MODELING BRAND PERSONALITY USING STRUCTURAL EQUATION MODELING

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ABSTRACT

Brand personality is acknowledged as an imperative platform for budding a trustworthy customer base for products. Modeling the Brand Personality is essential for any marketer in the present global marketing scenario. Brand differs in their power and value in the market place. Brand Personality is set of human characteristics associated with a brand. Customers are willing to pay for using a branded product compared to the unbranded product. Brand is an intangible assets and it is difficult to measure it directly. Structural Equation Modeling provides a method to model the brand personality that cannot be directly measured. This paper aim to focus on SEM to model the brand personality of LUX in Indian context using the framework developed by Aaker.

Keywords: SEM Model, Brand Personality, Brand

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1. Introduction

Brand personality has been the centre of attraction since decades. Brands endow with their customers with emotional and experiential benefits. The benefits that brands provide their customers are essential to building strong brand equity. In order to build this strong brand equity in the market, it is fundamental to understand the core dimensions of brand image, which is brand personality (Lee and Oh, 2006). Brand personality is an essential component of brand imagery- a soft attribute of an image-that helps create brand equity (Batra, Lehmann, and Singh, 1993; Biel, 1993). Aaker (1996) defines the associated personality of a brand as a set of human demographic characteristics like age, gender, and race; human lifestyle characteristics like activities, interest, and opinion; and human personality traits such as extroversion, dependability, and sentimentality. The brand becomes a living person and is often attached to a metaphor. In this way, the abstract intangible assets and characteristics can be visualized in a tangible way, and customers interact with brands as if they where human beings. Aaker(1996),Batra, Lehmann, and Singh(1993),Plummer(1985) found measuring a brand's personality may help firms to communicate effectively with their consumers and may play a major role in advertising and promotional efforts. A brand personality can be used as a basis of differentiation from other brands and help to differentiate the brand from competitors in a particular product category. As such, marketing practitioners have become increasingly aware of the importance of building "a clear and distinctive brand personality" (Yaverbaum, 2001, p. 20) as a central driver of consumer preference. Zentes et. al.(2008), suggested building a brand personality is an important objective of brand management . Consumers are more likely to buy brands that have personalities that closely match their own self image (Schiff man and Kanuk, 2007). Govers and Schoormans (2005) noted that consumers prefer brands that have a personality which fits their own personality. Brand personality in the retail industry is becoming an increasingly important concept as supermarket chains develop in the global market. Leading retail companies such as Wal-Mart, Tesco and Carrefour have developed unique image and brand personalities to differentiate their retail chain from their counter parts. Although there is an increasing interest in brand personality research but too many studies have not been done in Asian context and India in particular. Although we live in the arena of globalization but still localization of products and services is still in the centre stage and focus of marketers. India is selected for the study because people of different religion, race and culture exists here since generations. The Brand Personality

has been created by J.Aaker(1997) with its foundation based upon personality psychology. .J.Aaker developed the brand personality scale to measure the five personality dimensions – Sincerity, Excitement, Competence, Sophistication and Ruggedness. The role of brand personality in marketing is very important this concept and tool can be used to build brand equity in a very effective way(Hoeffler and Keller,2002).Keller and Richy(2006) established the importance of brand personality by stating that business organizations must build up their own corporate brand personalities. According to Okazaki(2006) the brand personality scale can be used to assess the purchasing decisions of the consumers. This study has attempted to extend Aakers brand personality scale to identify the different dimensions or factors for the "LUX" brand.

2. Literature Review

Aaker and Fournier (1995) defined brand personality as the "set of meanings constructed by an observer to describe the 'inner' characteristics of another person…that can be used to summarize complex behaviors and form expectations of future behaviors" (p.392). Jennifer Aaker (1997) developed a theoretical framework of the brand personality construct by determining the number and nature of dimensions of brand personality traits. Aaker (1997) developed a measurement scale called the Brand Personality Scale, which consisted of 42 traits. That is, brand personality is a consumer's evaluation of a brand on a pattern of traits that are typically used to describe a person's personality (Batra, Lehmann, & Singh, 1993). In today's life, we are surrounded by many brands (Kapferer 2007: Klein 2000) and their presence is felt every where. According to the American Marketing Association, a brand is a "name, term, sign, symbol, or design, or a combination of them, intended to identify the goods and services of one seller or group of sellers and to differentiate them from competitors" (AMA 2010).Another definition suggests that brands are a means to satisfy all the different stakeholders of the company-such as customers, buyers, or civil society organizations.(Srivastava, Fahey, and Christensen 2001;Crane,Matten,and Moon 2008).According to (Kapferer 2007) brands are a set of perceptions. According to (Keller 2008, Ramello 2006), the trade mark (legal term for a brand) is a means of protection and is used to identify and differentiate the products and services of a company from that of its competitors. From the company's perspective branded articles are a device to convince the customers about the uniqueness of the products and services which ultimately create an imperfect competition. The idea of personification of brands has not been a

recent concept but with the development of the Brand Personality Scale, it has drawn the attention of the academicians and marketing practioners as well. Brand personality has its foundation on personality psychology and has built up on the constructs of brand image and brand identity. Aaker provided a valid, reliable and generalizable Brand Personality scale and suggested its relevance across a wide spectrum of industries and product categories. According to Austin et al. (2005) all the items in the scale may not be relevant and applicable in certain products and some service organizations.Azoulay and Kapferer(2003) raised concerns over the applicability and generalizability of Aakers framework because the Brand Personality Scale poorly reflected the negative traits such as, unreliability or selfishness. This study has attempted to extend Aakers brand personality scale to identify the different dimensions or factors for the "LUX" brand. In Korea, Lee and Oh (2006) found Excitement/Sophistication and Smoothness dimensions. In the French study, Koebel and Ladwein (1999) found only one dimension, Competence, in common with the dimensions found in Aaker's study. Aaker's (1997) seminal research produced the most commonly used definition in existing marketing literature: brand personality is "the set of human characteristics associated with a brand." Following the trait-based approach to personality, Aaker's (1997) model of brand personality is similar to The Big Five of human personality popularized by Allport and Odbert (1936), Cattell (1946), Norman (1967), and Goldberg (1990), among others. McShane and Von Glinow (2005, p.59) gave the following outline of The Big Five's dimensions (characteristics): conscientiousness (careful, dependable, self-disciplined), agreeableness (courteous, good-natured, empathic, caring), neuroticism (anxious, hostile, depressed), openness to experience (sensitive, flexible, creative, curious), and extroversion (outgoing, talkative, sociable, assertive). Similarly, Aaker (1997) empirically showed that brand personality has five dimensions, which in turn have characteristic facets that define them: sincerity (down-to-earth, honest, wholesome, and cheerful), excitement (daring, spirited, imaginative, and up-to-date), competence (reliable, intelligent, and successful), sophistication (upper class and charming), and ruggedness (outdoorsy and tough). The 15 facets are founded upon 42 human personality traits that were applied to brands and comprise the Brand Personality Scale (BPS). Aditya Shankar Mishra (2011) studied the brand personality of "Nokia" brand in the Indian context and mentioned that some dimensions of the Brand Personality Scale emerged which had similar meanings,but not exactly with the same attributes.Saptarishi Purkayastha(2009) studied the brand personality of four brands in India and

concluded that each brand should be treated separately and the scale cannot be generalized for different brands. The results of his study gave different brand personality dimensions which were containing separate variables for different brands. According to Long –Yi Lin (2007) there exists positive relations between excitement, competence and sincerity dimensions of the brand personality and personality traits extroversion, agreeableness, conciousness. He also found the positive influence of brand personality on brand loyalty.

The study by Suvenuss Sophinson & Kawpong Polyrat (2009) found that brand personality can be used as a strategic tool to increase the restaurant patronage. Azoulay Kapferer(2003) proposed some additional new measures for measuring brand personality.

Jose I. Rejas et al 2004 in their study to measure the ford brand personality in chile refined the four dimensions of the original scale developed by Aaker(1997)which exhibited reliability and validity. Melike Demirbag et al 2008 ,identified six dimensions of brand personality for branding places. Sven Kuenzel found that as brand personality congruence and reputation affect brand loyalty directly so brand identification has only partial mediating role on these variables. Jeuni Romaniuk 2008 suggested that if the objective of the study is to study the whole market, competing brand and even non users ,than free choice method would be more appropriate than than the five point scale developed by Aaker(1997).According to him ,one should not always assume that a method with more scale points will be more suitable. Maria de La Paz Toldos Romero et al (2012) . in their study of brand personality of Mexico found that due to differences in culture and language only three dimensions of Aaker's(1997) sincerity, sophistication and ruggedness were very similar and other new dimensions like success, vivacity, domesticity and professionalism were evolved. J.L Aaker (1997) developed a valid, reliable and generalizable scale to measure the five dimensions of brand personality. Raj Arora & Charles stonner (2009) conducted a two studies design and collected both qualitative and quantitative data and concluded to use both the methods because some important dimensions appeared only in the qualitative analysis and failed to appear in the quantitative analysis and vice versa. Brand D. Carlson & et al identified success, wholesomeness, imaginativeness and toughness as important brand personality dimensions in predicting team cognitive identification. Didier Louis & Cindy Lombart (2010) proposed an integrated model that links brand personality, trust, attachment and commitment and also found the impact of both positive and negative personality traits on three major relational consequences i.e. trust, attachment and commitment.

3. Research design

Data collection

The data were obtained in India through a survey using a structuredquestionnaire. A pre-test was carried out to correct possible defects and to anticipate respondent's doubts and problems during the data collection process. In order to guarantee the representativeness of the population, the random quota sampling method was employed, according to criteria of age, gender and geographical location. A questionnaire was designed which asked the respondents to answer 15 items. The 15 items were adopted from Aaker's 1997) brand personality scale with a purpose to measure the five personality traits developed by Aaker (1997). A total of 452 respondents were taken into consideration . The questions were structured in a Likert scale model (1 to 5) with, 1 as (Most descriptive), and 5 as (Least descriptive). Multivariate analysis i.e EFA(Exploratory factor analysis) was used to identify facets within the Aaker's(1997) brand personality scale. First exploratory studies were performed to ensure their reliability. We eliminated those indicators which displayed an item-total correlation of below 0.3 (Nurosis, 1993) and those whose Cronbach's alpha did not exceed the reference value of 0.7. On the basis of these premises we ascertained that the those item did not fall within the recommended limits, and it was therefore eliminated. The second phase of scale validation consisted of performing a confirmatory factor analysis (Hair et al., 1999). To this end the structural equation method (SEM) was applied, using AMOS 20 statistical software and employing the robust maximum likelihood estimation method,

Results

The next step was to analyse the causal relationships proposed in the model, using structural equation modeling. The goodness of fit indices was calculated and it was verified that they attained the limits recommended by Hair et al. (1999) . The majority of the relationships proposed are significant.

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Data Analysis and Results

Table 1.1 (A) KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.825
Bartlett's Test of Sphericity	Approx. Chi-Square	1131.954
	df	105
	Sig.	.000

The adequacy of the data is evaluated on the basis of the results of Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity. The KMO measure of sampling adequacy is .825 indicating that the present data are suitable for factor analysis. Bartlett's Test of Sphericity is significant ($p<.001$), indicating sufficient correlation exists, between variables for the factor analysis. The Bartlett's Test statistics is approximately distributed and is accepted.

Table 1.1 (B) Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.955	33.032	33.032	4.955	33.032	33.032	4.834	32.228	32.228
2	3.177	21.182	54.215	3.177	21.182	54.215	3.224	21.492	53.720
3	2.903	19.355	73.569	2.903	19.355	73.569	2.977	19.849	73.569
4	.878	5.856	79.425						
5	.632	4.216	83.641						
6	.486	3.243	86.884						
7	.394	2.630	89.513						
8	.303	2.020	91.534						
9	.271	1.808	93.342						
10	.250	1.665	95.006						
11	.218	1.454	96.461						
12	.192	1.279	97.739						
13	.153	1.021	98.761						
14	.113	.750	99.511						
15	.073	.489	100.000						

Extraction Method: Principal Component Analysis.

The first 3 components i.e. factors in the above table have an Eigen values over 1 and they account for about 73% of the observed variation in the consumers' perception about internet banking. According Kaiser Criterion, only the first 3 factors should be used because other Eigen values are more than one.

TABLE 1.1 (C) Rotated Component Matrix(a)

	Component		
	1	2	3
Down to Earth	.957		
Honest			
Wholesome		.946	
Cheerfull			.858
Daring	.879		
Imaginative		.908	
Up-to-date			.786
Spirited	.895		
Reliable	.834		
Intelligent			.870
Successful		.878	
Upperclass			.785
Charming		.750	
Outdoorsy	.894		
Tough	.903		

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 4 iterations.

From the above table, the attributes like down to earth , daring, spirited,reliable,outdoorsy and tough have loading factor .957, .879, .895, .834, .894 and .903 on Factor 1.This concludes that Factor 1 is a combination of these 6 variables. Therefore the factor can be interpreted as generic as per the brand personality of lux is taken into consideration.. Factor 1 alone contributed 33% variations in consumers' perception about lux brand. The attributes like wholesome , imaginative , successful , and charming have a high loading i.e. .946, .908, .878 and .750 indicating that Factor 2 is a combination of these variables. These variables are combined into a factor called holistic. Factor 2 i.e. holistic alone contributed 21% variations in consumers' perception about lux brand personality. The attributes like Cheerfull, Up-to-date, Intelligent and Upperclass have a high loading i.e. .858, .786, .870 and .785 indicating that Factor 3 is a combination of these variables. These variables are combined into a factor called elite. Factor 3 i.e. elite alone contributed 19% variations in consumers' perception about lux brand personality.
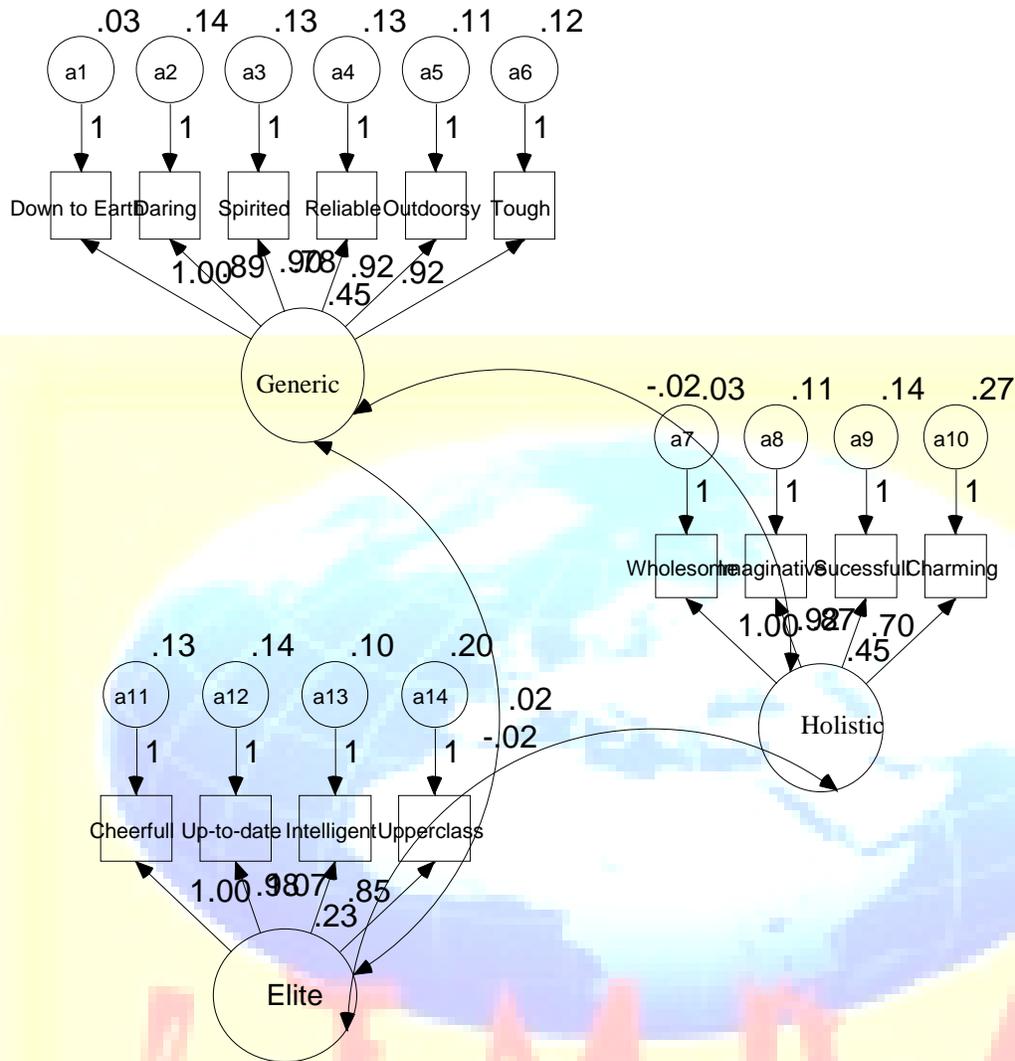
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Fig-1.0 Modeling the Brand Personality using SEM Model

Structural Equation Modeling

Structural equation modeling (SEM) consists of an integration of two models, including the measurement model, which explains the relationships between latent variables and observed variables, and the structural model, which defines causal relationships among those latent factors (Jitlung, 2009). Modification indices (MI) are often used to assess the overall model fit (Moss, 2009). Common fit indices are RMSEA, CMIN/DF, CFI, and NFI (Kohn et al., 2011). The value of RMSEA of 0.1 or less, CMIN/DF of less than two, and CFI and NFI of 0.80 or more represent the model as a good fit (Browne and Cudeck, 1993; Garson, 2006. The above study demonstrates the power of structural equation modeling for modeling brand personality and also identifying

the reliable measured variables .The base line model; was analysed with SEM . The fit indices as shown in table revealed the best –fit measurement model

Table 2.0 Fit Indices Results

Fit Index	Acceptable Level	Best Structural Model
RMSEA	<=0.10	0.08
CMIN/DF	<2.00	1.23
CFI	>=0.8	0.93
NFI	>=0.8	0.92
GFI	>=0.8	0.95

4. Conclusion and Suggestions

The data obtained when analyzed using factor analysis, gave different brand personality dimensions containing separate variables for "LUX" brands indicating that each brand should be treated separately and the scale cannot be generalized for different types of brands. Factor 1 named as Simple, Factor 2 as Holistic and Factor 3 as Elite.Out of the fifteen variables,honesty did not come under any of the factors. The results demonstrate that Aaker's (1997) scale is not totally applicable. However, this assumption needs to be further tested by research in other countries, product categories, brands and industries with a larger sample size.

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