A nexus between the elements of brand equity and its creation: evidence from the telecommunication industry of Sri Lanka

Mohamed Ismail Mujahid Hilal
Faculty of Management & Commerce; South Eastern University of Sri Lanka, Oluvil, Sri Lanka

*mujahidh@seu.ac.lk*

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**ABSTRACT**
The study provides deeper understanding of the brand equity elements and its creation in the telecommunication industry in Sri Lanka. The main objective of the study was to examine how the image, awareness, and loyalty of the brand create brand equity in the telecommunication industry in Sri Lanka. A survey of 422 customers was conducted by a questionnaire. Multivariate analysis was applied using SPSS 20. The findings show that all variables included in this study support the creation of customer-based brand equity in the telecommunication sector in Sri Lanka. It was found that the telecommunication sector should focus more on generating brand knowledge.

**Contribution/ Originality**
This study focuses on the brand equity elements of Sri Lanka telecommunication sector. This study contributes to the telecommunication industry’s marketing efforts to improve its services to customers. This study contributes to the industry emphasizing that brand knowledge is a serious element in creating customer-based brand equity in the telecommunication sector.

1. INTRODUCTION

Brands prefer higher equity gains of consumers and tend toward consumers due to increase of sale. Hence factors that influence brand performance should be evaluated carefully if managers are to have strong brands. Managers should investigate elements containing the brand equity to obtain clear and precise results of brand performance (Chirani et al., 2012).

The telecommunication sector faces a fiercely competitive market. Each brand plays an extensively competitive role in capturing the market share among very stable customers. There are many brands competing in the industry with efficient marketing. Brands are very significant in the telecommunications industry due to the fact that customers are very loyal to brands hence many use various brands for various purposes.

Since competition among the brands is fierce, there is a need for differentiating their services. Brands set the most important points of differentiation among competing offers. When customers choose, the brand with high equity comes to mind and the customer will favour that brand without any perceived risk. It is therefore significant to study the brand equity in the telecommunications sector of Sri Lanka and how customer oriented brand equity is formed with elements, namely brand knowledge, (brand awareness and brand image) and brand loyalty. Brand knowledge and brand loyalty were selected since they have received broader acceptance among researchers as these dimensions are essential for customers in the telecommunications industry.

Thus the primary objective of this study is to investigate the elements of brand equity, namely brand knowledge and loyalty, and how they impact creating brand equity for telecommunication brands. This paper has been organised as follows: 1. The literature review and theoretical framework explain the dimension of brand equity and derived hypotheses 2. The methodology adopted for this study is outlined 3. The results and discussion 4. The conclusion and implications.

2. LITERATURE REVIEW

Keller (2013) defines customer-based brand equity as “the differential effect that brand knowledge has on consumer response to marketing that brand”. This definition of brand equity has three ingredients: the effect resultant from a difference, knowledge of the brand, consumers’ response to marketing. Brand equity is initiated from consumers’ different responses. The differences in the responses are the results of consumer knowledge with regard to the brand. Marketing activities help customers to create responses resulting from customer perception, customer preferences, and customer behaviour. Brand equity is explained in two ways: consumers’ perception and consumers’ behavior (Silverman et al., 1998). Consumers’ perception comprises brand associations, brand awareness, perceived quality. Consumers’ behavior consists of brand loyalty and differences in price (Myers, 2003). Although brand equity is described in two ways, Mohan and Sequeira (2016) also reiterate that the important elements of brand equity are loyalty, awareness, perceived quality, and associations of the brand. Liu et al. (2017) also confirmed and verified with the Aaker (1991) model that brand equity consists of brand awareness which is important for marketing decision makers to charm the consumers and remind them that there is a certain brand on the market.

Brand equity is one of the important resources for organizations which are a key asset that creates competitive advantage and enhances the financial performance of organizations (Mizik, 2014).

A brand has significant intangible value. Therefore companies prioritize brand equity irrespective of their sizes in all industries (Lehmann et al., 2008; Hao et al., 2007). Keller (2008) emphasizes that a brand’s power relies on customer loyalty and the perception consumers have from feeling, using, hearing, and seeing it. Firms need to raise the efficiency of marketing expenditures due to higher cost, intense competition, and devastation of demand. Marketers need to have full understanding of consumers’ behavior and act accordingly. This can be done through the knowledge that brands
generate in consumers’ minds through marketing. Many researchers have acknowledged the strategic significance of brands (for example Aaker, 1991; Kapferer, 1994) thus brands are considered to be the core of marketing and business strategy (Doyle, 1998) by firms which can gain competitive advantage.

2.1. Brand awareness
Awareness of a brand is part of brand knowledge, which contributes to brand equity according to the literature (see Myers, 2003; Mohan and Sequeira, 2016; Liu et al., 2017). According to Huang and Sarigollu (2012) brand awareness is defined as recalling, recognition, and being aware of a brand. The most imperative and critical dimension of brand equity is brand awareness. Consumers who are aware of products can make purchasing decisions more easily than if they are not aware of them (Macdonald and Sharp, 2000). Brand with higher awareness exhibit commitment to themselves and motivation for buyers to buy. This creates a positive attitude to the brand and buying intention (Erdem et al., 2006). Brand awareness positively influences the market, market share, and sales of the brand (Huang and Sarigollu, 2012).

The relationship between price, promotion, and awareness of a brand is positive because of the brand exposure to consumers generates experience (Huang and Sarigollu, 2012). Despite the fact that the facts discussed earlier support brand equity, a study conducted in India found that there is a moderate correlation between brand awareness and overall brand equity in the FMCG industries. The impact exerted by the brand awareness is low. The brand awareness is not the only element that creates customer based brand equity (Mohan and Sequeira, 2016).

2.2. Brand image
The image of a brand is another component of brand knowledge of customer based brand equity. Brand image is one of the important components of marketing (Dirsehan and Kurtulus, 2018). Since brand image is a key for marketing in many companies, brand image positively contributes to the word of mouth and consumer commitment (Seo and Park, 2018). Dobni and Zinkhan (1990) define the perception of consumers according to the image of the brand. Brand image is also a reminder of the brand to consumers (Keller, 1993). Brand image is one of the critical components of the customer based brand equity (Jara and Cliquet, 2012). The benefits of brand image can be obtained through placing solid claims and sole associations into the minds of consumers (Keller et al., 2012). Brand image influences consumers’ willingness to pay premium prices (Cretu and Brodie, 2007). Brand image significantly contributes to consumers’ buying intentions (Liu et al., 2017).

2.3. Brand loyalty
According to the literature, loyalty to a brand is one of the vital components that create brand equity. Loyalty to a brand is “the attachment that a consumer has to a brand” (Aaker, 1991). Brand loyalty is one of the significant bases of the brand performance (Colicev et al., 2016). Brand loyalty indicates that a consumer will not switch to another brand even if there be significant improvement or price changes to the brand the consumer uses. Therefore brand loyalty creates and influences consumers’ positive attitude and relates to buying intentions (Liu et al., 2017). It is also evident that a strong relationship exists between brand loyalty and brand equity (Mohan and Sequeira, 2016; Atilgan et al., 2005). Brand loyalty is also associated with personal viral marketing and word of mouth tools. This is also evident from a study conducted by (Eelen et al., 2017).

3. THEORETICAL FRAMEWORK
The independent variables used in the study consist of brand knowledge (which includes awareness of the brand and image of the brand), brand loyalty and brand equity, which are dependent variable. Every Single variable is explained and the hypotheses are also developed accordingly.

Brand awareness contains recognizing a brand and recalling a brand (Keller, 2013). Recognition of a brand is once customer sees the product category; the brand should come in their mind of as
previously used one. The second component is brand recall, which means that consumers should be able to memorize the brand from their memory when the product category is given. Consumers should have the brand awareness in order to give the priority in purchasing a particular brand (Alamro and Rowley, 2011). Brand awareness is an important factor in the process of decision making of consumers in purchasing. When consumers look at a product category, the brand comes into their mind and the particular brand is placed in sets of consideration (Nedungadi, 1990). Most of the researches in the past literature proved that brand awareness was one of the key determinants of brand equity (see Washburn and Plank, 2002; Pappu et al., 2005). Huang and Sarigollu (2012) confirm that the brand awareness discharges well the market outcome as one of the ingredients of the brand equity. Further, Mohan and Sequeira (2016) and Liu et al. (2017) also confirmed that awareness of a brand is one of the vital components of the customer based brand equity.

In addition, Keller (2013) emphasized that brand equity stems from brand knowledge which contains awareness and image of the brand. Brand image is one of the sources of brand equity. Iceberg model of brand equity is also explaining the image and it’s constituted. The brand image includes identity elements such as product and packaging design, advertisement and promotion, which are visible to consumers (Zimmermann et al., 2001). Many studies found that brand image is one of the critical elements in brand equity (see, Jara and Cliquet, 2012; Liu et al., 2017; Dirsehan and Kurtulus, 2018).

In the case of customers of telecommunication industry, brand knowledge is important determinant of brand equity since customers select the brand to use after looking at brand associations and thus, researcher hypothesizes that.

\[H_1\]: Brand knowledge (brand awareness and brand image) among customers in the telecommunication industry positively contributes to the brand equity.

In the case of brand loyalty, customers in the telecommunication industry are very loyal to the brand they use. Oliver (1999) defines loyalty as “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...” Odin et al. (2001) explains that when a consumer buys the same brand repeatedly, that consumer owes a loyalty to the particular brand. Brand loyalty is one of the vital elements of brand equity. It is very expensive for any business to attract customers and keep them. When customers are very loyal and satisfied with the brand, it is inexpensive to keep them with the brand (Aaker, 1991). With the loyalty, customers in the telecommunication industry are aware of many brands and they are creating positive word of mouth by recommending to other peers and people. With the positive word of mouth, actions by competitors brand are counterattacked (Dick and Basu, 1994). Further, Reichheld and Detrick (2003) explains that customer loyalty is the outcome of customer retention programs so that customers remain active in using the brand. It is because of the fact that customer loyalty is also depending on the ability to maintain customers’ loyalty (Zeithaml et al., 1996). Travis (2000) considers that brand loyalty is also a result of brand equity. He further retreated that brand loyalty can be enriched with additional dimensions of the brand equity. Hence, researcher hypothesizes that.

\[H_2\]: Brand loyalty in the telecommunication sector positively contributes to the brand equity of the telecommunication brands.

Given the development of hypothesis and explanation of two variables namely brand knowledge and brand loyalty, the conceptual model is given as below;
Figure 1: Theoretical framework

4. METHODOLOGY

There are approximately one million telecommunication customers in the two districts under studying. Researcher was unable to get the exact number of users of telecommunications services in the study areas. According to Krejcie and Morgan (1970), at 5% of the margin of error, for one million customers, 384 customers need to be surveyed. A survey among 422 customers enjoying telecommunication services was given questionnaires and received 268 which represents 63% of response rate. The survey was conducted in Ampara and Baticaloa districts of Sri Lanka which was the two major districts of three in the Eastern province of Sri Lanka. Researcher adopted convenient sampling method since most of the people use telecommunication facility for their routine and official communications.

The questionnaire was adopted for brand awareness of Severi and Ling (2013), for brand image from Kim and Kim (2005) and for brand loyalty from Yoo and Donthu (2001). Thus, questionnaire consists of two parts with five constructs with regard to awareness of the brand, seven constructs about the image of the brand and four items in respect of brand loyalty. Overall brand equity had four items. All items were rated with seven point’s Likert scales.

Correlation analysis was also used for analysis purpose. Relationship between independent variables given as brand knowledge and brand loyalty and dependent variable brand equity have been explored using multivariate technique under which multiple regressions analysis was used. The following multiple regression formula was used for data analysis.

\[ y = \beta_0 + X_1\beta_1 + X_2\beta_2 + e \]

Where;

- \( y \) denotes the dependent variable brand equity.
- \( \beta_0 \) is constant;
- \( X_1 \) and \( X_2 \) are the independent variables brand knowledge and brand loyalty respectively.
- \( \beta_1 \) and \( \beta_2 \) represent regression coefficient of the independent variables associated with brand knowledge and brand loyalty respectively.
- \( e \) represents the error component of the fitted relationship.

Although adopted questionnaire has been used in this study, pilot study was conducted among 52 customers in the telecommunication industry. 0.96 was the value of Cronbach’s alpha which is greater than 0.70. Thus, this confirmed the internal consistency of the instrument. Factor analysis was also performed for the purpose of reducing data. All communalities were higher than 0.5 and all items were included in the analysis. Multiple regression techniques were used for analysing the collected data.
5. RESULTS AND DISCUSSION

In the occasion of Demographical profile of these respondents, 56 percent were male and 43 percent were female. Of 268 respondents, 22 percent were at GCE Ordinary Level and 41 per cent were with GCE Advanced Level qualifications. 24 percent, 4 percent and 9 percent of respondents fall in the category of bachelor degree, master degree and having below ordinary level qualifications respectively. In the case of income of these respondents, 10 percent of them were having below Rs. 10,000, 26 percent of them were within the range of Rs. 10,000 – Rs. 30,000, 45 percent of them fell within the range of Rs. 30,000 to Rs. 50,000 and 19 percent of them were in the above Rs. 50,000 monthly incomes.

Factor analysis was performed for purpose of reduction of data and cumulative variances are given in Table 1.

Table 1: Cumulative variances

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cumulative Variances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand knowledge</td>
<td>93.8%</td>
</tr>
<tr>
<td>Brand loyalty</td>
<td>71.1%</td>
</tr>
<tr>
<td>Overall brand equity</td>
<td>68.4%</td>
</tr>
</tbody>
</table>

All variances are given in Table 1 shows that data is well represented in all variables.

Correlations analysis was performed and associations are given in the correlation matrix in Table 2.

Table 2: Correlation matrix

<table>
<thead>
<tr>
<th></th>
<th>Brand knowledge</th>
<th>Brand loyalty</th>
<th>Overall brand equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand knowledge</td>
<td>1</td>
<td>0.748**</td>
<td>0.860**</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>0.000</td>
<td>268</td>
</tr>
<tr>
<td>Brand loyalty</td>
<td>1</td>
<td>0.676**</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>268</td>
<td>268</td>
<td></td>
</tr>
<tr>
<td>Overall brand equity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)

Correlation analysis shows that brand knowledge and overall brand equity have positive association ($p < 0.05, r = 0.860$). It was further brought to light that brand loyalty and overall brand equity have positive correlation indicating that a positive association ($p < 0.05, r = 0.676$) exists between these variables.

With the view to investigate the model fit and to test hypotheses multiple regression was used. The results are shown in Table 3.

Table 3: Regression results

<table>
<thead>
<tr>
<th>Variables</th>
<th>$\beta$</th>
<th>$p$</th>
<th>$T$</th>
<th>Sig.</th>
<th>IVF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand knowledge</td>
<td>5.2</td>
<td>0.00</td>
<td>17.1</td>
<td>0.00</td>
<td>2.27</td>
</tr>
<tr>
<td>Brand loyalty</td>
<td>0.07</td>
<td>0.12</td>
<td>1.6</td>
<td>0.12</td>
<td>2.27</td>
</tr>
</tbody>
</table>

Note: $F_{2, 268} = 382.01$, $p < 0.05$, $R^2 = 0.74$, Adjusted $R^2 = 0.74$, $n = 268$
Analysis reveals that $R^2$ value is 0.74 at significant level of 5% with less than $p$-value of 0.05. This illustrates that 74% of brand equity of the telecommunication industry is well described by the brand knowledge and brand loyalty. Adjusted $R^2$ of 0.74 means that significant model shows that 74% impact on the brand equity. Inflation Variation Factors are smaller than five and therefore, there is no evidence of multicollinearity issues. The regression equation is derived as follows.

$$OBE = 4.560E - 17 + 5.169BK + 0.074BL$$

Researcher tested the adequacy of the model as well. The model is also adhering to the assumptions of normality. The residual histogram is given in the Figure 2.

**Figure 2: The residual histogram**

In addition to the histogram of residuals, in order to test the model fitted with multiple regression, Normal Probability Plot is also examined. NPP is roughly a straight line and the data around the line. NPP is given in Figure 3.

Further, researcher has tested the model for linearity and equality of variances and confirmed with scatter plot. Scatter plot is given in Figure 4.

**Figure 3: NPP of residual**
Although the model is statistically best fit with brand knowledge and brand loyalty, brand knowledge is only variable that contributes significantly to the overall brand equity of the telecommunication industry ($p < 0.05$, $t = 17.1$). The other variable brand loyalty is also associated with overall brand equity of this industry however, it is not statistically and significantly ($p > 0.05$, $t = 1.6$) supporting. In accordance with the results of the regression analysis, $H_1$ is supported and $H_2$ is unsupported.

Although the brand loyalty of these customers in the telecommunication industry in creating brand equity is positive, contribution of which is statistically insignificant as per the model fitted in this study. The reason for this trend may be that customers are reluctant for being loyal to a specific brand of communication since the customers are in a position to switch to a cheaper brand within the industry.

Findings also reveal that correlation between brand knowledge and brand loyalty in the telecommunication industry have positive strong association ($r = 0.75$, $p < 0.05$). R-Square value is 0.559 ($t = 18.4$, $p < 0.05$). This is also shown in Figure 5.

As per Keller (2013), brand knowledge consists of two dimensions namely brand awareness and brand image and thus, it is necessary to explore the brand knowledge in the telecommunication industry. Despite the fact that these two elements of brand equity and brand loyalty associate

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**Figure 4: Scatter plot of residuals**

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**Figure 5: Scatter plot (BK & BL)**

As per Keller (2013), brand knowledge consists of two dimensions namely brand awareness and brand image and thus, it is necessary to explore the brand knowledge in the telecommunication industry. Despite the fact that these two elements of brand equity and brand loyalty associate
positively (BI → BL: $r = 0.84, p < 0.05$; BA → BL: $r = 0.72, p < 0.05$), brand image has a strong association with brand loyalty. These results also support the findings of Kayaman and Arasli (2007) and Keller and Lehmann (2006). This is also shown in Figure 6.

Figure 6: Scatter plot (BI & BL)

R-Square value for these variables is 0.71($t = 25.5, p < 0.05$). This result suggests that increasing the brand awareness of telecommunication brand will enhance the brand loyalty. Marketers in the telecommunication industry should focus on enhancing brand loyalty by raising the brand image of the telecommunication brand and increase the brand equity in the industry in return.

6. CONCLUSION

The main objective of this study was to explore brand awareness, brand image, brand loyalty, and their contribution to creating brand equity in the telecommunication sector of Sri Lanka. Although the findings suggest that brand knowledge and loyalty positively contribute to the creation of brand equity in the telecommunication industry, customers’ knowledge of brands in the telecommunication industry statistically contributes to a significant extent to brand equity in the industry. Brand loyalty contributes insignificantly to creating brand equity in the telecommunication industry. However, marketers can enhance brand equity by building brand image since brand image as a dimension of brand knowledge is strongly linked to brand loyalty. Findings of the study also strongly support the studies of Kayaman and Arasli (2007), Liu et al., 2017; and Keller and Lehmann (2006) by confirming that brand awareness, image, and loyalty play a critical role in the creation of customer based brand equity.

7. IMPLICATIONS FOR MANAGERS

This research is helpful for marketing managers in telecommunication companies. Managers can see the results of their marketing efforts on their business. They can see where the marketing resources can be assigned to improve the effectiveness of the performance. The study is also helpful for policy makers and practitioners as it emphasizes that brand knowledge is a serious element in the creation of customer based brand equity in the Sri Lankan telecommunication industry. Brand knowledge containing brand awareness and image highly influences the brand equity in the telecommunication industry. Brand awareness of the telecommunication industry should be seen when attracting potential customers to telecommunication brands in Sri Lanka. The next factor is brand loyalty. Marketers should consider the factors that make up brand loyalty and be vigilant of the telecommunication industry avoiding actions that cause consumer switching.
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