Brand Image and its Impact on Consumer’s Perception: Structural Equation Modeling Approach on Young Consumer’s in Bangladesh

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Abstract: The purpose of this study is to investigate the impact of brand image towards young consumer’s perception in selecting beverage products. A survey was conducted among 400 young consumers from the Dhaka city capital of Bangladesh. The data analyses were conducted by exploratory factor analysis, confirmatory factor analysis and structural equation modeling to test the hypothesis. The results revealed that the most of the young consumers are highly concerned about brand image regarding selection of any beverage drinks. This is a relatively new issue that remains largely undiscovered by researchers under underdeveloped country’s perspective. It is hoped that the findings may assist the local and multinational beverage companies about the necessities of enhancing their brand image. The paper adds to the existing body of research on beverage consumers particularly on young consumer’s perceptions and expectations from their chosen brand.

Key words: Consumer perception, brand image, young consumers, Dhaka city, Bangladesh

INTRODUCTION

According to Solomon (2009) consumer behavior is the process where individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires. Prior to choice of any products or services consumers place a number of attributes in their choice sets. Among these attributes are price, quality and service quality (Dodds et al., 1991; Ofir, 2004; Turk and Avciar, 2009). However, studies also revealed that, besides price and quality, other signals that are also considered as more important to assess the product’s worth, are brand, store name, past experience, attitude and product information (Curry and Riesz, 1988; Zeithaml, 1988; Dodds et al., 1991). Past empirical studies also revealed that the reference price also affects the consumers’ buying behavior (Winer, 1986; Lattin and Bucklin, 1989). On the other hand, Lattin and Bucklin (1989) did one of the studies that apparently not supporting the reference price effects. Brand name, for example, often signals as a cue or as a surrogate of product quality use by consumers in their evaluation of goods or services before they decide to purchase. Researchers argued that the effect of price tends to be stronger when it is presented alone as compared when it is combined together with brand name (Dodds et al., 1991). Bristow et al. (2002) contended that if consumers believed that there are differences among brands, then the brand name becomes the center piece of information in the purchase decision or repurchase intention. In fact, consumers also use brands to create or communicate their self-image or status (O’Cass and Frost, 2002; Escalas and Bettman, 2003). Consumers sometimes associate themselves to a given brand when they make brand choice and also make their brand choice based on associations with manufacturer’s brand name (Fugate, 1986; Aker, 1997). Besides, brand names contribute value to the consumer’s image, as well as the economic success of the businesses (Alreck and Settle, 1999; Ataneman and Ulelin, 2003).

Nguyen and Leblanc (1998, 2001) claimed that image is related to the physical and behavioral attributes of the firm, such as business name, architecture, variety of products/services and to the impression of quality communicated by each person interacting with the firm’s clients. A seller’s reputation effects the perceptions of the quality of the products sold by that seller (Cabrera, 2000) confirmed this hypothesis in his study of product stretching. Haque et al. (2006) depicted consumer familiarity and confidence significantly depend on brand of the products and a company’s sales history. In general, familiarity is created when there are long sales history, strong brand images of a company and previous satisfaction of using the product (Cotman et al., 2000;
Huang et al., 2004). Confidence was also derived from consumers’ attitudes that directly influence their purchasing intentions (Smith and Sivakumar, 2004). According to Aydin and Ozer (2005) image, perceived service quality, trust and customer switching costs are the major antecedents of customer loyalty and loyal customers may buy more, accept higher prices and have a positive word-of-mouth effect. Consequently, image as an attitude must affect behavioral intentions such as customer loyalty (Johnson et al., 2001). Leung (2009) depicted that purchase intention of consumers products like computers or clothing can drive consumers based on the brand name and its image. Nguyen and Leblanc (2001) demonstrated that image relates positively with customer loyalty in three sectors (telecommunication, retailing and education).

Ballantyne et al. (2006) defined brand image as the material property associated with the brand which could make profits or sense for customers and help or increase describing the products characteristics. Wu and Fu (2009) said that while referring to a brand image, the perception of consumers presented by the fact which would be more important than the fact itself. Magid et al. (2006) also thought that brand image included customer responses to brand name, sign, or impression and also represented the symbol of the product quality. Meanwhile, Magid et al. (2006) considered brand image as a set of assets and liabilities linked with brand name and sign that the assets and liabilities increased or reduced the value by the enterprise providing products or services for customers. That is why the power of a brand lies in the minds of consumers or customers (Keller, 2000). Biel (1992) considered three elements of brand image, namely the maker’s image (enterprise image), the product image and the image of competitor’s brand. All of the three had great impact on customers’ perception of brand while brand image would then have influence on user image. Tsai (2005) also found that brand image is the symbolic, affective and trade off value as an indicator of "brand purchase value" was positively related to repurchase intention. In recent times their exist a stiff competition of the beverage companies in Bangladesh. This is happen due to privatization and liberalization of policy the private sector. Consumer’s beverage industry in Bangladesh under various social categories has several options about selection of a company’s products. Therefore, apart from service quality of the beverage products most of the young consumers are now interested to consume products from a company those have better brand image. In fact carbonated beverage entered into Bangladesh market in the later part of 1980. At that time there were only few companies in Bangladesh under this industry. But by the change of time, western culture influences and movement of multinational companies beverage drink become very popular in Bangladesh. By year 2000 more than 12 Beverage Company operating business in Bangladesh and most of them are foreign companies. In Bangladesh enters the beverage industry mainly by the inspiration of the private sector initiative like Transcom Beverages Limited (TBL manufactures the famous Pepsi range of beverages-Pepsi, 7up, Mirinda Orange, Mirinda Lemon, Slice and Soda.), Global Beverage Co. Ltd., AST Beverage Ltd., Pran Beverage (Products: Maxx Cola, Cloudy Lemon, Clear Lime, Power Drink etc.), Tabani Beverage Company Ltd., Partex Beverage Ltd. (Products: RC Cola, RC Orange, Upper 10, RC Lemon, MUM Mineral Water etc.), Akij Food and Beverage Ltd. Because of the stiff competition companies of beverage industry are trying to capture the maximum share of the market by providing various activities to capture and retain the young consumers. So, it is necessary for them to learn about the consumer’s perception about the brand image.

Furthermore, there exists a significant research gap linking brand image and young consumer’s perception on choosing beverage products in Bangladesh. The present study aims to gather primary data from the young consumer’s of beverage products about the degree of influence of brand image and their perception. This study presents a conceptual and exploratory analysis of the relevant variables which will direct for further empirical studies.

Past literature revealed that a successful brand image enables consumers to identify their desired need which ultimately helps a company from its competitors (Hsieh et al., 2004). On the other hand Taro Wef and Haque (2007) had given importance on supplier selection based on their brand image. In fact the findings of Jiang et al. (2011) revealed that apart from brand image price discount and complementary products may have positive impact on customer loyalty. Furthermore, Linder and Seidensticker (2010) agreed that brand image is one of the company’s core competencies. Mishra and Datta (2011) revealed that brand name has strong influence on customer based brand equity. Kotler (2001) defined brand image as a set of beliefs, ideas and impression that a person holds regarding an object. On the other hand, Keller (1993) considered brand image as a set of perceptions about a brand on consumer’s memory. Na et al. (1999) connected brand image with customer's perception as they mentioned that image cannot be measured by attribute measurements alone but must include measurements of consumers’ perceptions of the value and benefits attainable from using the brand.
Fig. 1: Conceptual framework of the proposed study

In addition, brand image has been conceptualized and operationalized in several ways (Reynolds and Gutman, 1984; Faircloth et al., 2001). It has been measured based on attributes (Koo, 2003; Kandampully and Suhartanto, 2000), brand benefits or values (Hsieh et al., 2004; Roth, 1995; Bhat and Reddy, 1998); or using brand image scale (Malkota, 1981; Faircloth et al., 2001). So this research can draw the following hypothesis:

- **H1**: Brand image plays a significant influence on young consumer’s perception in selecting beverage products

Above all researchers in this research found that there is very limited literature focusing on consumer's perception in the choice of beverage products where brand image play a significant influences. Based on the literature review this study proposes a conceptual framework of studying the relationship between brand image and consumer's perception. The schematic diagram is presented in Fig. 1.

**MATERIALS AND METHODS**

Questionnaires were distributed to the respondents according to the market share of the companies in the particular market for minimizing the biasness. A self-administered questionnaire was developed of this research. Section one to two designed to measure the participant’s perceptions of the beverage company’s brand image and their perception on those companies. The responses of this measurement were scored using a 7-point rating scale. A total of 450-instruments were distributed among the potential respondents for this study, of which 400 questionnaires were received and proved to valid for further studies. This represents a success rate of more than 80%, which is considered to be extremely good in view of time, cost, certainty and geographical constraints.

Data was collected through distributing structured questions by following convenient sampling procedure to the consumers of beverage products especially young within the age group of 13-25 years from various public and private universities in Dhaka city the capital of Bangladesh. Dhaka city was selected because significant number of young consumers of beverage products is significant in Dhaka compared with other rural area in Bangladesh. This study used 400 respondents to complete the research objective. Out of 400 samples around 30% of respondents were from TBL manufactures the famous Pepsi range of beverages, 30% were from Global Beverage Co. Ltd., 15% of the respondents were from Pran Beverage and the remaining 15% Tabani Beverage Company Ltd., 10% Partex Beverage Ltd. From 400 respondents, 60% of the respondents were males and 40% were females. The largest number of responses came from the 18-25 age group range and the lowest was from the group below 18 years of age. This was mainly due to the fact that most of the respondents were from University students. Ethnicity wise, the majority of the respondents were from Dhaka city with a rate of 90%. The majority of the respondents was Bachelor’s students (80%) followed by Masters Student which is (20%). Most of the respondents were unemployed 80% followed by 20% was employed commanded a salary of TK 20000 per month. Of the respondents in this research, 80% were single.

The data analysis of his study was organized into three stages. The first stage of the data analysis conducted an Exploratory Factor Analysis (EFA), the second part of the data analysis employed a Confirmatory Factor Analysis (CFA) to confirm the factor. In this study, the goodness of fit testing was conducted by using several criteria, including Chi-square test, Root Mean Square Error of Approximation (RMSEA), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Normed Fit Index (NFI) and Comparative Fit Index (CFI) (Hair et al., 2006). SEM (Structural Equation Modeling) was used to test hypothesis 1.

**RESULTS AND DISCUSSION**

Reliability coefficient of all the items in the instruments: This research were used Cronbach alpha to measure the reliability for a set of two or more constructs where alpha coefficient values range between 0 and 1 with higher
Table 1: Reliability analysis for all variables

<table>
<thead>
<tr>
<th>Cronbach's alpha</th>
<th>Cronbach's alpha based on standardized items</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.791</td>
<td>0.780</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 2: KMO and Bartlett's test

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin measure of sampling adequacy</th>
<th>Bartlett's test of sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.816</td>
<td>Approx. Chi-square: 924.487</td>
</tr>
<tr>
<td></td>
<td>df: 91</td>
</tr>
<tr>
<td></td>
<td>Sig: 0.000</td>
</tr>
</tbody>
</table>

Table 3: Factor loading matrices following rotation of two-factor solutions

<table>
<thead>
<tr>
<th>Items</th>
<th>Consumers perception (CP)</th>
<th>Brand Image (BI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest of customers' (c1)</td>
<td>0.67</td>
<td>0.69</td>
</tr>
<tr>
<td>Experience (c2)</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>Trust (c3)</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>Perception towards local beverage company is positive (c4)</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>Customer representative have a tendency of willingness to help customers (c5)</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>Involvement with community's (b1)</td>
<td></td>
<td>0.67</td>
</tr>
<tr>
<td>Social responsibility (b2)</td>
<td></td>
<td>0.68</td>
</tr>
<tr>
<td>Involvement in socially responsible activities (b3)</td>
<td></td>
<td>0.63</td>
</tr>
<tr>
<td>Consumers and general public will bear the costs of business</td>
<td></td>
<td>0.69</td>
</tr>
<tr>
<td>social involvement (b4)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Extraction method: Principal component analysis, Rotation method: Variance with Kaiser normalization, Rotation converged in 5 iterations

Table 4: The reliability coefficients for derived factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>No. of cases</th>
<th>No. of items</th>
<th>Cronbach's alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer's perception</td>
<td>400</td>
<td>5</td>
<td>0.79</td>
</tr>
<tr>
<td>Brand Image</td>
<td>400</td>
<td>4</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Reliability test of each item under each factor after factor analysis: According to Hair et al. (2006) reliability measures shows greater consistency than less reliable measures (Table 4). The reliability coefficients for the four factors: Consumer’s perception and brand image were 0.79, 0.81, respectively. As Table 4 shows, all alpha coefficients for the data exceed the minimum standard for reliability of 0.70 recommended by Nunnally (1978). Thus, the results indicate that these multiple measures are highly reliable for measuring each construct.

Confirmatory factor analysis: The second phase of data analysis consisted with confirmatory factor analysis. To this end the Structural Equation Method (SEM) was applied, using maximum likelihood estimation method to test the hypothesis of this study. Although, this research has employed EFA for verifying grouping and loading pattern of measuring scale items, it has further attempted to screen EFA examination by conducting CFA among all the variables with measuring items retained by EFA.

Brand image: From the result of EFA as shown in Table 3, have retained 4 measuring items for young consumer’s perception on beverage products. This study have retained all these items after conducting CFA, as all those indicators were loaded with loading factor more than 0.60. After adding this parameter, the measurement model fit indices of price showed an adequate fit: χ2/df = 1.78 (χ2 = 23.225, df = 13), GFI = 0.97, AGFI = 0.96, CFI = 0.97, NFI = 0.95, TLI = 0.96 and RMSEA = 0.040.

Consumers perception: From EFA as shown in Table 3, have retained 5 measuring items for this variable. This study have retained all these items after conducting CFA, as all those indicators were loaded with loading factor more than 0.60. The measurement model fit indices of customer’s satisfaction and brand image showed an adequate fit: χ2/df = 1.20 (χ2 = 16.851, df = 14), GF = 0.96, AGFI = 0.95, CFI = 0.95, NFI = 0.93, TLI = 0.93 and RMSEA = 0.040.

Statistical significance of parameter estimates: In this stage this of data analysis this research utilized Critical Ratio (CR) value, which represents the parameter of an estimate divided by its standard error. Based on a probability level 0.05 the test statistic needs to be >1.96 before the hypothesis (that estimates equals 0.0) can be rejected. On the other hand, it is also important to note
that nonsignificant parameters can be indicative of a sample size that is too small (Byrne, 2001).

**Hypotheses testing:** The structural equation model was examined to test the relationship among the constructs. After adjustment of the model by observing the modification indices value goodness-of-fit indicates for this model were chi-square/df = (159.768/61) = 2.61, GFI = 0.95, AGFI = 0.94, CFI = 0.93, NFI = 0.91, RMSEA= 0.04. Figure 2 depicts the full model. After observing the statistical test it is been clear that all the paths are not significant at p<0.05. (H1) brand image has significant influence on consumer perception in selecting a beverage product (Table 5). From the statistical result the null hypotheses H1 is accepted at 0.5 level of significance p>0.000.

**CONCLUSION AND MANAGERIAL IMPLEMENTATION**

In this study, respondents were directly asked to provide their perceptions or evaluations of the comparisons, using a seven point scale. The results indicated that the adequate measurement model was a good fit with the data. This study was undertaken to examine and understand the consumer’s perception in the choice of beverage products in Bangladesh. As a general notion, consumer’s perception is widely varied with the service quality, brand image and customer’s satisfaction. From the current research it is being revealed that in Bangladesh most of the young consumer’s are very concern about the brand image. The competition among the beverage company’s in Bangladesh is very intense now than ever before. They compete not only with product quality by a large amount of investment, but also for the acquisition of new customers and retention of old customers by direct and indirect image building activities. Above all, an understanding of direct effect by the key factors like brand image, affecting the young consumer’s perception will put the marketing manager in a better position to design appropriate strategies to deal with marketing practices that will enhance the benefit of the companies.

**LIMITATION OF THE STUDY AND DIRECTION TO FUTURE RESEARCH**

This research still predict that further research efforts are being needed to examine these factors in Bangladesh with additional samples before generalization can be made. Further research must consider customers satisfaction as a mediating role in between service quality and customer’s satisfaction. In addition, further research is needed to measure the relationship of overall satisfaction and behavioral intention to the consumers’ perceptions of the service quality of a particular company’s products.

**REFERENCES**


