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The mediatory impact of brand loyalty and brand image on brand equity

Hossien Emari^{1*}, Ali Jafari² and Mehdi Mogaddam²

¹Department of Management, Faculty of Human Science, Islamic Azad University, Bonab Branch, Bonab, 55518/134, Iran.

²Islamic Azad University, Bonab Branch, East Azerbaijan, Iran.

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This study examines the underlying dimensions of brand equity in the chocolate industry. For this purpose, researchers developed a model to identify which factors are influential in building brand equity. The second purpose was to assess brand loyalty and brand images... mediating effect between brand attitude, brand personality, brand association with brand equity. The study employed structural equation modeling to investigate the causal relationships between the dimensions of brand equity and brand equity itself. It specifically measures the way in which consumers' perceptions of the dimensions of brand equity affect the overall brand equity evaluations. Data were collected from a sample of consumers of chocolate industry in Iran. The results of this empirical study indicate that brand loyalty and brand image are important components of brand equity in this industry. Moreover, the role of brand loyalty and brand image as mediating factors in the intention of brand equity are supported. The principal contribution of the present research is that it provides empirical evidence of the multidimensionality of consumer based brand equity, supporting Aaker's and Keller's conceptualization of brand equity. The present research also enriched brand equity building by incorporating the brand personality and brand image, as recommended by previous researchers. Moreover, creating the brand equity index in chocolate industry of Iran particularly is novel.

Key words: Brand equity, brand personality, brand loyalty, brand image, structural equation modeling, Iran.

INTRODUCTION

One of the most popular and potentially important marketing concepts which have been extensively discussed by both academicians and practitioners over the past decade is brand equity (Atligan et al., 2005). This is because successful brands can allow marketers to gain competitive advantage (Kim et al., 2008). A brand is any label that carries meaning and associations. A great brand does more: it lends coloration and resonance to a product or service (Kotler, 2003a).

A strong brand provides a series of benefits to a firm, such as greater customer loyalty and higher resiliency to favorable customer response to price change, and

endure crisis situations, higher profit margins, more licensing and brand extension opportunities (Kim et al., 2005). Furthermore, according to Pappu et al. (2005), high brand equity levels are known to lead to higher consumer preferences and purchase intentions.

Brand building is considered the best way of doing business because of the constant changes in the marketing environment. Successful brand building could strengthen a producer's competitive position to withstand the increasing power of retailers. Brand building can also bring advantages such as defending against competitors and building market share (Pappu et al., 2005).

Much research focuses on developing brand equity measurement tools (Bong et al., 1999; Yoo and Donthu, 2001; Pappu et al., 2005), little empirical research attempts to understand or measure the process of brand equity formation over time. Moreover, not many studies

*Corresponding author. E-mail: emari_hossien@yahoo.com.
Tel: +98 4127238893. Fax: +98 4127230393.

have investigated structural relationships among the factors that influence brand equity.

That is, the purposes of the study presented here, as well as to identify which factors are influential in building brand equity. The study is presented in the following manner: First, we draw from the research literature to identify the brand equity factors that influence the building of successful brands in chocolate industry. Second, we construct a research model that explains the relationships of those factors to brand equity. Third, we generate research hypotheses and empirically test them. Finally, this research discusses the practical and theoretical implications of the results.

Theoretical model and hypotheses

The issue of brand equity has emerged as one of the most crucial topics for marketing management in the 1990s (Kim et al., 2005). The emergence of brand equity has raised the importance of marketing strategies and provided focus for managers and researchers (Boo et al., 2009). A powerful brand has high brand equity. Brands have higher brand equity to the extent that they have higher brand loyalty, name awareness, perceived quality, strong brand associations and other assets such as patents, trademarks and channel relationships. A brand with strong brand equity is a valuable asset (Kotler et al., 1999). Brand equity is the added value endowed to products and services. This value may be reflected in how consumers think, feel, and act with respect to the brand, as well as the prices, market share, and profitability that the brand commands for the firm. Brand equity is an important intangible asset that has psychological and financial value to the firm (Kotler et al., 2007).

The content and meaning of brand equity have been debated in a number of different ways and for a number of different purposes, but so far no common viewpoint has emerged. It can be discussed from the perspective of the manufacturer, retailer, or the consumer. While manufacturers and retailers are interested in the strategic implications of the brand equity, investors are more sympathetic for a financially defined concept (Atilgan et al., 2005).

Proponents of the financial perspective define brand equity as the total value of a brand which is a separable asset – when it is sold, or included in a balance sheet (Feldwick, 1996). Alternative definitions adopting the same perspective consider brand equity as the current financial value of the flow of future profits attached to the brand itself (the potential future contribution linked to the name in the current distribution context) (Kopferer, 2008).

The customer-based brand equity definitions approach the subject from the perspective of the consumer – whether it is an individual or an organization. They contend that for a brand to have value, it must be valued

by consumers. The premise of customer-based brand equity models is that the power of a brand lies in what customers have seen, read, heard, learned, thought and felt about the brand over time. In other words, the power of a brand lies in the minds of existing or potential customers and what they have experienced directly and indirectly about the brand (Kotler and Keller, 2006). Thus, a customer-based definition of brand equity is given by Keller (2003) as “the differential effect that brand knowledge has on consumer response to the marketing of that brand”. While there are several other definitions of brand equity from different perspectives, one of the most generally accepted and the most comprehensive is “a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firm’s customers” (Aaker, 1991). According to Patricia (2000), brand equity is the sum total of all the different values that people attach to the brand name.

Kotler (2003b) defined brand equity as “the customers... subjective and intangible assessment of the brand, above and beyond its objectively perceived value. The sub drivers of brand equity are customer brand awareness, customer attitude toward brand, and customer perception of brand ethics”. Based on Kotler and Armstrong (2006), brand equity is the positive differential effect that knowing the brand name has on customer response to the product or service.

Brand equity consists of several dimensions: brand loyalty, brand awareness, perceived quality of brand, brand image and brand associations. These dimensions may be used to explore the findings of marketing and consumer behavior research in relation to brand equity (Yoo and Donthu, 2001; Kim et al., 2008). Thus, we develop a brand equity model that capitalizes on these dimensions.

Based on a review of the literature, this study developed a framework linking brand loyalty and brand image to brand equity (Figure 1). This framework has three main features. First, it examines the main effects of brand loyalty and brand image on brand equity. Second, it examines the effect of brand attitude, brand personality and brand association on brand equity. Third, this framework assesses brand loyalty and brand images... mediating effect between brand attitude, brand personality, brand association with brand equity. We use this framework to develop our hypotheses as described subsequently.

This study describes brand attitude as a consumer’s overall positive or negative evaluation of a given brand (Chang and Chieng, 2006). Moreover, according to the study of Kim et al. (2008), brand loyalty differs from brand attitude and habit, although the latter can indicate brand loyalty. Brand attitude is a consumer’s feelings or behavior toward a brand. Brand loyalty can be a separate construct from brand attitude, but that multi loyalty, or loyalty toward more than one brand, involves attitudes

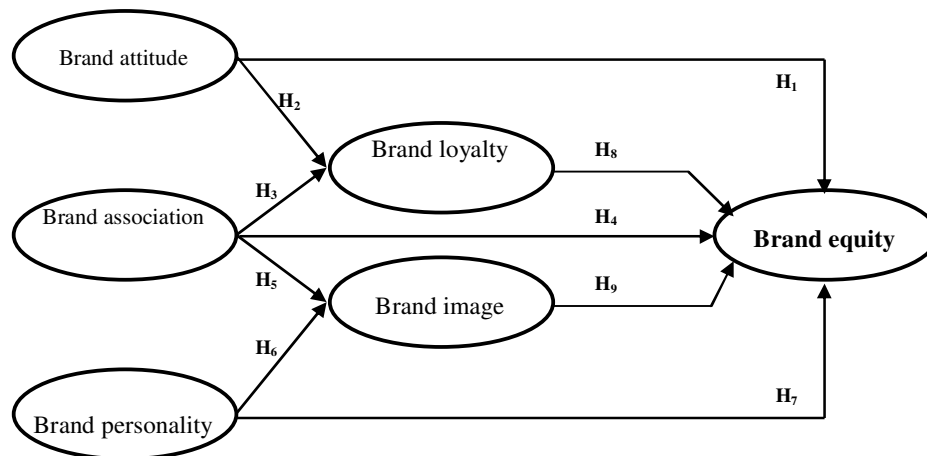


Figure 1. The hypotheses model.

that can be more comprehensive. A high level of brand loyalty indicates a tendency to buy only a signal brand in a product category, not a multi loyalty purchase intention.

Additionally, Chaudhuri (1995) proposed a conceptual model and demonstrated that the brand attitude construct is an affective antecedent of brand equity. Similarly, Chaudhuri showed that brand loyalty mediates brand attitude and brand equity. From the above definitions and suggested relationships in the literature. Brand attitude is particularly important in brand loyalty and brand equity formation. These are summarized in the following hypotheses:

H₁: Brand attitude has a significant positive direct effect on brand equity.

H_{1a}: Brand loyalty has a positive moderating influence on the relationship between brand attitude and brand equity.

H₂: Brand attitude has a significant positive direct effect on brand loyalty.

This study defines brand associations (product and organization associations) as the information linked to the node in memory. This information yields an association in the mind of the consumer (Chang and Chieng, 2006). Higher brand awareness in the consumer's mind, along with strong, unique, positive associations, leads the consumer to increase his preference for the brand (Bravo et al., 2007).

The results of the preceding empirical studies have demonstrated, on the whole, effects of some of the dimensions on overall brand equity (Bravo et al., 2007; Bamert et al., 2005; Yasin et al., 2007; Atilgan et al., 2005). Consequently, this study proposes positive relation between brand association and brand equity.

Based on the study of Bravo et al. (2007), brand equity dimensions are closely interrelated. Nevertheless, loyalty

has been considered as a construct was affected by the other three dimensions: awareness, associations and perceived quality. From the suggested relationships in the literature (Taylor et al., 2007: 249; Bravo et al., 2007; Atilgan et al., 2005), brand association is particularly important in brand loyalty formation.

According the research of Taylor et al. (2007), brand image is defined as perceptions about the brand as reflected by the brand associations held in consumer memory. Thus, there is positive relationship between brand association and brand image. Consequently, the following hypotheses are proposed:

H₃: Brand association has a significant positive direct effect on brand loyalty.

H₄: Brand association has a significant positive direct effect on brand equity.

H_{4a}: Brand loyalty has a positive moderating influence on the relationship between brand association and brand equity.

H_{4b}: Brand image has a positive moderating influence on the relationship between brand association and brand equity.

H₅: Brand association has a significant positive direct effect on brand image.

Aaker (1997) defined brand personality as "the set of human characteristics associated with a brand". So, in contrast to psychologists, Aaker defines personality in terms of characteristics instead of traits and meticulously developed a 44-item brand personality scale that encompasses five broad dimensions: sincerity, excitement, competence, sophistication and ruggedness. The scale has served as a brand personality measure in

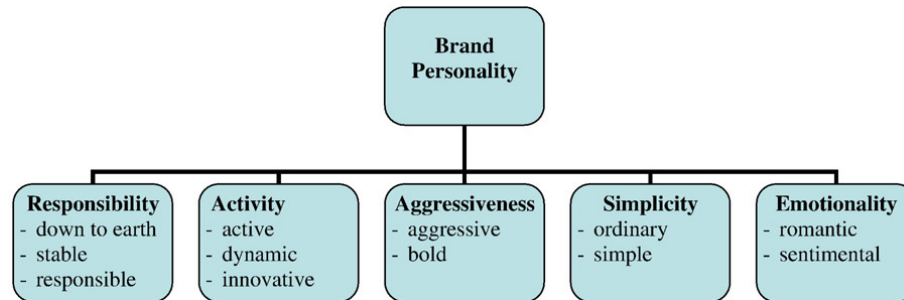


Figure 2. The brand personality dimensions (Geuens et al., 2009).

many studies and its factor structure proved to be robust in several of them (Chang and Chieng, 2006; Sweeney and Brandon, 2006). However, Aaker's scale has recently been criticized on several grounds. Geuens et al. (2009) summarized these criticisms in bellow format: a first criticism pertains to the loose definition of brand personality, which embraces several other characteristics (such as age, gender etc.) besides personality. This induces a construct validity problem and leaves researchers and practitioners uncertain of what they have actually measured: the perceived brand personality (a sender aspect) or perceived user characteristics (receiver aspects).

A second criticism concerns the non generalizability of the factor structure for analyses at the respondent level (for a specific brand or within a specific product category).

A third criticism relates to the non replace ability of the five factors cross-culturally researchers found that only three of the five factors applied in Spain (namely, sincerity, excitement and sophistication). Peacefulness replaced ruggedness and passion replaced competence. In Japan four of the five factors emerged, whereas peacefulness again replaced ruggedness. This shortcoming led several researchers to construct a country-specific brand personality scale.

Based on the above discussions, Geuens et al. (2009) were to return to the basics of brand personality and develop a new scale based on a rigorous definition of brand personality that excludes all non-personality items (Figure 2). This study defines brand personality based on Geuens's model.

Valette et al. (2009) relates brand personality dimensions directly to brand equity. Rekom et al. (2006) argued that brand personality might be crucial to understanding brand choice. Indeed, at a time in which consumers consider product quality as a given and competitors can easily copy product characteristics, a strong brand identity and personality are invaluable to build brand equity.

According the work of Diamantopoulos (2005), brand personality is an essential component of brand image that helps create brand equity. Brand image consisted of

three essential features: (1) Physical attributes (for example, green in color); (2) functional characteristics (for example, cleans teeth more effectively); and (3) characterization (for example, youthful). This latter characterization process was termed brand personality. It is well known that the introduction of brand extensions can have positive or negative effects on a core brand's image and subsequent equity. Based on the aforesaid definitions and suggested relationships in the literature, the following hypotheses are formulated:

H₆: Brand personality has a significant positive direct effect on brand image.

H₇: Brand personality has a significant positive direct effect on brand equity.

H_{7a}: Brand image has a positive moderating influence on the relationship between brand personality and brand equity.

Today, firms invest substantial resources to develop names with a favorable image. Among other advantages, a positive image facilitates business expansion through brand extensions. Thus, product introductions with the same brand name are able to leverage the brand image, brand awareness and, on the whole, brand equity obtained in the established markets (Salinas and Perez, 2009).

According the work of Boo et al. (2009), brand image has been considered as the reasoned or emotional perceptions consumers attach to specific brands. Brand image has also been identified as an important source of brand equity (Boo et al., 2009). Thus, the following hypothesis was formulated:

H₉: Brand image has a significant positive direct effect on brand equity.

Aaker (1991) defines brand loyalty as a situation which reflects how likely a customer will be to switch to another brand, especially when that brand makes a change, either in price or in product features. Moreover,

Chaudhuri (1995) defines brand loyalty as “a consumer’s preference to buy a single brand name in a product class; it is a result of the perceived quality of the brand and not its price.” According to the work of Kim et al. (2008), brand loyalty is a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior.”

Keller (2003), on the other hand, examines brand loyalty under the term “brand resonance” which refers to the nature of customer-brand relationship and the extent to which customers feel that they are “in sync” with the brand. Customers, with true brand resonance, have a high degree of loyalty, actively seek means to interact with the brand and share their experiences with others.

In fact, brand loyalty is the main driver of brand equity because it is considered to be the path that leads to certain marketing advantages and outcomes (for example, reduced marketing costs, price premiums, market share and greater trade leverage), which have been closely associated with brand equity (Delgado et al., 2005; Yasin et al., 2007; Bamert et al., 2005; Atligan et al., 2005; Bravo et al., 2007; Kim et al., 2008).

H₈: Brand loyalty has a significant positive direct effect on brand equity.

METHODS

The study collected data from chocolate consumers in Iran. After the pilot test, the sample is selected in the following manner: First, five cities were randomly selected in Iran. Second, chocolate consumers are selected by implementing judgment sampling method for collecting data. Out of 500 questionnaires disbursed to consumers, 432 responses came back. Among the returned questionnaires, 15 were not complete enough to be used for further analysis. Thus, 417 questionnaires were ultimately used for the study. This relatively high response rate of almost 83% was attained with help from the managers of chocolate companies in Iran. The sample consisted of 277 male (0.644) and 140 female (0.446) respondents. In terms of education level, more than half of the respondents (0.658) had a college degree and 84 had a high school degree (0.243). This research project was conducted in 2010.

Instruments

The review of the literature and two focus group interviews held with the customers of the chocolate industry provided the basis for the generation of the items used to measure each of the constructs under study. Six constructs need to be measured in this research, including, brand attitude, brand association, brand personality, brand loyalty, brand image and brand equity. The questionnaires were designed in English for different industries, and then were translated (back translation) into Farsi by two Iranian translators. Ultimately, all questionnaires were reworded to better suit the chocolate industry context and were evaluated during the pre-test.

In response to criticism of brand personality measures that

embrace other aspects besides brand personality; Geuens et al. (2009) developed a new brand personality measure consisting of personality items only. The new scale consists of five factors that show an affinity with the big five human personality dimensions. Unlike existing scales, this new measure proved to be reliable for between-brand between-category comparisons, for between-brand within-category comparisons, and for between-respondent comparisons. Moreover, the scale showed high test-retest reliability and cross-cultural validity (in the US and nine other European countries).

Specifically, a series of focus groups studied the Geuens et al. (2009) measure, and recommended that activity dimension is suitable for chocolate context. The focus group comprised teams of chocolate industry marketers and customers in Iran. Consequently, this study only employed the activity dimension to measure brand personality. Thus, according to the activity dimension of Geuens et al. (2009) three items were developed to measure brand personality in this research.

Although, a qualitative study using free association can grasp the substantial meaning of the brand, this study examined the causal effect of the brand knowledge construct by utilizing the direct method. The brand association construct was assessed by four items developed for this study based on the work of Chang and Chieng (2006). All responses about questions utilized an appropriate Likert scale from 1 to 5.

Separate interviews with the managers and marketers at the time of the data collection suggested that rating a brand image would be more appropriate than measuring the company’s overall or product image in chocolate industry of Iran.

This study defines brand image as a subjective, perceptual phenomenon of brand that is reflected by a network of associations in the memory of the consumers. Four items based on the work of Roth, in 1995, were developed for this study. These items contain two factors: functional/ sensory and social image (Chang and Chieng, 2006). Each item was measured using a Likert scale from 1 to 5.

Measures for attitudinal brand loyalty were also adapted from the literature. For example, respondents were asked to rate the statement “Brand X would be my first choice” on a scale of 1 to 5. This measure had been empirically tested and employed in earlier studies (Atligan et al., 2005; Bravo et al., 2007). Each item had the verbal anchors “strongly disagree” and “strongly agree” for the 1 and 5 scale points (Pappu et al., 2006).

A four-item Likert scale was used to measure the brand equity construct. This measure had been empirically tested and employed in earlier studies (Delgado et al., 2005; Bravo et al., 2007; Yasin et al., 2007). The four items measure the difference in consumer choice between the focal branded product and an unbranded product given the same level of product features. In line with our view of brand equity as a relational market-based asset, this definition explicitly relies on brand knowledge structures in the minds of consumers as the foundation of brand equity (Delgado et al., 2005).

Six items were developed to measure brand attitude construct from the work of Chang and Chieng (2006). These items include product, service, and store atmosphere attitude. These items were measured using Likert scale from 1 to 5. Confirmatory factor analysis (CFA) and structural equation modeling (SEM) procedures were used to test hypotheses in this research. All procedures were based on the analysis of covariance structures using the LISREL 8.5 program. The name LISREL is an acronym for “Linear Structural Relations”. The qualifier “linear” is restrictive for the current version of the LISREL program, but the name LISREL has become synonymous with “structural equation modeling” or SEM (Stephen and Mathilda, 2008).

The structural equation model (or multivariable analysis, by using latent variable) is a comprehensive statistical approach which is used to test hypotheses concerning the relations between observed

and latent variables (Rezaiean et al., 2010). Since there are two approaches available in the structural equation modeling approach, it would be necessary to address each approach and the one that the study employs (Emari et al., 2011). In this research, all responses about questions utilized an appropriate Likert scale and a path analysis with latent variables-the common factor of the sets of item-scores was used.

Factor analysis is one of the multi-variable analytical techniques frequently used in various fields of study particularly in social sciences in search of the interrelations between variables (Esengun et al., 2006). Factor analysis is a set of techniques for determining the extent to which variables that are related can be grouped together so that they can be treated as one combined variable of factor rather than as a series of separate variables (Abdullah and Asngari, 2011).

RESULTS

Analysis of scale properties

Before assessing the research model it was necessary to establish the validity and reliability of the modified items and the new items developed for this study (Kang and James, 2004). The general concept of validity was traditionally defined as the degree to which at test measures what it claims, or purports, to be measuring. Validity traditionally subdivided in to three categories: content criterion-related and construct validity (Givi et al., 2010: 206). Confirmatory factor analysis (CFA) was utilized to verify the construct validity of scales. In order to have a valid construct, the items comprising a construct must be one dimensional.

The psychometric properties of each construct were evaluated in separate confirmatory factor models. The model fit for each CFA was evaluated using the normal fit index (NFI), non normal fit index (NNFI), the root mean square error of approximation (RMSEA) and χ^2_{df} values were also reported as references for model fit (Table 1).

Structural equation model

Covariances between constructs were computed and used as input for confirmatory factor analysis. Co variances, means and standard deviations of the aggregated measures are presented in Table 2. All the estimated co variances were statistically significant ($p < 0.05$). Also, the results of the LISREL estimation of the structural model are summarized and reported in Table 3. The path coefficients depicted in Table 3, all of the path estimates are significant ($p \leq 0.05$).

According to results, brand attitude has not a considerable positive effect ($H_1: \gamma_{11}=0.0019$ and $T_{value} = 0.065$) on brand equity, and therefore H_1 is not confirmed, but it has a significant positive influence on brand loyalty ($H_2: \gamma_{12}=0.09$ and $T_{value} = 2.38$), which confirms H_2 .

It is necessary to compare the paths leading to brand equity to understand the mediatory role of brand loyalty between brand attitude and brand equity. That is, if the

magnitude of the path between the brand loyalty and the brand equity is larger than the individual path between brand attitude and brand equity, then the role of brand loyalty as a mediating factor would be supported. The results show that the path between brand loyalty and brand equity ($H_8: \beta_1 = 0.43$ and $T_{value} = 12.62$) is larger than other path. Thus, the role of brand loyalty as a mediating factor is confirmed (H_{1a} and H_{4a} are supported).

The path coefficients depicted in Table 3 show that brand association are related positively to both brand loyalty ($H_3: \gamma_{21} = 0.6$ and $T_{value} = 15.36$) and brand equity ($H_4: \gamma_{22} = 0.14$ and $T_{value} = 3.41$) and, therefore H_3 and H_4 are confirmed. In addition, the path between the brand loyalty and the brand equity is larger than the individual path between brand association and brand equity then, the role of brand loyalty as a mediating factor between brand association and brand equity is supported (H_{4a} is supported).

Inspection of coefficients indicates that, as expected, both brand association ($H_5: \gamma_{23} = 0.29$ and $T_{value} = 6.93$) and brand personality ($H_6: \gamma_{31} = 0.27$ and $T_{value} = 4.74$) have significant positive impact on brand equity, thus, confirming H_5 and H_6 . Moreover, both brand image ($H_9: \beta_2 = 0.22$ and $T_{value} = 6.13$) and brand personality ($H_3: \gamma_{32}=0.1$ and $T_{value} = 2.17$) positively influence on brand equity.

The findings of this research reveal that the path between brand image and brand equity is larger than the individual paths between brand association, brand personality and brand equity. Thus, the role of brand image as a mediating factor betwixt brand association, brand personality and brand equity is confirmed (H_{4b} and H_{7a} are supported).

To evaluate the fit of CFAs, several goodness-of-fit indicators were used to assess the model's goodness of fit including the ratio of χ^2 to degrees-of-freedom (df), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI) and root mean square residual (RMR). As shown in Table 4, all individual measurement model indices exceed their respective common acceptance levels recommended by previous researchers, thus demonstrating that the measurement model posited relatively a good fit with the data collected. Values > 0.9 for CFI, GFI, and AGFI indices indicate a good fit to the data (Gokturk and Mueller, 2010).

DISCUSSION

This study examines the direct and indirect effects of brand equity dimensions on the development and building of brand equity of various products in chocolate industry. Following Cohen recommendations in 1988 (Kassim and Abdulla, 2006), standardized path coefficient with absolute values of less than 0.10 may indicate "small" effect; values of around 0.30 a "medium" effect; and "large" effects may be suggested by

Table 1. Reliability and validity test.

Scales	Alpha	χ^2/df	NNFI	RMSEA	NFI
Brand attitude					
1. Chocolate Flavor					
2. Chocolate Varieties					
3. Service attitude	0.76	3	0.93	0.03	0.93
4. Knowledge					
5. In-store decoration					
6. Comfort (Chang and Chieng, 2006: 941).					
Brand association					
1. Stability of chocolate quality					
2. Freshness of raw materials					
3. Chocolate flavor	0.83	2	0.90	0.02	0.89
4. Chocolate brewing method (Chang and Chieng, 2006: 941)					
Brand personality					
1. Responsiveness (down to earth, stable, responsible)					
2. Activity (active, dynamic, innovative)					
3. Aggressiveness (Aggressive, bold)	0.69	2	0.91	0.01	0.95
4. Simplicity (ordering, simple)					
5. Emotionality (romantic, sentimental) (Geuens et al., 2009: 103)					
Brand loyalty					
1. I consider myself loyal only to this purchased brand					
2. This purchased brand would be my first choice (Pappu et al., 2006: 716)	0.67	3	0.89	0.04	0.97
Brand image					
1. My purchased brand focuses on chocolate quality					
2. My purchased brand satisfies my desire to eat chocolate					
3. My purchased brand meets my sensory enjoyment	0.72	2	0.95	0.08	0.90
3. My purchased brand offers me a sense of group belonging (Chang and Chieng, 2006: 941)					
Brand equity					
1. It makes sense to buy this purchased brand instead of any other brand, even if they are the same					
2. Even if another brand has the same features as this purchased brand, I would prefer to buy this brand (Delgado et al., 2005: 191)	0.87	2	0.92	0.02	0.92

coefficients with absolute value of 0.50 or more.

The results of this research show that the brand equity of chocolate products is directly made up of two dimensions, namely brand loyalty and brand image. These two dimensions have a medium direct impact on brand equity as hypothesized. Other dimensions have a very small and venial direct impact on brand equity that disregarded in building of brand equity in chocolate

industry of Iran. The aforementioned findings are in conformity with past researches that have also found brand personality, brand association and brand image related to brand equity. The results proceeded from study of Bong et al. (1999) indicated that, brand image has positive effect on brand equity, and brand association has positively influence on brand image. The research of Chang and Chieng (2006) revealed that, both brand

Table 2. Co variances, means and standard deviations of constructs

Construct	Mean	Standard deviation	Covariance matrix						
Brand attitude	0.00	1.00	1.00						
Brand association	0.00	1.00	0.38	1.00					
Brand personality	3.62	0.75	0.25	0.44	0.56				
Brand loyalty	0.00	1.00	0.32	0.64	0.36	1.00			
Brand image	3.80	0.85	0.29	0.41	0.28	0.54	0.73		
Brand equity	3.47	0.92	0.28	0.55	0.33	0.67	0.48	0.81	

Table 3. Results of the structural model.

Hypotheses	Standardized beta(t)	Significant level	Hypotheses support
H ₁ : brand attitude to brand equity	0.0019(0.065)	0.02	No
H ₂ : brand attitude to brand loyalty	0.09(2.38)	0.04	Yes
H ₃ : brand association to brand loyalty	0.60(15.36)	0.04	Yes
H ₄ : brand association to brand equity	0.14(3.41)	0.04	Yes
H ₅ : brand association to brand image	0.29(6.93)	0.05	Yes
H ₆ : brand personality to brand image	0.27(4.75)	0.05	Yes
H ₇ : brand personality to brand equity	0.10(2.17)	0.04	Yes
H ₈ : brand loyalty to brand equity	0.43(12.62)	0.03	Yes
H ₉ : brand image to brand equity	0.22(6.13)	0.03	Yes

Note: Significant $p \leq 0.05$.

Table 4. Goodness of fit statistics.

Fit indices	Recommended value	Structural model
CFI	> 0.9	0.90
RMR	<<<	0.074
GFI	> 0.9	0.93
AGFI	> 0.8	0.48
χ^2/df	< 3.00	3.00

association and brand personality have positive effect on brand image in the two samples of Shanghai (China) and Taipei (Taiwan).

Results derived from research of Valette et al. (2009), confirmed the relative impact of brand personality and consumer promotions on brand equity. The positive effect of brand association on brand equity do not support previous studies of Bravo et al. (2007) and Atligan et al. (2005), but supports the study of Yasin et al. (2007) who investigated the relationship.

The results obtained from study of Bravo, Andres and Salinas show that the effect of the brand association on brand equity is not significant and, concerning the effect of loyalty on brand equity, did obtain positive and significant results. Moreover, in their research, brand association had a positive effect on brand loyalty but,

brand loyalty was much closer to the concept of brand equity than brand associations. So, Bravo et al. (1999) confirmed the mediatory role of brand loyalty between brand association and brand equity.

As mentioned earlier, the second focus of this study is to examine the indirect relationship between brand attitude, brand association and brand personality with brand equity, which is mediated by the brand loyalty and brand image. From the previous section, it is found that relationships exist between brand attitude and brand association with brand loyalty and between brand association and brand personality with brand image.

The results from the current study confirm the role of brand loyalty and brand image as a mediating factor in the building of brand equity. But, only brand association has large indirect relationship with brand equity. This

indirect relationship indicates that brand association is related to brand equity through the brand loyalty. In this linkage, brand loyalty fully mediates the relationship while brand image act as partial mediator. Figure 1 illustrates these relationships.

Chaudhuri proposes a model which suggested that both direct and indirect paths from brand attitude and brand equity were significant when market share was used as brand equity outcome, and in the case of price as brand equity outcome, brand attitude did not influence price directly but did influence price only indirectly through brand loyalty (Chaudhuri, 1995).

Conclusion

The aforementioned findings, indicates that the two dimensions of brand equity actually form the brand assets in which the evaluation of the brand's added value or equity is based upon. The formation of brand equity, therefore, is rooted in these dimensions. In other words, the extent of brand loyalty and brand image as well as the distinctiveness of the brands of chocolate products indicates the existence of brand equity. In terms of the effect size, brand loyalty seems to contribute the most ($\beta_1 = 0.43$) to the formation of brand equity. This is in line with the works of Yoo and Donthu (2001) and Yasin et al. (2007) that found brand loyalty as the key construct in explaining brand equity.

One implication of these findings for managers is to assess brand loyalty as part of an assessment of development and building of brand equity. In addition, the importance of brand loyalty in the relationship of brand association with brand equity concept was the most important finding in this study and should encourage researchers explicitly to consider this construct in future models of brand equity and its outcomes

Viewing the results of the study suggest that brand loyalty has the greatest contribution to the development of brand equity. This implies that companies of chocolate industry should put greater emphasis in creating brand loyalty for their products. To ensure loyal customers, producers and retailers need to build long-term relationship with their customers, offer and maintain high quality products, and provide good services.

Furthermore, the model proposed in this research makes a theoretical contribution but can also be used as a practical managerial tool. Finally, companies have to use the recommendations stated below to build their brands in the new economy.

- 1) Chocolate companies should clarify the corporation's basic values and build the strong corporate brand. Because, put their name on a product or service creates an image of quality and value.
- 2) Chocolate companies should use brand managers to carry out the tactical work. But the brand's ultimate success will depend on everyone in the company

accepting and living the brand's value proposition.

3) Chocolate companies need to develop a more comprehensive brand building plan to create positive customer experiences at every touch point (events, seminars, news, telephone, e-mail, person- to-person contact).

4) Chocolate companies need to define the brand's basic essence to be delivered wherever it is sold. Local executions can be varied as long as they deliver the feel of the brand.

5) Chocolate companies must use the brand value proposition as the key driver of the company's strategy, operations, services, and product development.

6) Chocolate companies must measure their brand-building effectiveness by a more comprehensive set of measures including customer perceived value, customer satisfaction, share of wallet, Customer retention and Customer advocacy.

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