

A Study of Customer-Based Brand Equity Prioritization by using Analytical Hierarchy Process

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ABSTRACT

New entrepreneur face with issues in managing brand equity and its significant is that it helps firms to enhance their cash flow and product differentiation to enjoy and obtain benefits out of competitive advantage. Plus, brand equity is regarded as a key benchmark for the state of health of a brand, and monitoring is believed to be an effective way of managing brand. Previous researchers have discussed that there are two motives to study brand equity which are financial motivation in order to value the brand and improving market productivity. Therefore, brand equity is treated as the most valuable intangible asset according to literatures. Customer based brand equity can create the most powerful point of difference among product suppliers. Therefore, it is imperative to explore the dimension and criteria of customer based brand equity model which includes resonance, judgement, feelings, performance, imagery and salience. In order to explore the criteria prioritization of customer based brand equity amongst customers towards the new product sell by entrepreneur in the market, researcher obtained filled questionnaires from 20 respondents who have experience in buy new local product by entrepreneurs. Analytical Hierarchy Process (AHP) which is one of Multi Criteria Decision Method families was used as methodology for this study. AHP methodology is implemented in this study. Result shows the prioritization of criteria in customer based brand equity model significantly contribute to the brand equity of products by entrepreneur. Furthermore, the contribution of this study is to the extent to which the new entrepreneurs can use the prioritization criteria findings to create the brand equity for their product and customer's wants towards new products can be fulfilled.

Keywords: Customer Based Brand Equity, Prioritization, Product Criteria, Entrepreneur, Analytical Hierarchy Process

1. INTRODUCTION

Keller (2013) defines customer based brand equity as “the differential effect that brand knowledge has on consumer response to the marketing that brand” which means when a customer react favorably to the product of service, the particular brand has positive brand equity. Mohamed Ismail and Kaldeen (2016) said that in contrary, the product or service will have condensed brand equity, when customers react less favorably to the brand. These definition of brand equity has three ingredients such as differential effect, brand knowledge and consumer response to marketing. According to Keller (2013), brand equity is emerging from the differences in consumer response. Those differences in the responses are the feedback of consumer knowledge of the brand. Differential responses that create brand equity connected to all aspect of brand marketing such as preference, perception and behavior.

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Entrepreneurship according to Onuoha (2007), “is the practice of starting new organizations or revitalizing mature organizations, particularly new businesses generally in response to identified opportunities”. While, Schumpeter (1965) defined “entrepreneurs as individuals who exploit market opportunity through technical and or organizational innovation”. There are two general motives for studying brand equity especially for new entrepreneur. Firstly, the financial motivation to value the brand and to show in the accounts and it is also for the asset valuation for merger and acquisition (Keller, 1993). Brand has significant intangible value and hence, brand equity should be prioritized by company using the feedback from customer based brand equity model to fulfill customer demand. The second reasons for study brand equity according to Keller (1993), is to improving marketing productivity. Firms are in need of raising the efficiency of marketing expenditure due to higher cost, intense competition and devastation of demand. Therefore, marketers need to have full understanding of the consumer behavior and act accordingly. This can be done by the progress of the marketing program that the knowledge has been created through the brand in the mind of consumers with previous investment in the marketing program. Many researcher in the world have acknowledge the strategic significance of the brand (for example Aaker, 1991; Keller, 1993 and Kepferer 1994) and thus, brands are considered as heart of the marketing and business strategy (Doyle, 1998) by a firm which can gain competitive advantage (Aaker, 1998).

Today, the brand equity is a distinctive factors and a most competitive gun for pioneer service or product of company in the market (Tingchi Liu and *et al.*, 2014). Exploring customer based brand equity prioritization by using Analytic Hierarchy Process (AHP) is significant because it gives suggestion of guiding the marketing strategies and provides insight into where the new entrepreneurs need to focus in marketing managerial decision making. The knowledge created on the ranking of criteria prioritization will regard to brand with short term marketing activities influences on the success of the future marketing programs for the brand. Therefore, entrepreneurs or managers should be able to gain insight into how marketing programs influence on the consumer learning and how consumer recall the brand related information (Keller, 1993).

Objective of this study focus on exploring the customer based brand equity model and using this model to get ranking of criteria prioritization by using Analytic Hierarchy Process (AHP). The vision is to helps new entrepreneurs or marketing managers enhancing strong brand equity for their product in the market by getting feedback from customers throughout the research. In order to achieve the objective of this study, this research is designed in the following line. Firstly, this study starts with introduction that explains background of the study. Secondly, the customer based brand equity model is explained briefly with support of past literature review. Thirdly, the methodology adopted for this study which is Analytic Hierarchy Process (AHP) is explained. Fourthly, results and discussion are given and lastly the conclusion is provided at the end.

2. LITERATURE REVIEW

When making the purchase for goods and services, consumers undergo a very complex decision-making process especially for buying new product launch in the market. Since the consumer decision making process is complex, entrepreneur’s time to time need to strive in learning more about the criteria of product that affect consumers make decisions to buy. This will allow for better serving the needs of the consumers. Hanna Willman (2017), state that choices are significantly influenced by the changes in decision making context for example time pressure and endless opportunities. Previous study state that the best applied work in customer choice analysis is based on the rational choice paradigm. It is based on simple explanation of decision making theory:

consumers are hypothesized to approach choice situation with a predefined utility function which defines how the observed attributes of products will be integrated to form overall evaluations of desirability or utility (Kara, 1993). McFadden (1980), stated that as soon as the alternatives are evaluated, consumers are hypothesized to choose the option with the highest overall utility or value. In this study, we will do prioritization for consumer based brand equity using Analytic Hierarchy Process (AHP) and rank the most important criteria.

Two major frameworks related to CBBE conceptualizations belong to Aaker (1996) and Keller (1993). Aaker point of views CBBE as a set of assets linked to a brand's name and symbol that add to or subtract from the value provided by a product or service to the customer (Atefeh Yazdanparast, 2016). A customer perceives brand equity as the value added to the product by associating it to a brand name. According to Peary Kilei (2017), Aaker provided the most comprehensive brand equity model which consists of five different assets that are the source of the value creation. Aaker (1991) said that, these assets include: brand loyalty; brand name awareness; perceived brand quality; brand associations in addition to perceived quality; and other proprietary brand asset such as, patents, trademarks, and channel relationships. Keller (1993), views CBBE as differences in customer response to marketing activity. Keller model identifies 6 elements including brand resonance, brand judgement, brand feelings, brand performance, brand imagery and brand salience. Keller (2013) state that, the six building blocks are:

- (1) Brand Resonance, which refer to the customer relationship and the degree to which customers believe that they are "in sync" with the product brand.
- (2) Brand Judgement, which concentrate on the personal opinions and evaluations by customers of the product brand.
- (3) Brand Feelings, which are the emotional responses and reaction of customers towards the product brand.
- (4) Brand Performance, the degree to which the product brand meets the functional need of customers.
- (5) Brand Imagery, which relates to the extrinsic properties of the product brand.
- (6) Brand Salience, which relates to how often the product brand is evoked in the mind of the customers.

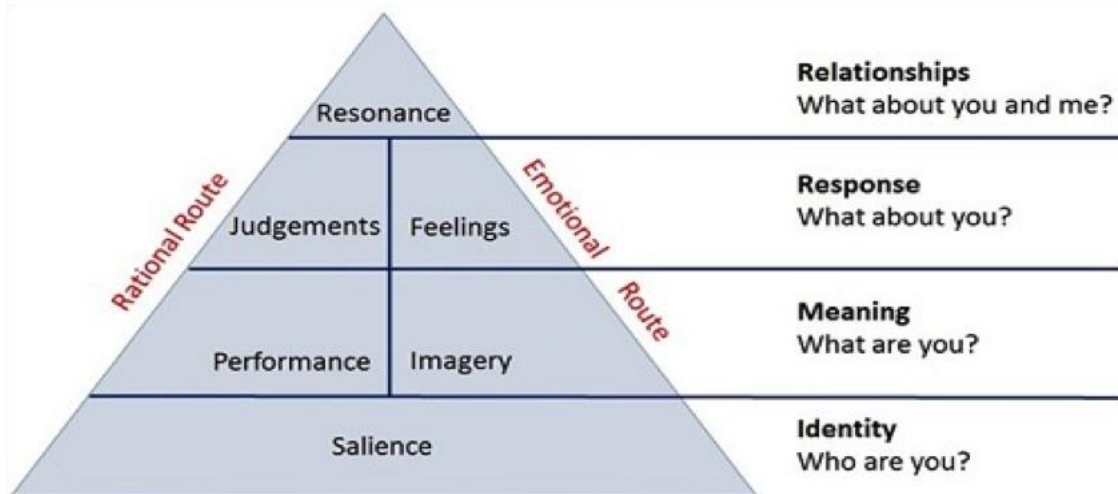


Figure 1. Keller's customer based brand equity (CBBE) pyramid.

In the brand building block, brand salience occurs when all other brand building blocks are established and the customers of the product express a high degree of loyalty to the brand. These criteria can be seen at the moment customers actively interact with brand and share their experience with others when true brand salience is present (Keller, 2001). The first step in building a strong brand is to ensure the correct brand identity. The second building block establishes brand meaning which consists of two major categories of brand associations related to performance and brand imagery (Keller *et al.*, 2011). These associations can be formed directly, from the customer's own experience and contact with the specific mutual fund brand, through advertising or word of mouth. Brand performance describes how well the product brand meets the customer's functional needs such as product quality, product functions and product benefits. The other main type of brand meaning is brand imagery which depends on extrinsic properties of the product.

Brand response is the third building block in the Keller model and represents what customers think or feel about the brand. Brand responses are distinguished either as brand judgement or brand feelings. Customers may make four types of judgement which are quality, credibility, consideration and superiority with respect to the brand. Brand feelings are customer's emotional responses and reactions to the brand such as excitement, passion, happiness and social approval (Keller, 2013). Brand resonance is the final building block in the pyramid where brand response is converted to create an active loyalty relationship role between customers and the brand. The pinnacle of the pyramid is resonance, described as having four elements: attitudinal attachment, behavioral loyalty, sense of community and active engagement (Keller *et al.*, 2011).

Analytics Hierarchy Process (AHP), since its development has been an apparatus because of leaders and specialists, and it stands out amongst the most broadly utilized multiple criteria decision-making tools. They incorporate uses of AHP in distinctive fields, for example arranging, selecting best option, asset assignments, streamlining, determining clash, and so forth, and also numerical augmentations of AHP (Vargas, 1990). Among the uses of AHP techniques in the field is by selecting the best criteria among the CBBE model, and arrange the ranking of criteria prioritization to get stronger brand equity of product. Objective of this study focus on exploring the customer based brand equity model and using this model to get ranking of criteria prioritization by using Analytic Hierarchy Process (AHP). The vision is to help new entrepreneurs or marketing managers enhancing strong brand equity for their product in the market by getting feedback from customers throughout the research. The procedure of this work has been received from Saaty (1980). Keeping in mind the end goal to gather quantitative and subjective information about AHP with criteria prioritization towards CBBE model, a methodology is followed to safeguard effective implementation. The AHP procedure here provided a ranking of criteria prioritization with respect to the attributes that define brand equity.

3. METHODOLOGY

There are two different ways of doing research, qualitative and quantitative. For this study, quantitative research has been used because it wants to precisely measure consumer behavior, preference and criteria prioritization. One of the families Multi Criteria Decision Method (MCDM) is Analytic Hierarchy Process (AHP) was taken into consideration. AHP is a structured technique for organizing and analyzing complex decision, based on mathematics and psychology. Decision situation to which the AHP can be applied include: choice; ranking; prioritization; resource allocation; benchmarking; quality management and conflict resolution. AHP methodology is implemented in the software package Expert Choice. Huang and Thuy (2014) used AHP as a research method for the objective to show out the opinions from company and consumers in terms of brand

equity. The AHP procedure provided a priority of brand equity with respect to the criteria that define brand equity.

The Survey method is represented by actual customers of entrepreneur’s company. Conducting a customer survey is never a straightforward process. This customer survey used the same question with expert approach in order to find out how customers would value brand equity factors and how they would rank each factor with different features. For data sampling, the questionnaires are distributed to 20 customers as respondents. Over a month, the survey using AHP-based questionnaire was distributed to the customers that have experience buying new product sell in the market by entrepreneur firm. The selection of cities is based on the coverage of a mixed population and convenience in sampling. Convenience sampling was appropriate for this study because of the scale used. The Saaty’s “9” point scale is meant for the audience who learn about the scale. According to Rajeev Kumar (2017), for avoiding confusion in response and to make the respondent understand the questionnaire easily, this research uses a convenient sampling. The judgements for respondent answering these questionnaires were in view of a nine-point scale of significant like the one utilized as a part of the first AHP instrument (Saaty, 1980).

Table 1 The preference scale for pairwise comparisons

*Preference Level	Numeric Value
Equally preferred	1
Equally to moderately preferred	2
Moderately preferred	3
Moderately to strongly preferred	4
Strongly preferred	5
Strongly to very strongly preferred	6
Very strongly preferred	7
Very strongly to extremely preferred	8
Extremely preferred	9

*Preference level can also be replaced by importance level, significance level, or any other appropriate levels.

Source: E. M. Nazri, M. Balhuwaisl and M.M. Kasim (2016)

In data collection, the primary data for this study come from the survey by actual customers of entrepreneur’s company. In order to get information concerning the brand equity, researcher did a survey with actual customers. The survey was conducted by using questionnaire that includes statements about the criteria and sub-criteria of brand equity. The secondary data come from books, internet, journals and articles. Secondary data is obtained from the collection of information from others regarding the key terms of research. In questionnaire design, the ratio scale was developed this way and it is defined as follows in Table 1.

Then, after all the pairwise comparison matrices are formed, based on the basis of Satty’s eigenvector procedure, the vector of weights, $w = [w_1, w_2, \dots, w_n]$ is computed. The first step computation of the weights is the pairwise comparison matrix, $A = [a_{ij}]_{n \times n}$, is normalized by equation (1). Then, the weights are computed by equation (2).

Normalization

$$a_{ij} = \frac{a_{ij}}{\sum_{i=1}^n a_{ij}} \quad (1)$$

for all $j = 1, 2, \dots, n$.

Weight Calculation

$$w_i = \frac{\sum_{j=1}^n a_{ij}}{n} \quad (2)$$

for all $i = 1, 2, \dots, n$.

The important validating parameter in AHP is λ_{max} value. To calculate the Consistency Ratio (CR), the Consistency Index (CI) for each matrix of order n can be obtained from equation (3).

$$CI = \frac{\lambda_{max} - n}{n - 1} \quad (3)$$

Then, CR can be calculated using the following equation (4):

$$CR = \frac{CI}{RI} \quad (4)$$

Where RI is from matrices of order 1 to 10 as suggested by Satty (1980). The comparisons are acceptable if the value of the $CR < 0.1$. However, the indicative of inconsistent judgements when the values of $CR > 0.1$. In such cases, one should reconsider and revise the original values in the pairwise comparison matrix A.

4. RESULT AND DISCUSSION

On the basis of theoretical analysis of existing literature on consumer based brand equity, the conceptual figure of customer criteria prioritization towards the goal was developed (Figure 2).

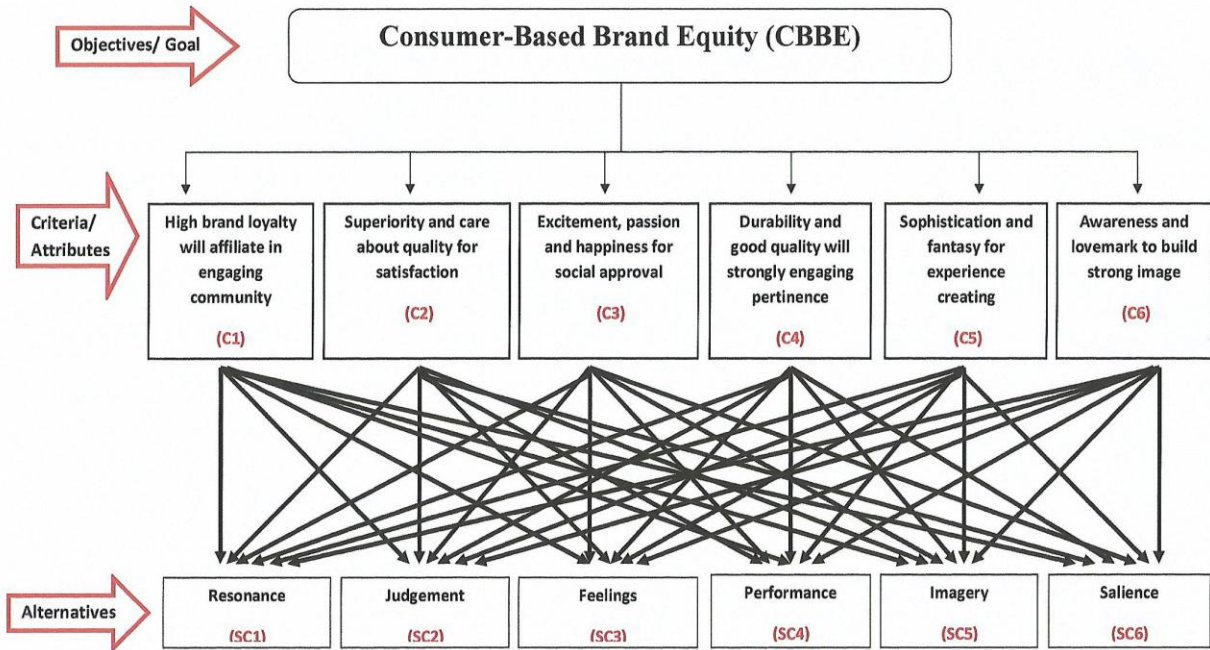


Figure 2. Customer-based brand equity (CBBE) structure diagram.

Twenty questionnaires were distributed and the respondent feedbacks are analyzed using AHP methodology in the software package Expert Choice. The pairwise comparison result is analyzed. Throughout the AHP procedure, it provided a priority of brand equity with respect to the criteria that define brand equity.

Table 2 Result of weight and consistency ratio for main criteria

Criteria	Weights	Rank
High Brand Loyalty (C1)	0.0266	1
Superiority (C2)	0.0050	2
Excitement (C3)	0.0024	3
Durability (C4)	0.0010	4
Sophistication (C5)	0.0003	5
Lovemark (C6)	0.0001	6

The result is provided in Table 2. The results for Criteria 1 which is “high brand loyalty will affiliate in engaging community” have weights of 0.0266 and the feedback from customers put this criteria in the first ranking. For Criteria 2 which is “Superiority and care about quality for satisfaction”,

feedback from respondents put it at ranking number two with weight 0.0050. Criteria 3 which is “Excitement, passion and happiness for social approval” is at ranking number 3 with weight 0.0024. For Criteria 4 which is “Durability and good quality will strongly engaging pertinence”, customers have chosen to put it at ranking number 4 with weight 0.0010. Criteria 5 which is “Sophistication and fantasy for experience creating” have weight of 0.0003 and respondent has put this criteria at ranking number five. Last but not least, Criteria 6 which is “Awareness and lovemark to build strong image” have weight of 0.0001 and respondent have chosen to put it at ranking number 6 that means it is least important criteria compared to 5 other criteria. The results have shown the criteria prioritization chosen by respondents throughout pairwise comparison between the criteria and sub-criteria towards achieving the goal for customer based brand equity.

5. CONCLUSION

The study show that the arrangement of criteria prioritization result is parallel to the customer based brand equity model which is the most important sub-criteria is on top of the pyramid CBBE model to the least important criteria at the bottom. The sub-criteria is follow accordingly from top to the bottom pyramid of CBBE model which start with resonance; judgement; feelings, performance; imagery and salience. It means that this study is supporting the literature review of previous study on CBBE model arrangements. It can be conclude that the new entrepreneur and firms can refer directly to CBBE model in order to increase their product brand equity. By that, customer’s wants towards new products can be fulfilled.

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