Baak, B.S.B.A 2006). Agarwal and Rao (1996) identified four dimensions to measure brand equity, which includes: brand awareness, perception/orientation, preferences, choice intentions and actual choice (Smith et al, 2007, 108). Regarding different dimensions of academic models of brand equity, the table 1 is provided. As you can see the four aspects, brand awareness, brand associations, perceived quality and brand loyalty has been repeated in most of the models; hence these four indicators have been used in the study as the original manufacture of model.

Table 1: The research literature

	Q	L	A	D	I	P	I	I	P	P	I	P	I	P	I
Aaker. 1991															
Keller. 1993															
Lassaretal. 1995															
Agarwal&Rao.1996															
Yoo et al. 2000															
Berry. 2000															
Yoo&Donthu. 2001															
Pappu& Quester.2006															
Keller. 2008															

Reflections on the past researches indicate that, Yoo and colleagues (2000) created a model, the effects of marketing-mix elements on brand equity. They used perceived quality, brand loyalty, brand association and awareness for brand equity. The result indicate the negative effect of price promotion and positive effect of the high cost of advertising, high price, good store image and high volume of distribution on brand equity. Yoo and Donthu (2001) proved that the Yoo model and new brand equity scale is reliable and can be generalize across the various cultures and product levels. Yoo and Donthu (2002) have conducted another study with purpose of cross-cultural generalizing of Yoo and colleagues (2000) model. The results showed identical effects between American and Korean samples. Only brand awareness and associations have had the same effect on brand equity. It's possible that the results not consistent with attitudes and opinions of Iran. Another study conducted in 2005 by Raj. He considered five dimensions of marketing-mix of Yoo model plus financial support and two aspects, brand awareness and brand image for brand equity. The results showed that instead of price amount, other variables have positive effects on brand equity. Another study has conducted by Romas and Franco (2005). They used perceived quality, brand loyalty, brand awareness and brand image as the dimensions of brand equity and perceived cost of advertising was used as marketing communications variables. The results indicate that marketing communication has positive and price promotion has negative effect on the brand equity dimensions. Hui-Chu Chen (2007) showed that store image, the intensity of distribution and price has a significant impact on the brand equity. In 2009 another study has been conducted by Xiao Tong and Jana M.Hawley. Their indicators were, the store image, celebrity, sponsorship, price

promotion, non-price promotion, TV advertisement, Web advertisement and print advertisement. Findings showed a positive effect of all variables on brand equity except price promotion. Florence and colleagues (2009) showed the positive effect of brand personality and negative effect of sale promotion. Kim and Hyun (2010) showed that all marketing – mix activities have a positive effect on brand equity. As seen in the literature review, all studies so far focus on the four elements of marketing –mix. For this reason, only advertising and sale promotion variables have been used as promotion. Despite the importance of marketing-mix elements especially direct marketing yet in the recent decades no study has been done in this field. In additions, most studies have used three dimensions of Yoo model and brand image despite its importance in entrepreneur businesses and food industries hasn't been considered, that you can take it into account as importance and further necessity of the research.

## 2.1 Promotion-mix as an antecedent of brand equity

Theoretical analysis shows that marketing communication strategies are often considered necessary in creating brand equity (Tong and Hawley, 2009, 566). For example, Simon and Sullivan (1993) mention the sale force and advertising share as brand equity sources. Other promotional activities such as public relations (Aaker, 1991), Warranty (Boulding and Kirimani, 1993), advertising slogans and promotional events (Keller 1993) have been proposed (Yoo et al, 2000, 197). In consumer marketing, the positive effect of advertising on brand equity has been demonstrated (Aaker and Jacobson, 1994; Cobb. Walgren, Ruble and Donthu, 1995; Simon and Sullivan, 1993; Yoo and Donthu, 2002; Yoo et al 2000). According to the

Keller (2008) promotional events that have long-term goals can help build brand equity. Gordon and the others (1993) argued that brand awareness and brand association obtain with direct contact with dealers in business market. In addition Van Riel and the others (2005) proved the positive impact of promotion on brand loyalty and perceived quality (Kim and Hyun, 2010, 7). Walgaren, Ruble and Donthu(2005) concluded that the companies with more advertising budget has higher level of brand equity than the companies with less advertising budget. Yoo and Donthu (2000) found out that the huge advertising spending is associated with high brand equity (Smith, 2010, 110). Most of the studies on consumer responses to sale promotion, surveys direct and immediate impact on customers buying ( Yoo et al, 2000; Tong and Hawley, 2009; Valette- Florence et al, 2009). Studies of the long-term effects of promotions on brand equity, indicating incompatible effects on brand equity such as: increased price sensitivity (Mela et al, 1997) and the lost brand equity (Yoo et al, 2000; Mela et al, 2006). Delvechio, Henard and Freling (2006) proved that sale promotion can also increase and decrease brand preference and Ailawadi, Neslin and Lemann (2003) have provided empirical evidence of long-term positive effect of price promotion on purchase strengthening and brand performance( Valette-Florence et al, 2009 , 2). Due to continue change in the internal and external environment, in order to connect a brand to a product, public relation strategy can promote brand knowledge and through recognition and recall create brand awareness. PR (public relation) can also increase brand associations such as brand image and create brand experience attitude of brand (Hsieh and Li, 2007, 28). Knowing how the promotion activities help the brand equity or hurt it, will able marketing managers to develop effective promotional programs. Because managers need to enhance productive brand activities and avoid damaging activities to brand (Yoo et al, 2000, 197).

## 2.2 Research hypotheses:

The support constructs of hypotheses are indicated as follows:

### Brand equity and dimensions

As stated in the study, to measure brand equity, Aaker, Yoo and Keller models have been used as follows:

**Brand awareness:** Brand awareness means the customer can remember or recognize the brand (Huang and Sarigolu, 2011, 1).

**Perceived quality:** By providing a reason for shoppers and differentiate the brand from the competing bran, perceived quality can create values for customers ( Pappu and Quester , 2005).

**Brand Loyalty:** A deep believe for rebuying a favorable product or service in the future, although environmental influences and marketers efforts on changing the customer's behavior (Keller, 2010).

**Brand Image:** Brand image defined as which "a customer perception from a brand" that represents a group of features that are in the customer's mind (Bian and Moutinho, 2009, 193).

Regarding indicated subjects hypotheses  $H_{1a}$  through  $H_{1d}$  are as follows:

$H_{1a}$ : Brand awareness has impact on creating customer-based brand equity in food industries

$H_{1b}$ : Brand loyalty has impact on creating customer-based brand equity in food industries

$H_{1c}$ : Perceived quality has impact on creating customer-based brand equity in food industries

$H_{1d}$ : Brand image has impact on creating customer-based brand equity in food industries

The elements of promotional-mix and brand equity

Promotion is to communicate directly or indirectly with individuals, groups or organizations to inform and persuade them to buy company's services and products (Rezvani and Hosseini, 2008, 95). Promotion is composed of five major communication elements such as: 1. Advertising: the definition of advertising in the study is, intensity, spending and brand advertising of a company through various tools and media based on customers attitude ( Yoo and Donthu, 2000).

$H_{2a}$  through  $H_{2d}$  hypotheses of advertising aspects are as follows:

$H_{2a}$ : advertisement has impact on creating brand awareness in food industries.

$H_{2b}$ : advertisement has impact on creating brand loyalty in food industries.

$H_{2c}$ : advertisement has impact on creating perceived quality in food industries.

$H_{2d}$ : advertisement has impact on creating brand image in food industries.

2. Personal selling: personal selling is outright conflict with one or more potential buyers to offer something answer their questions or orders (Kotler, 2007). Study on the impact of personal selling on brand equity hasn't been done so far.

The  $H_{2e}$  through  $H_{2h}$  hypotheses in personal selling aspect are as follows:

$H_{2e}$ : Personal selling has impact on creating brand awareness in food industries.

$H_{2f}$ : Personal selling has impact on creating brand loyalty in food industries.

$H_{2g}$ : Personal selling has impact on creating perceived quality in food industries.

$H_{2h}$ : Personal selling has impact on creating brand image in food industries.

3. Selling promotion: the purpose of selling promotion in the research is, a set of price promotions and non-price promotions which includes special discounts during the year, buying coupons, discount coupons, bonuses, product refunds and etc.

The  $H_{2i}$  through  $H_{2l}$  hypotheses in selling promotion are as follows:

$H_{2i}$ : Selling promotion has impact on creating brand awareness in food industries.

$H_{2j}$ : Selling promotion has impact on creating brand loyalty in food industries.

$H_{2k}$ : Selling promotion has impact on creating perceived quality in food industries.

$H_{2l}$ : Selling promotion has impact on creating brand image in food industries.

4. Public relations: by the view of Moritz (2007), public relations is impersonal persuasion of demand for products, services or business units through inserting important and positive business news in the media without having to pay any money by related companies, and include good relations with customers by gaining a good reputation, creating favorable image by resolving problems, rumors, stories and adverse events.

The  $H_{2m}$  through  $H_{2p}$  hypotheses in public relations are as follows:

$H_{2m}$ : public relations have impact on creating brand awareness in food industries.

$H_{2n}$ : public relations have impact on creating brand loyalty in food industries.

$H_{2o}$ : public relations have impact on creating perceived quality in food industries.

$H_{2p}$ : public relations have impact on creating brand image in food industries.

5. Direct marketing: direct marketing consists of direct connections with customers who are chosen accurately to get a quick response. Using mail, telephone, fax, e-mail and other means of impersonal communications which are used to make indirect communications or getting the direct group of customers or potential customer's reactions. The study of relationship between direct marketing and brand equity has not been done so far.

The  $H_{2q}$  through  $H_{2t}$  hypotheses in direct marketing are as follows:

$H_{2q}$ : direct marketing has impact on creating brand awareness in food industries.

$H_{2r}$ : direct marketing has impact on creating brand loyalty in food industries.

$H_{2s}$ : direct marketing has impact on creating perceived quality in food industries.

$H_{2t}$ : direct marketing has impact on creating brand image in food industries.

### 2.3 The conceptual model

Measuring brand equity, because of its multidimensional nature, we used brand loyalty, perceived quality and brand awareness aspects of Aaker (1991) and Yoo (2000). Also brand image has been taken from Keller (1993) model and mix elements have been used for promotional – mix, in addition the frequency of these models and using these models in different countries in large number is another reason for why we chose them, which are shown in Figure 1.

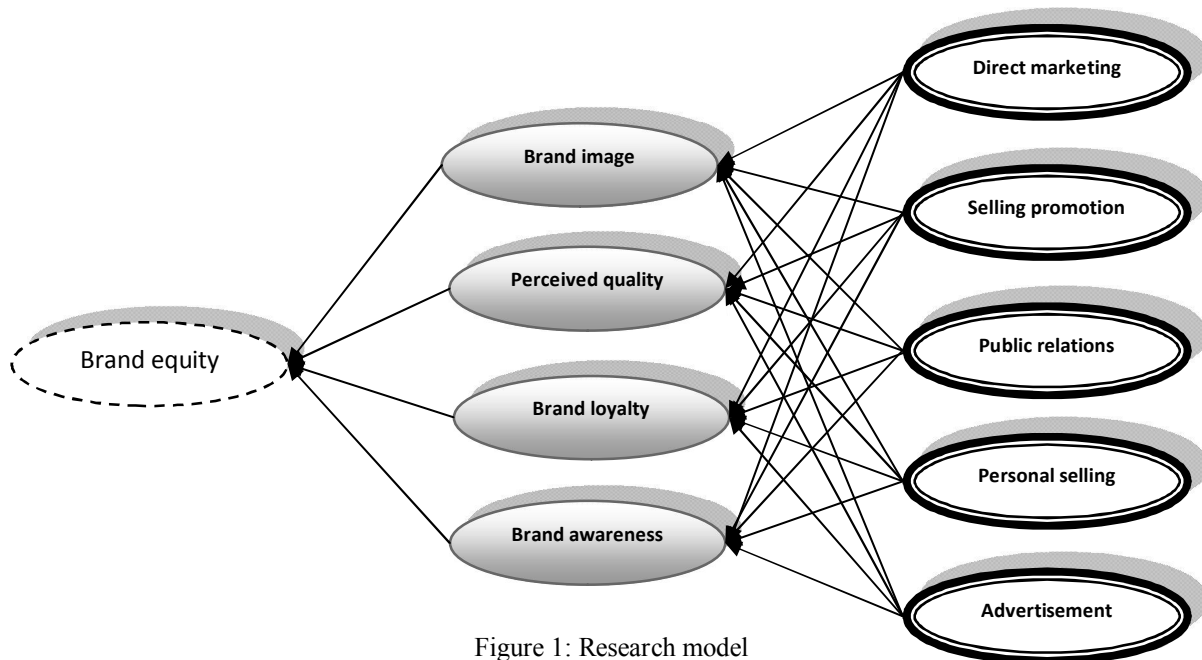


Figure 1: Research model

### 3. Research method

In terms of research aim, this is a practical research and the data collections methods are descriptive – survey and by the view of relationship between variables its correlation and in terms of time, it is sectional. Due to expansion and dispersion of residents of Tehran, who buy their dairy products from chain stores of Shahrvand (north, south, central –east and west) have been considered in the research. That is why Farmaniyeh branch in north and Sadegheh branch in west, Bayhaqi branch in center, Majidieh branch in east and Nazyabad branch in south of Tehran was selected. Due to unavailability of population size (N), in order to choose sample size, classified random method was used. When we are sampling from an infinite population by listrel software; the sample size is given by below formula:

$$5 \ll n \ll 15q$$

Q is equal to questionnaire questions, because the number of questions is 47, hence at least 235 is the acceptable number of samples according to the formula ( $235 \ll n \ll 705$ ), so 240 questionnaires were distributed among the samples. According to the research aims and surveyed assumptions, two types of variables is considered, exogenous variables of the research include: advertising, personal selling, public relations, selling promotion and direct marketing and endogenous variables of the research are brand awareness, perceived quality, brand loyalty, brand image and overall brand value.

In the present study, using ten experts view, the personal selling variable was omitted because of

the certain conditions of dairy industries, and questionnaire tool was used to collect the data. For surveying the promotional – mix by virtue of advertising, personal selling, public relations, selling promotion and direct marketing scale and for the study of brand equity, referred to the Aaker's, Keller's and Yoo indicators, constructed questionnaire was used. After designing the questionnaire, it was approved by ten masters and experts in the field of study and tried to make the questionnaire as understandable as possible. So that the questions 1 to 24 related to promotional – mix and questions 25 to 47, related to customer – based brand equity. Questions 1 through 9 related to advertising, questions 10 through 12 related to public relations, questions 13 through 20 related to selling promotion, questions 21 through 24 related to direct marketing, questions 25 through 27 related to brand awareness, questions 28 through 33 related to perceived quality, questions 34 through 37 related to brand loyalty, questions 38 through 44 related to brand image and questions 45 through 47 related to customer – based brand equity. Content validity of the questionnaire has been confirmed by about ten related experts. Cronbach's alpha was used to determine the reliability of the test. The results are shown in table 2. Finally the taken value from the cronbach's alpha from spss software version 18, for the questionnaire variables is 0.9, which indicates high reliability for the questionnaire.

Table 2: Cronbach's alpha coefficient

variable	advertising	Public relations	Selling promotion	Direct marketing	Brand awareness	Perceived quality	Brand loyalty	Brand image	Brand equity
The number of questions	9	3	8	4	3	6	4	7	3
Cronbach's alpha	0.87	0.7	0.71	0.7	0.84	0.86	0.79	0.83	0.81

#### 3.1 Selection of brands

In order to select the brands of the study, first we visit supermarkets and chain stores of different part of Tehran, and then we provide a list of dairy brands and products of each of them. Then by referring to brands internet websites, their history and other specifications were investigated. After consultation with experts in brands selling, In terms of three criteria, the selling volume, quality and brand prestige, each brand was scored by the respondents. Eventually, using descriptions of experts, sellers and even surveying brand products and other

specifications, six brands include: Damdaran, Peghah, Mimas, Kaleh, Mihaan and Chupan were chosen.

#### 3.2 Data analysis method

In the study, after making sure of the data normality by Kolmogorov-Smirnov Test, using median test to check the status of variables, Friedman test to rank the indicators, the Pierson correlation test and path analysis with spss version18 software and by using structural equation model, causal relationship between variables through coefficients

and significant number were assessed with Lisrel 8.54 software and accordingly to conducted tests, confirm or refusal of the hypotheses has been decided.

### 3.3 Research Findings

Before examining the structural equations model, the correlation between model variables was

tested. The following table shows the correlation between the variables two by two. The significance level for the hypotheses comes as follows:

$H_0$ : there isn't significant relationship between I and j variables.

$H_1$ : there is significant relationship between I and j variables.

Table 3: Correlation coefficient and significant level of the research variables

variable	advertising	Public relations	Selling promotion	Direct marketing	Brand awareness	Perceived quality	Brand loyalty	Brand image	Brand equity
advertising									
Public relations	r = .09 sig = .275								
Selling promotion	r = .10 sig = .111	r = .08 sig = .125							
Direct marketing	r = .07 sig = .223	r = .09 sig = .342	r = .06 sig = .491						
Brand awareness	r = .20 sig = .000	r = .19 sig = .000	r = .24 sig = .000	r = .28 sig = .000					
Perceived quality	r = .34 sig = .000	r = .31 sig = .000	r = .38 sig = .000	r = .69 sig = .000	r = .66 sig = .000				
Brand loyalty	r = .62 sig = .000	r = .21 sig = .000	r = .24 sig = .000	r = .62 sig = .000	r = .69 sig = .000	r = .76 sig = .000			
Brand image	r = .17 sig = .000	r = .32 sig = .000	r = .34 sig = .000	r = .62 sig = .000	r = .62 sig = .000	r = .71 sig = .000	r = .67 sig = .000		
Brand equity	r = .21 sig = .000	r = .29 sig = .000	r = .23 sig = .000	r = .41 sig = .000	r = .70 sig = .000	r = .78 sig = .000	r = .82 sig = .000	r = .82 sig = .000	

As it seen in table 3 (in the table, r stands for correlation coefficient and sig stands for significant level), all the relationships are meaningful and there is correlation between variables. (There is no meaningful relationship between the independent variables which there is no need for such relationship).

Results confirmatory factor analysis shows that between latent and observed variables, in exogenous variables there are positive correlation, and in terms of proportion indicators, the model is in good condition. Since the degrees of freedom to  $X^2$  is equal to 1.16 which is less than maximum allowed (which is 3), and RMSEA as the fitness of the model indicator volume is 0.025 that is less than the allowable amount (which is 0.08), shows utility of the model. Even in significant mode (with significant levels greater than 1.96), all of the exogenous variables parameters are significant. Thus the questionnaire questions were appropriate. There is no significant relationship between independent variables. Regarding endogenous variables, since the proportion of  $X^2$  to freedom degree is equal to 1.01,

hence it is less than limited amount which is 3 and RMSEA amount is 0.01, so it is less than allowed amount, so there is a positive correlation, and in terms of fitness indicators, the model is in good condition. All of the endogenous variables parameters are significant because all of the parameters significant level is greater than 1.96. In addition, there is positive and significant correlation between endogenous variables.

### 3.4 Overall fit of model

Lisrel software provides a series of fit indexes which can be used to test the generality of the model and model fit. According to the figure 2 and 3, fit indexed are as follows: 1. the ratio of chi-square to degrees of freedom ( $df/x^2$ ) of the model is 1.01 which is lower than allowable value that is 3, hence in terms of this index, the model is in good condition. 2. The root mean square error (RMSEA) of the model is 0.007. Generally in the structural equation modeling if the RMSEA values were between 0.005 and 0.008, it shows that the model is fit, hence according to the index, the model is in good condition.

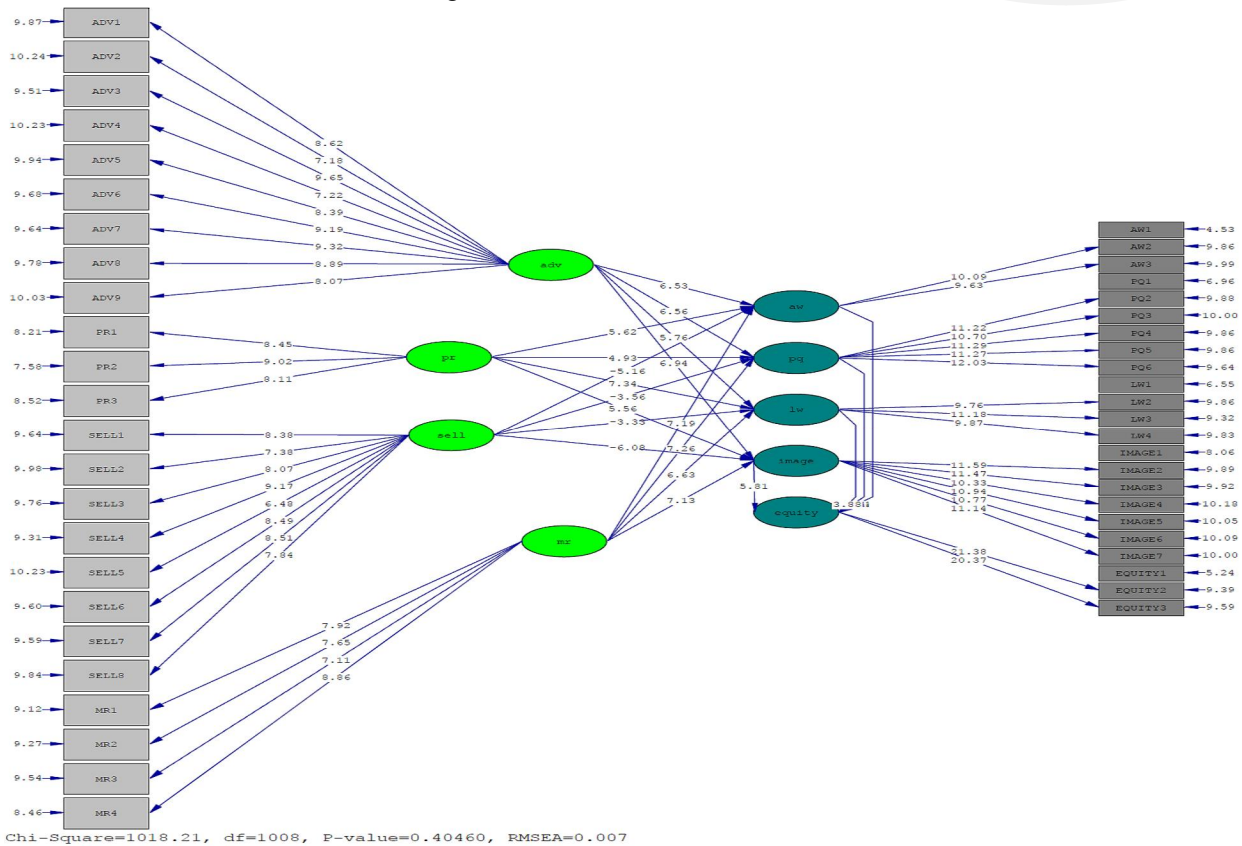
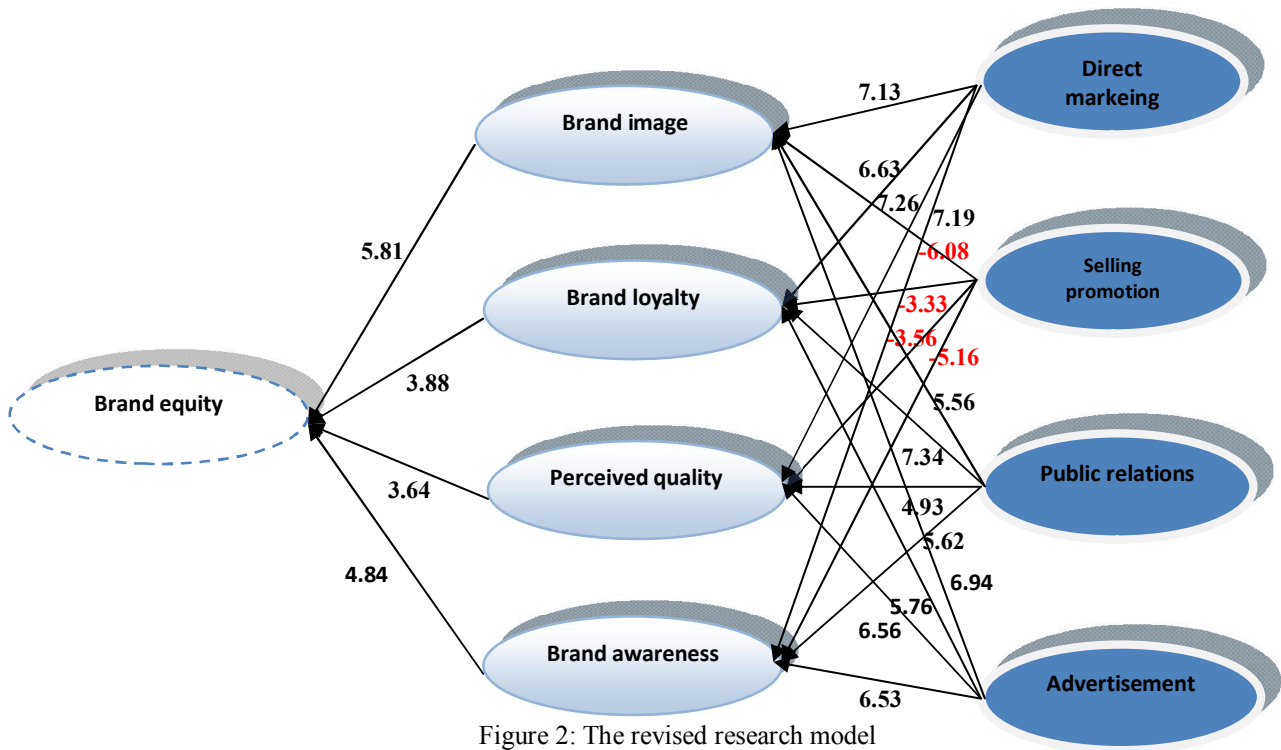


Figure 3: The path analysis model of the research in significance value state



### 3.5 Summary of research hypotheses

The hypotheses test results are summarized in Table 4.

Table 4: The research hypotheses test results

	path	Standard estimation	T-Value	condition
H <sub>1a</sub>	The impact of brand awareness on customer based brand equity	0.32	4.84	Approved
H <sub>1b</sub>	The impact of perceived quality on customer based brand equity	0.19	3.64	Approved
H <sub>1c</sub>	The impact of brand loyalty on customer based brand equity	0.23	3.88	Approved
H <sub>1d</sub>	The impact of brand image on customer based brand equity	0.35	5.81	Approved
H <sub>2a</sub>	The impact of advertising on brand awareness	0.44	6.53	Approved
H <sub>2b</sub>	The impact of public relations on brand awareness	0.39	5.62	Approved
H <sub>2c</sub>	The impact of selling promotion on brand awareness	-0.31	-5.16	Disapproved
H <sub>2d</sub>	The impact of direct marketing on brand awareness	0.12	7.19	Approved
H <sub>2f</sub>	The impact of advertising on perceived quality	0.45	6.56	Approved
H <sub>2g</sub>	The impact of public relations on perceived quality	0.35	4.93	Approved
H <sub>2h</sub>	The impact of selling promotion on perceived quality	-0.28	-3.56	Disapproved
H <sub>2i</sub>	The impact of direct marketing on perceived quality	0.51	7.26	Approved
H <sub>2j</sub>	The impact of advertising on brand loyalty	0.40	5.76	Approved
H <sub>2k</sub>	The impact of public relations on brand loyalty	0.54	7.34	Approved
H <sub>2k</sub>	The impact of selling promotion on brand loyalty	0.09	-3.33	Disapproved
H <sub>2m</sub>	The impact of direct marketing on brand loyalty	0.47	6.63	Approved
H <sub>2n</sub>	The impact of advertising on brand image	0.46	6.94	Approved
H <sub>2o</sub>	The impact of public relations on brand image	0.37	5.56	Approved
H <sub>2p</sub>	The impact of selling promotion on brand image	-0.40	-6.08	Disapproved
H <sub>2q</sub>	The impact of direct marketing on brand image	0.48	7.13	Approved

### 3.6 Brand ranking, using Friedman test

The 7 and 8 questions of the questionnaire are related to individual's knowledge and their buying amount of six brands, which by using

Friedman test, the ranks of the brands are presented in the following:

Table 5: Rank mean in Friedman test

Brand name	Damdaran	Peghah	Mimas	Kalleh	Mihan	Chopan
Rank Mean	3.60	3.47	2.59	4.21	3.89	3.24

As seen in the rank mean table, the lowest rank is related to Mimas and the highest rank is related to the Kalleh.

Table 6: Calculated values for statistical indices

Statistical indices	Number	$\chi^2$	Freedom degree	Significant value(.sig)
Calculated values	240	43,562	5	0.000

Considering output of SPSS software, the significant value (.sig), is lower than standard level (sig= 0.05), so the H<sub>0</sub> hypothesis is approved in in 0.95 confidence level. As a result, it can be said that between the individuals buying amount from six brands, there are significant differences which indicates their brand equity differentiation.

### 4. Results and Recommendations

As seen in the table 4, instead of hypotheses related to sales promotion, all the hypotheses of the research have been approved, which indicates the approve of the previous researches. In the study, it was observed that promotion mix can impact on the customer-based brand equity from different aspects which the degree of each element influence is even

different from the others. Among the promotion mix components and their impact on the brand awareness, respectively, direct marketing, advertising, public relations and sales promotion are most effective. Between the promotion mix components and their impact on the perceived quality, respectively direct marketing, advertising, public relations and sales promotion are most effective. Of promotion mix components and their impact on the brand loyalty, respectively, public relations, direct marketing, advertising and sales promotion are the most effective and eventually between the promotion mix components and their effect on the brand image, direct marketing, advertising, public relations and sales promotion are the most effective respectively. The research results also show that the four dimensions have a positive impact on the customer-based brand equity. Between the four dimensions, brand image, brand awareness, brand loyalty and perceived quality have respectively the most impact on the customer-based brand equity. Finally among the considered brands, Kalleh, Mihan, Damdaran, Peghah, Chopan and Mimas brand respectively have the most customer-based brand equity. In the study, considering that the advertisement had the most impact on the brand image and brand awareness, assigning adequate funding for advertisement and having appropriate schedule for repeating advertisement campaign, result in brand image, and using advertisement for products which are in the early stages of the life curve is necessary for brand awareness. Also, considering that the public relations had the most impact on the brand loyalty, engaging in sponsorship activities such as charities, sport financial support, artistic support and academic financial support, for creating brand loyalty is recommended. In addition, the use of sales promotion should accompany with accuracy and precaution and must be in suitable amount. Regular use of them for example: auction, coupons, discounts and refunds makes inference in the customers which indicates low perceived quality of the products and hence result in damage to customer-based brand equity. At last, because the direct marketing has the most impact on the brand loyalty, it is recommended that food vendors use marketing accompany with direct mail, telephone marketing and marketing with catalogs to increase their brand loyalty.

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