Full Length Research Paper

The effects of brand associations on consumer response

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Accepted 5 September, 2011

This paper studies the dimensions of brand image, focusing on the functions or value of the brand as perceived by consumers. In this way, four categories of functions are identified: guarantee, personal identification, social identification and status. By way of questions, it has been proposed that these functions have a positive influence on the consumer's willingness to recommend the brand, pay a price premium for it and accept brand extensions. The questions have been tested in the Iran mobile phone market and were partially supported. The results obtained confirm the convenience of analyzing brand associations separately and enable the ascertaining of the brand associations that are the most relevant in order to attain certain consumer responses.

Key words: Brand, brand equity, brand associations, brand image, dimensions of brand functions.

INTRODUCTION

Over the last decade, firms have markedly increased their investments in the creation and development of brands. In fact, in most economic sectors a gradual brand generalization can be observed, even in those markets that have traditionally been more reluctant to use them (as is the case of food and agriculture or high tech product markets).

The creation of a brand implies communicating a certain brand image in such a way that all the firm's target groups link such a brand (and thus the products sold using its name) with a set of associations. Brand equity research in marketing, as exemplified by Aaker's (1991, 1996) conceptualization and Keller's (1993, 1998) framework, is rooted in cognitive psychology and focuses on consumer cognitive processes. Thus, this view of brand equity proposes that:

1. The brand creates value for both the consumer and the firm;
2. The brand provides value to the firm by generating value for the consumers; and
3. Consumers' brand associations are a key element in brand equity formation and management

The issue of brand equity has emerged as one of the most critical areas for marketing management. Despite strong interest in the subject, however, to date little research has been conducted in order to investigate which brand associations have the strongest effects on consumer behavior. Some of these works only adopt a theoretical perspective, without performing an empirical test. Moreover, several of the empirical studies made analyze the overall relation between brand image and consumer response, that is to say, without considering the different dimensions of brand associations (Yoo and Lee, 2000).

Brand

Aaker (1991) defines brands as the names and symbols that identify the goods of one seller and differentiate them from those of another seller. As a brand element, a logo can be defined as a graphic representation or image that
triggers memory associations of the target brand (Walsh et al., 2010).

**Brand equity**

Brand equity 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. It has also been defined as the effect of brand knowledge on consumer response to the brand. As such, brand equity is the value of the brand name that has the potential of being extended either in the form of line extensions or in conjunction with other brand names as in co-branding (Washburn, 2000). Aaker (1991) conceptualized brand equity as an aggregate variable of the five dimensions of the brand assets: brand loyalty, brand awareness, perceived quality, brand association, and other proprietary assets. Since then, brand equity has generally been defined as the incremental utility with which a brand endows a product, compared to its non-branded counterpart (Wang et al., 2003).

**Brand image**

Brand image approaches focus on the receiver side of the brand and analyze how external stakeholders perceive the brand (Burmann et al., 2008). Brand image can be defined as the perceptions about a brand as reflected by the brand associations held in consumer memory. Moreover, there are three important aspects to brand image which determine the different consumer responses to different products. The dimensions are the favorability, strength, and uniqueness of brand associations (Alexandris et al., 2008).

**Brand associations**

Keller (1993) defined brand associations as informational nodes linked to the brand node in memory and contains the meaning of the brand for the consumers. The same author classified brand associations in three categories: Attributes, benefits and attitudes. Associations may be based on product experience, product attributes, positioning of the brand in promotional communications, price information, packaging, perceived typical user imagery, or other sources. The associations related to the functions represent a greater degree of abstraction than those referring to the attributes, and so are more accessible and remain longer in the consumer's memory (Dean, 2004).

**Dimensions of brand functions**

When delimiting brand functions the greatest difficulty lies in the small number and the diverging nature of studies examining their dimensionality. Furthermore, most works do not make an explicit distinction between product functions and brand functions. Product functions are associations related to the physical or tangible attributes, and so are present in all products, even in those sold without a brand or with an unknown brand. Brand functions, on the other hand, are associations related to intangible attributes or images added to the product thanks to its brand name, that is, they represent benefits that can only be obtained from products with a brand. The guarantee function, understanding by this the promise or guarantee of quality, is based on the appraisal that the brand is reliable, efficiently carries out its performance qualities and meets the generated expectations. Similarly, it is fitting to associate this function with the perception that the brand is linked to products with a suitable level of performance and is concerned about conveniently satisfying consumer needs, contributing variety and innovation (Rio et al., 2001). The personal identification function is related to the fact that consumers can identify themselves with some brands and develop feelings of affinity towards them. In the literature on brand influence, a basic theory refers to the congruence between the consumer's behavior, his self-image and the product image. This theory is based on the idea that individuals can enrich their self image through the images of the brands they buy and use. In this way, the theory upholds that the greater the consistency between the brand image and the consumer's self-image, the better the consumer's evaluation of a brand and the greater his intention to buy it (Hogg, 2000).

**LITERATURE REVIEW**

Aaker (1991) makes another important contribution with his typology, distinguishing between 11 dimensions: product attributes intangibles, customer benefits, price, use / application, user, celebrity, life style, product class, competitors, and country of origin (Alexandris, 2004).

Keller (1993) considers brand image and brand awareness (brand recall and recognition) to be the two components of brand knowledge. He classifies brand associations (and therefore brand image) into three categories that fall along a continuum from concrete to abstract.

1. **Attributes**: Keller distinguishes between non-product-related attributes (price, packaging, user imagery, usage imagery; the last two can also produce brand personality attributes) and product-related attributes.
2. **Benefits**: functional (often linked to physiological needs), experiential (what it feels like to use the product), and symbolic (one example: a need for social approval or self-esteem).
3. **Brand attitudes**: defined as consumers’ overall...
evaluations of a brand.

Aaker’s and Keller’s typologies share many common categories: price, user imagery, usage imagery, and product attributes. I will show that both have some weaknesses, but first consider how it is possible to tap the content of a consumer’s knowledge. Because, Korchia (2000) of the possible limitations of both these typologies (If these typologies cannot tap most of a consumer’s knowledge about a brand, then they will fail in the study of this brand’s image: for example, they neglect the importance of the retailing channels for a brand, leading to an incomplete description), a new typology of brand image is proposed and tested. According to Gladden and Funk (2002), research on brand associations can help both sport organizations' managers to build their brands name, and marketers to determine the components of brand equity in order to target and manipulate them. Ross et al. (2006) added that brand associations’ research can contribute to enhancing the image, awareness, and build consumer loyalty (Robinson, 2006).

Conceptual model

As it is seen in Figure 1, research model is based on the model used by Rio, Vazquez and Iglesias for Spanish sports shoes market in 2001 and the difference is that the type and brands considered in this research is for mobile phone market. The said diagram shows the conceptual model of research and the relations of variables of it. Rio and his colleagues found out that the dimensions of brand function have direct and positive effect on the consumer’s response. Based on this model, the effect of dimensions of brand functions, that is, guarantee, personal identification and social identification, and status on the consumer’s response including three variables related to a brand extension (the interest for purchasing other products with the same brand), recommendation and to pay a price premium is analyzed. The questions of this research analyze the relation of two or several variables. The main issue could be expressed as follows:

"How is the effect of brand associations on the responses of mobile phone consumers?"

Based on the above and regarding the main question, the following sub-questions are emerged:

1. Which factor of brand associations could cause that a specific brand be extended by its consumers led to purchasing other products with the same brand?
2. Which factor of brand associations could cause that a specific brand be recommended to others by its consumers?
3. Which factor of brand associations could cause that the consumers of a specific brand be interested to pay a price premium purchasing the products with that brand?

METHODOLOGY

The present research is applied in terms of its goal and it is of the correlative research types in terms of method, which will be analyzed on the basis of covariance matrix. To analyze, the methods of Confirmatory Factor Analysis (CFA), Path Analysis and Structural Equation Model (SEM) are used. The library and field methods are used to collect information. Questionnaire is the tool to collect information for materializing this research. To conduct pretest, 40 questionnaires were distributed and collected, which sustainability was confirmed by Cronbach’s Alpha (0.913), which shows the high level sustainability of the questionnaire. The content validity method has been used to evaluate the fitness of questionnaire, which has been confirmed by some marketing professors of reputable universities and some marketing experts. Sampling method has been Simple Random Sampling (SRS), as the sample was selected among the users of mobile phone in Mashhad city in fall and winter of 2010. The sample volume considered for this research is about 261 samples, 9 times more than the number of parameters, which is an acceptable amount for factor analysis. Taking into consideration the reserve number, 310 questionnaires have been distributed and finally 274 questionnaires
have been analyzed. The present research has to focus on five brands (Figure 2 and Table 1).

**Data analysis**

Data analysis has been done by LISREL 8.8 software application, using Structural Equations Model (SEM) including Confirmatory Factor Analysis (CFA) and Path Analysis. In this stage the questions and existing paths in model are analyzed, using the diagram of model path coefficient, diagram of T statistic and covariance matrix for each independent variable. Also model fitness has been examined by Chi-square ($\chi^2$), Degrees of Freedom (df), Chi-square / Degrees of Freedom ($\chi^2$/df), Root Mean Square Error of Approximation (RMSEA), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Root Mean Square Residua (RMR) and Parsimony Goodness of Fit Index (PGFI). Test statistic and path coefficient or estimation of the related parameter, resulted from the software application, have been used to examine the model paths. Test statistic is t-student statistic, which is rejected or accepted taking into consideration the amount of test hypothesis (zero hypothesis). If the amount of T statistic is bigger than 1.96, the test hypothesis is rejected at error level of 0.05.

**The effect of guarantee on the consumer’s response**

Table 2 shows the fit indexes of guarantee independent variable. As it is seen in the table, the amount of $\chi^2$ is calculated to have been 46.25. This number is compared with $\chi^2$ of the table and if it is less, it shows the suitable fitness of model, because as much as $\chi^2$ is less, the model presented will be more suitable. In this stage $\chi^2$/df is 2.50. The amount of $\chi^2$/df must be between 1 to 5 and the amounts less than 3 are more acceptable. The amount resulted shows the model suitable fitness. The RMSEA must be less than 0.08, which is 0.0 in this stage and it is suitable. The PGFI must be more than 0.5, which is 0.74 in the above model. Considering the indexes and results of LISREL software application, it could be seen that the data are approximately the same as models and the indexes presented show that generally the model presented is a suitable one and the experimental data are in conformity with them.

**The effect of guarantee on extension**

The amount of regression coefficient is 1.15 and T statistic is 3.21. As the amount of T statistic is more than 1.96, with 95% assurance it could be stated that the guarantee is caused by the extension of the brand by its
consumer, on the other hand as the regression coefficient is positive, the effect is positive.

The effect of guarantee on recommendation

The amount of regression coefficient is 0.82 and T statistic is 3.59. As the amount of T statistic is more than 1.96, with 95% assurance it could be stated that the guarantee is caused by the recommendation of the brand by its consumer, on the other hand as the regression coefficient is positive, the effect is positive.

The effect of guarantee on price premium

The amount of regression coefficient is 1.06 and T statistic is 3.29. As the amount of T statistic is more than 1.96, with 95% assurance it could be stated that the guarantee is caused by paying a price premium of the brand by the consumer; on the other hand as the regression coefficient is positive, the effect is positive.

The effect of personal identification on the consumer's response

Table 3 shows the fit indexes of guarantee independent variable. As it is seen in the table, the amount of $\chi^2$ is calculated to have been 36.58. This number is compared with $\chi^2$ of the table and if it is less, it shows the suitable fitness of model, because as much as $\chi^2$ is less, the model presented will be more suitable. In this stage $\chi^2$/df is 1.39. The amount of $\chi^2$/df must be between 1 to 5 and the amounts less than 3 are more acceptable. The amount resulted shows the model suitable fitness. The RMSEA must be less than 0.08, which is 0.0 in this stage and it is suitable. The PGFI must be more than 0.5, which is 0.64 in the above model. Considering the indexes and results of LISREL software application, it could be seen that the data are approximately the same as models and the indexes presented show that generally the model presented is a suitable one and the experimental data are in conformity with them.

The effect of personal identification on extension

The amount of regression coefficient is 1.28 and T statistic is 3.03. As the amount of T statistic is more than 1.96, with 95% assurance it could be stated that the personal identification is caused by the extension of the brand by its consumer, on the other hand as the regression coefficient is positive, the effect is positive.

The effect of personal identification on recommendation

The amount of regression coefficient is 0.77 and T statistic is 3.42. As the amount of T statistic is more than 1.96, with 95% assurance it could be stated that the personal identification is caused by the recommendation of the brand by its consumer, on the other hand as the regression coefficient is positive, the effect is positive.

The effect of personal identification on price premium

The amount of regression coefficient is 1.02 and T statistic is 3.39. As the amount of T statistic is more than 1.96, with 95% assurance it could be stated that the personal identification is caused by paying a price premium of the brand by its consumer. On the other hand as the regression coefficient is positive, the effect is positive.

The effect of social identification on the consumer's response

Table 4 shows the fit indexes of guarantee independent variable. As it is seen in Table 4, the amount of $\chi^2$ is calculated to have been 56.89. This number is compared with $\chi^2$ of the table and if it is less, it shows the suitable fitness of model, because as much as $\chi^2$ is less, the
model presented will be more suitable. In this stage $\chi^2/df$ is 1.52. The amount of $\chi^2/df$ must be between 1 and 5 and the amounts less than 3 are more acceptable. The amount resulted shows the model suitable fitness. The RMSEA must be less than 0.08, which is 0.0 in this stage and it is suitable. The PGFI must be more than 0.5, which is 0.71 in the above model. Considering the indexes and results of LISREL software application, it could be seen that the data are approximately the same as models and the indexes presented show that generally the model presented is a suitable one and the experimental data are in conformity with them.

### The effect of social identification on price premium

The amount of regression coefficient is 1.16 and $T$ statistic is 3.14. As the amount of $T$ statistic is more than 1.96, with 95% assurance it could be stated that the social identification is caused by paying a price premium of the brand by its consumer, on the other hand as the regression coefficient is positive, the effect is positive.

### The effect of status on the consumer’s response

Table 5 shows the fit indexes of guarantee independent variable. As it is seen in Table 5, the amount of $\chi^2$ is calculated to have been 28.17. This number is compared with $\chi^2$ of the table and if it is less, it shows the suitable fitness of model, because as much as $\chi^2$ is less, the model presented will be more suitable. In this stage $\chi^2/df$ is 1.81. The amount of $\chi^2/df$ must be between 1 and 5 and the amounts less than 3 are more acceptable. The amount resulted shows the model suitable fitness. The RMSEA must be less than 0.08, which is 0.0 in this stage and it is suitable. The PGFI must be more than 0.5, which is 0.64 in the above model. Considering the indexes and results of LISREL software application, it could be seen that the data are approximately the same as models and the indexes presented show that generally the model presented is a suitable one and the experimental data are in conformity with them.

### The effect of status on extension

The amount of regression coefficient is 1.03 and $T$ statistic is 3.84. As the amount of $T$ statistic is more than 1.96, with 95% assurance it could be stated that the status is caused by the extension of the brand by its consumer, on the other hand as the regression coefficient is positive, the effect is positive.

### The effect of status on recommendation

The amount of regression coefficient is 0.79 and $T$ statistic is 3.24. As the amount of $T$ statistic is more than 1.96, with 95% assurance, it could be stated that the status is caused by the recommendation of the brand by its consumer; on the other hand as the regression coefficient is positive, the effect is positive.

### The effect of status on price premium

The amount of regression coefficient is 1.25 and $T$ statistic is 3.95. As the amount of $T$ statistic is more than 1.96, with 95% assurance, it could be stated that the social identification is caused by the recommendation of the brand by its consumer. On the other hand as the regression coefficient is positive, the effect is positive.
Table 6. Abstract examining the first question.

<table>
<thead>
<tr>
<th>Questions of research</th>
<th>Confirmation and not confirmation of the question</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1 The effect of guarantee on extension</td>
<td>Confirmation</td>
<td>The guarantee has effect on the brand extension</td>
</tr>
<tr>
<td>1-2 The effect of personal identification on extension</td>
<td>Confirmation</td>
<td>The personal identification has effect on the brand extension</td>
</tr>
<tr>
<td>1-3 The effect of social identification on extension</td>
<td>Confirmation</td>
<td>The social identification has effect on the brand extension</td>
</tr>
<tr>
<td>1-4 The effect of status on extension</td>
<td>Confirmation</td>
<td>The status has effect on the brand extension</td>
</tr>
</tbody>
</table>

Table 7. Abstract examining the second question.

<table>
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<th>Confirmation and not confirmation of the question</th>
<th>Result</th>
</tr>
</thead>
<tbody>
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<td>2-1 The effect of guarantee on recommendation</td>
<td>Confirmation</td>
<td>The guarantee has effect on recommendation</td>
</tr>
<tr>
<td>2-2 The effect of personal identification on recommendation</td>
<td>Confirmation</td>
<td>The personal identification has effect on recommendation</td>
</tr>
<tr>
<td>2-3 The effect of social identification on recommendation</td>
<td>Confirmation</td>
<td>The social identification has effect on recommendation</td>
</tr>
<tr>
<td>2-4 The effect of status on recommendation</td>
<td>Confirmation</td>
<td>The status has effect on recommendation</td>
</tr>
</tbody>
</table>

Table 8. Abstract examining the tertiary question.

<table>
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<th>Questions of research</th>
<th>Confirmation and not confirmation of the question</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-1 The effect of guarantee on price premium</td>
<td>Confirmation</td>
<td>The guarantee has effect on price premium</td>
</tr>
<tr>
<td>3-2 The effect of personal identification on price premium</td>
<td>Confirmation</td>
<td>The personal identification has effect on price premium</td>
</tr>
<tr>
<td>3-3 The effect of social identification on price premium</td>
<td>Confirmation</td>
<td>The social identification has effect on price premium</td>
</tr>
<tr>
<td>3-4 The effect of status on price premium</td>
<td>Confirmation</td>
<td>The status has effect on price premium</td>
</tr>
</tbody>
</table>

statistic is 3.97. As the amount of T statistic is more than 1.96, with 95 percent assurance it could be stated that the status is caused by paying a price premium of the brand by its consumer; on the other hand as the regression coefficient is positive, the effect is positive. The following tables (Table 6, 7 and 8) show the results of examining the questions of research:

1. Which factor of brand associations could cause that a specific brand be extended by its consumers led to purchasing other products with the same brand? (Table 6)
2. Which factor of brand associations could cause that a specific brand be recommended to others by its consumers? (Table 7)

1. Which factor of brand associations could cause that the consumers of a specific brand be interested to pay a price premium purchasing the products with that brand? (Table 8)

The final model of the research

In examining the present questions, 12 paths have been considered and all of them have positive effects. Considering the results, the present research has confirmed the model used by Rio, Vazquez and Iglesias for Spanish sports shoes market in 2001 (Figure 3). Based on Figure 3 and considering the research findings, it could be seen that each factor of dimensions of brand
function has positive and direct effect on the consumer's responses.

**CONCLUSION**

The guarantee as one of the dimensions of brand function has positive effect on the consumer's response; therefore, it is probable that when a consumer has an image and association positive of a product, he/she extends that brand and it causes that the product be recommended to others and also it is probable that the consumer is more interested to pay a price premium for a brand, which brings more profit for the company as a competitive privilege. The personal identification as one of the factors of the dimensions of brand function has positive effect on the consumer's response; therefore, it is probable that the individuals, who are dependent on a brand and are interested to be identified to others by that brand, extend it. Also, they are a cause to recommend the product to others. More dependency brings more interest to purchase that band and it is probable to pay a price premium for that band by the individual. The social identification, as one of the factors of the dimensions of brand function, has positive effect on the consumer's response; therefore, it is probable that the individuals, who seek reputation and social position and special brands, bear a great value for them, extend those brands and recommend them to others. Even it is probable that the said individuals have more interests to pay a price premium for special brand. The status as one of the factors of the dimensions of brand function has positive effect on the consumer's response. The status shows the prestige and sense, gained by a consumer by using a specific brand; therefore, the brand could be extended and recommended to others by the individuals who seek prestige and it is probable that the said individuals are interested to pay a price premium for a specific brand. In general, it is resulted that the brand association have positive and remarkable effects on the responses and reactions of mobile phone consumers in Mashhad city and if a company would like to evaluate its consumer's reactions, it could analyze the said factors, as each factor of the dimensions of brand function (Guarantee, Personal Identification, Social Identification and Status) has positive and direct effect on the consumer's response (Extension, Recommendation, Price Premium).

**REFERENCES**


