An empirical comparison of two brand personality scales: Evidence from India

Anees Ahmad[a,*], K.S. Thyagaraj[b]

[a] School of Business & Commerce, Glocal University, Mirzapur Pole, Mirzapur, Saharanpur, Uttar Pradesh 247122, India
[b] Department of Management Studies, Indian School of Mines, Dhanbad 826004, Jharkhand, India

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ABSTRACT

Aaker's (1997) brand personality scale has been widely used to measure the personality of brands. However, studies also show that Aaker's brand personality dimensions are not stable across cultures. In pursuance of this issue, we examine the structure of brand personality dimensions in India. This research presents the results of two studies conducted to develop a brand personality scale in Indian context, and to make an empirical comparison between Indian brand personality scale and Aaker's brand personality scale. Results reveal that brand personality in India can be described in six dimensions: sophistication, excitement, popularity, competence, trendiness and integrity. The findings empirically support the reliability and validity of the scale developed. The results also reveal that Indian brand personality scale is a suitable alternative to Aaker's brand personality scale in Indian context.

1. Introduction

One of the key aspects of a company's marketing strategy is to manage brands. An important percentage of the firm's overall marketing budget is spent on brand building and management activities (Domadenik et al., 2001; Mohan and Sequeira, 2013). Brand management facilitates utilization of the organization's assets and generates additional value (Pappu et al., 2005). Brand building strengthens the communication between a company and its consumers and yields competitive advantages to increase the market value of the company. Thus, brand building, as one of the core components of marketing mix, is considered highly essential to reinforce a company's position and to utilize available resources (Wang et al., 2008).

According to Keller (2008), one of the vital elements of brand management is building brand equity. Most marketing activities are directed towards building and managing brand equity (Aaker, 1991; Yoo and Donthu, 2001). Since, strong brands help in achieving competitive advantages, the concept of brand equity has attracted attention of both practitioners and academicians (Aaker, 1996; Keller, 2008). For instance, the increase in brand equity level results in increased consumer preferences as well as an increased intention to purchase (Cobb-Walgren et al., 1995; Freling et al., 2011; Romaniuk and Nenycz-Thiel, 2013).

According to Aaker (1996), brand personality is a key element of brand equity, and it can contribute to brand equity. Brand managers

seek to exploit the benefit of the effect that brand personality has on consumer behavior and brand equity. This study focuses on the brand personality and brand equity concepts. The relationship between brand personality and brand equity has not been subjected to extensive empirical testing (Freling and Forbes, 2005). Further empirical evidence is required to examine the relationship between these two constructs.

Understanding the concepts of brand personality and brand equity and gaining further insights into the relationship between brand personality and brand equity is needed to manage the brand effectively and to maximize brand value and therewith also the company's profit (Bauer et al., 2000; Keller, 2008).

Studies show that Aaker's (1997) brand personality dimensions are not stable across cultures. Other than the USA, the five dimensions could not be replicated in studies conducted in Japan and Spain (Aaker et al., 2001), France (Ferrandi et al., 2000), Netherlands (Smit et al., 2003) and China (Chu and Sung, 2011). This suggests that brand personality represents values and beliefs of a culture. Therefore, the cultural difference among countries can result in culture specific differences in brand personality dimensions. In pursuance of this issue, we examine the structure of brand personality dimensions in India.

In summary, our contributions in the study are:

1. To examine the structure of brand personality dimensions in India.

* Corresponding author.
E-mail addresses: anees.candytuft@gmail.com (A. Ahmad), ksthyagaraj@gmail.com (K.S. Thyagaraj).

The aim is to identify the culturally common and culture specific dimensions of brand personality in Indian and American context.

2. To empirically compare the Indian brand personality scale and American brand personality scale.

2. Theoretical background

2.1. Brand personality

Aaker, p 347) (1997) defined brand personality as "the set of human characteristics associated with a brand". Brand personality helps consumers in identifying themselves with the brand and they can relate their own personality with the personality of the brand (Sirgy, 1982; Louis and Lombart, 2010). Thus, if traits of brand's personality complement or match with those of consumers, they will feel more familiar and more contented with the brand. With a view to facilitate more detailed empirical research on brand personality concept, she developed a measurement instrument 'Brand Personality Scale'. Conducting an extensive study on US consumers, she developed a brand personality framework of five distinct dimensions, namely, sincerity, excitement, competence, sophistication, and ruggedness. According to Aaker (1997), a company's marketing management positions a brand by determining its extent of sincerity, excitement, competence, sophistication and ruggedness.

2.2. Brand equity

The consumer-based brand equity, adopted in this study, is brand equity from the customers' perspective. Consumer-based brand equity is the incremental value which a brand provides for its consumers. Aaker (1991) has conceptualized brand equity along four main dimensions: brand loyalty, perceived quality, brand awareness, and brand associations. Brand loyalty is the attachment of a customer towards a brand (Aaker, 1991). Perceived quality is the quality perceived by the consumer based on his/her subjective evaluations (Zeithaml, 1988). Brand awareness determines the extent to which a potential buyer can recall a brand as a member of a certain product category (Aaker, 1991). It refers to how strongly a brand is present in consumer's mind. Brand associations are the symbols and images associated with the brand because of consumption experience or communication exposure such as advertisements (Aaker, 1991).

2.3. Study 1: developing the brand personality scale in Indian context

Next, we develop a brand personality scale that captures the brand personality dimensions perceived by Indian consumers. In this section, first we discuss the selection of brands, selection of personality items and procedure of data collection. Then we conduct a principal component analysis to determine the dimensionality of the scale followed by a confirmatory factor analysis to establish the construct validity of the scale. Also, we examine the convergent and discriminant validity of the scale. Finally, the scale is shortened and subjected to confirmatory factor analysis to further determine the scale dimensionality.

2.4. Brand selection

A total of 18 brands were selected, representing different purchase motivations. With a view to increase the representativeness of the contemporary commercial brands in India, 12 global and 6 Indian brands were selected. The brands are well known to Indian consumers which ensured familiarity of the sample of brands. Based on Ratchford's (1987) classification, six brands were selected from highly symbolic product categories (Raymond's, Armani, Lakme, Titan, Archie's Cards, and Ray Ban), six brands were selected from utilitarian categories (Surf Excel, Dabur, Colgate, LIC, Prestige, and Sunsilk) and

six brands bridged both these categories (Toyota, Coca Cola, Dell, Adidas, Lego, and Domino's) function.

2.5. Selection of personality items

The selection process of personality items was completed in two steps. In a first step, 21 male and 15 female Indian participants were involved in a free association task. Participants were asked to think of each of the brand as a person and write attributes that first come to their mind. Participants were could skip a brand in case they were not familiar or had no experience with it. It was explained to participants that personality can be a set of human characteristics associated with a brand (Aaker, 1997). Considering only responses from participants who acknowledged familiarity with the brand, the free association process resulted in 138 personality items. The brand personality items generated in free association task were answered in English language.

In a second step, a panel comprising nine researchers from marketing area was asked to eliminate the inappropriate personality items from the list. The criteria for short listing the personality attributes were (i) words that were not personality traits, (ii) words with negative connotation, (iii) words that were synonyms for attributes already been identified, and (iv) words that were ambiguous or too general (Chu and Sung, 2011). The panel deleted items such as narcissistic, sparkling, crafted, cheap, supreme, bond, executive, fresh, savior, complex, modern, familiar, regular, eco-friendly, and rough. Based on the outcome of this two step process, a pool of 56 personality attributes was constructed.

2.6. Subjects and procedure

Participants of this study were Indian consumers recruited via Facebook using online questionnaire. The sampling frame was restricted to India. Snowball sampling method was adopted to increase the sample size. The online questionnaire was designed using Google Forms. Potential participants received the invitation in a personal message and were asked to participate in the survey. Personal messages were sent to friends (who also helped in recruiting volunteers) and members of various interest groups on Facebook, belonging to all four major regions of India namely East, West, North and South India.

Large number of brands in a questionnaire leads to participant fatigue (Aaker et al., 2001). Hence, with a view to minimize potential fatigue, the 18 brands were divided into six subgroups of three brands each (one symbolic brand, one utilitarian brand, and one symbolic/utilitarian brand) and participants were randomly assigned a brand group. This resulted in six subgroups of respondents. Each respondent in a subgroup rated three brands on a 5 point Likert scale (1= not at all descriptive, 5= extremely descriptive) and provided ratings on total of 168 items (3 brands on 56 personality items). With a view to control order bias due to primacy or recency effects, the researcher systematically rotated the order in which 56 attributes were listed for each brand in the questionnaire. A total of 636 participants completed the survey.

68.3% of the sample were 30 years old or younger representative of the Indian population which is predominantly young. Out of the total respondents, 56.3% were male. The male to female ratio of the sample also represents Indian population. 590 (92.7%) out of 636 respondents were either graduate or post graduate. Based on the qualification of the respondents it can be assumed that responses collected will provide a correct assessment of dimensions of brand personality in India. Most of the respondent belonged to the Northern states of India (32.4%) whereas respondents from Eastern (25.6%) and Western (23.5%) states were more or less equal with the least number of respondents from the Southern states of the country (18.5%). The overall sample was representative in terms of major regions in which Indian population lives.

Table 1
Factor structure of brand personality for Indian consumers.

Items	Indian Brand Personality Dimensions					
	Sophistication	Excitement	Popularity	Competence	Trendiness	Integrity
Sophisticated	0.900					
Stylish	0.816					
Extravagant	0.804					
Good Looking	0.754					
Upper class	0.746					
Feminine	0.622					
Colorful	0.567					
Elegant	0.496					
Enthusiastic		0.868				
Adventurous		0.813				
Vibrant		0.768				
Fun		0.737				
Cheerful		0.725				
Optimistic		0.702				
Casual		0.588				
Popular			0.851			
Admirable			0.743			
Attractive			0.736			
Friendly			0.731			
Simple			0.664			
Daring			0.663			
Lovely			0.506			
Competitive				0.886		
Efficient				0.721		
Dynamic				0.671		
Capable				0.656		
Reliable				0.654		
Determined				0.621		
Professional				0.495		
Dutiful				0.450		
Trendy					0.823	
Young					0.786	
Imaginative					0.748	
Independent					0.678	
Dominating					0.538	
Cultured					0.525	
Honest						0.792
Sincere						0.782
Moral						0.534

2.7. Item reduction and dimensionality of the scale

With a view to identify the underlying structure of brand personality dimensions, principal component analysis was applied on random part (N=326) of the sample with Promax rotation using SPSS, version 20. Guttman (1954) rule of extracting factors with eigenvalues more than 1 was applied for factor extraction. Six factors were extracted based on this criterion. The six factors explained 59.89% of total variance in the model (Hair et al., 2010). Table 2 shows Promax rotated factor pattern matrix with items loaded on their respective factors. Eight items that loaded below 0.40 were deleted (Aaker, 1997; Chu and Sung, 2011). These items were benevolent, idealistic, smooth, creative, gentle, pure, calm and healthy. Moreover, several items showed high loadings on more than one component; therefore 9 more items (modest, sentimental, handy, liberated, tough, clean, cute, thoughtful, and intelligent) were eliminated. Finally, a pattern matrix with 39 items was obtained (Table 1).

The result of principal component analysis reveals six dimensions where 8 items loaded on Sophistication dimension, 7 loaded on Excitement, 7 on Popularity, 8 on Competence, 6 on Trendiness and 3 on Integrity. Similar to other researches on brand personality structure, items like sophistication, stylish, extravagance, good looking and upper class loaded high on Sophistication dimension. The second dimension Excitement was defined by the items like enthusiastic, adventurous, vibrant, fun and cheerful. The third dimension was labeled as Popularity which included items like popular, admirable,

attractive and friendly. Competence was the fourth dimension containing personality items like competitive, efficient, dynamic, capable and reliable. The fifth dimension Trendiness was defined by items like trendy, young, imaginative, independent and dominating. Finally, the items honest, sincere and moral represented the Integrity dimension.

Satisfactory levels of internal consistency reliability exhibited for each dimension. The Cronbach's alphas calculated for all the dimensions ranged from 0.72 to 0.89 indicating good internal consistency among items (Nunnally, 1978).

3. Construct validity of the scale

Next, a confirmatory factor analysis (CFA) was conducted using AMOS, version 21 with a view to ascertain the robustness of factor structure obtained through principal component analysis. CFA was conducted on the remaining part of the data (N=310) and it estimated a six component model for 39 attributes of personality. The six-factor model showed an adequate fit (χ^2=2225.373, χ^2/d.f. ratio =3.23,

Table 2
Models and goodness-of-fit Indices.

Model	χ^2	df	RMSEA	GFI	CFI	TLI
One- factor model	15,669.75	703	0.151	0.418	0.231	0.190
Six- factor Model		680	0.043	0.911	0.941	0.936

GFI=0.896, CFI=0.921, TLI =0.915, RMSEA =0.049). However, Modification Indices were examined to improve the model through re-specifications. The error terms of dimensions with high modification indices were e2-e3 (MI =53.61) of sophistication, e9-e11 (MI =51.51) of excitement, e24- e27 (MI =48.42), e25- e29 (MI =54.28), e26-e30 (MI =69.23) of competence, and e33- e36 (MI =33.22), e34- e36 (MI =36.74) of trendiness. The confirmatory factor analysis was re run each time a modification was done. After these modifications, the values for multiple fit indices and chi-square statistics were: χ2=1821.46, degrees of freedom =680, χ2/d.f. ratio =2.67, Goodness of Fit Index (GFI) =0.911, Adjusted Goodness of Fit Index (AGFI) =0.898, Comparative Fit Index (CFI) =0.941, Tucker-Lewis Index (TLI) =0.936, Incremental Fit Index (IFI) =0.942 and Root mean square error of approximation (RMSEA) =0.043. Moreover, items loaded on factors at the level of significance 0.001. A model is considered to be acceptable if Goodness of Fit Index and Comparative Fit Index exceed 0.90 and 0.93 respectively (Byrne, 1994), other indices such as TLI and IFI should also exceed 0.90 (Bagozzi and Yi, 1988). The value of AGFI exceeding 0.8 is acceptable (Chau and Hu, 2001). The relative chi-square should be less than 5 (Schumacker and Lomax, 2004) and RMSEA should be less than 0.08 (Browne and Cudeck, 1993). Thus the overall assessment of fit indices upholds that the six factor structure is robust and stable. The six dimensional model in which 39 items explained six latent construct fits the data well.

The convergent validity of the scale was tested by calculating Average Variance Extracted (AVE) for each dimension. The values were: 0.63, 0.47, 0.65, 0.50, 0.56 and 0.55 respectively. All met the recommended value of 0.5 (Fornell and Larcker, 1981) except excitement dimension (AVE =0.47). However, the loadings of items on excitement dimension were above 0.6 as recommended by Hair et al. (2010). Thus, the convergent validity of six dimensional model is supported.

Further, this model was compared to another model in which all the items of six dimensions were loaded on one-factor to test discriminant validity of the scale. As shown in Table 3 the original model explains the data significantly better than the one factor model, thus establishing discriminant validity of the six factor structure.

4. Scale balancing

Often brand personality is one of the several measures used in a questionnaire, hence Geuens et al. (2009) emphasizes on the need of a short scale of brand personality so it can be easily administered. Keeping in mind the usage of scale in subsequent research, the scale was made more balanced by retaining the personality traits with the highest factor loadings (see Table 2) from each dimension (Chu and Sung, 2011). Three items with the highest item to total correlations in each dimension were incorporated in this short version of brand personality scale for Indian consumers. Thus an 18 item scale with six dimensions was obtained. A reduced set of personality items from each factor is given in Table 3. Further the short version of scale was subject to a confirmatory factor analysis (N =310) with a view to ascertain its robustness. The chi square value and other fit indices reflected that the short version of the scale fits the data (χ2=189.817, χ2/ d.f. ratio =1.582, GFI=0.978, CFI=0.988, TLI =0.985, RMSEA =0.025).

4.1. Study 2: comparison of scales

This study empirically tests the validity of two brand personality scales, i.e. Aaker's brand personality scale and the brand personality scale developed in Indian context.

5. Criteria for evaluating measurement scales

Three criteria were used to evaluate measurement scales: (1) convergent validity, (2) discriminant validity, and (3) predictive validity. Convergent validity reflects the degree of agreement among scales measuring the same concept (Danaher and Haddrell, 1996), For example, culturally common brand personality dimensions of India and US. Discriminant validity is the extent of disagreement among the scales used to measure unrelated concepts (Danaher and Haddrell, 1996), for example, culture specific dimensions of India and US. Predictive validity or criterion validity refers to the extent to which measured dimensions are related to subsequent behavioral outcome (Yang et al., 2005). For example, brand personality and brand equity.

5.1. Procedure

Present study uses a set of six brands both symbolic and utilitarian belonging to three different product categories namely clothing (Levi's, Peter England), Shampoo (Pantene, Head & Shoulders) and Soft Drinks (Pepsi, Sprite). For the final brand selection, the familiarity of brands among Indian consumers was considered.

In order to make an empirical comparison between Indian brand personality scale and American brand personality scale, a questionnaire was designed which was comprised of 54 questions. All items were measured using 5-point Likert scale.

Brand personality was measured using the Aaker's scale as well as the scale we developed in Indian context. A version of the Aaker's brand personality scale (Aaker, 1997, p. 352) was used which comprises 15 brand personality items representing the five brand personality dimensions. The dimension sincerity comprised four items: (1) down to earth, (2) honest, (3) wholesome, (4) cheerful, and the dimension excitement dimension comprising items: (1) daring, (2) spirited, (3) imaginative, and (4) up to date. Three items namely reliable, intelligent and successful represented competence dimension. The dimension sophistication contained items upper-class and charming while ruggedness dimension comprised of items outdoorsy and tough.

The short version of brand personality scale developed in Indian context (see Study 1) which comprises six dimensions and 18 items: sophisticated, stylish and extravagant (for sophistication); enthusiastic, adventurous, and vibrant (for excitement); popular, admirable and attractive (for popularity); competitive, efficient and dynamic (for competence); trendy, young and imaginative (for trendiness) and honest, sincere and moral (for integrity) was used.

Finally, to measure brand equity, we adopted 10 items from Yoo and Donthu (2001): "I consider myself to be loyal to this brand", "This brand would be my first choice", "I will not buy other brands if this brand is available at the store", "The likely quality of this brand is extremely high", "The likelihood that this brand would be functional is very high", "I can recognize this brand among other competing brands", "I am aware of this brand", "Some characteristics of this

Table 3
Indian brand personality dimensions.

Sophistication	Excitement	Popularity	Competence	Trendiness	Integrity
Sophisticated	Enthusiastic	Popular	Competitive	Trendy	Honest
Stylish	Adventurous	Admirable	Efficient	Young	Sincere
Extravagant	Vibrant	Attractive	Dynamic	Imaginative	Moral

brand come to my mind quickly", "I can quickly recall the symbol or logo of this brand", "I have no difficulty in imagining this brand in my mind".

In this study, we use brand personality as a second-order factor analogous to the concept of a 'whole personality', introduced by Allport (1961). A higher order factor or second-order factor approach is highly suitable to represent multidimensional constructs like brand personality and brand equity (Koufteros et al., 2009). The concept of second order brand personality is also endorsed by Brakus et al. (2009) as well as Valette-Florence et al. (2011). Similarly, the dimensions of brand equity (first-order factors) are also aggregated to form a second order factor of brand equity.

The online questionnaire survey approach was applied to collect data for this study. Similar to Study 1, Facebook was used to reach respondents. The target population was Indian users of the brands used in this study. Recruitment criterion was whether the participant had the consumption / usage experience with the brand he / she was questioned about. The snowball sampling method was used to draw a large sample. Researcher's personal friends and members of various interest groups were contacted by sending them personal messages. Further volunteers were asked if they know anyone else who can meet the criterion of consumption / usage experience and will participate in the survey. A total of 612 participants completed the survey.

64.8% in the sample were 30 years old or younger. 53.9% in the sample were male. The majority of respondents (92%) have completed graduate or postgraduate education. Moreover, the respondents were asked question about the frequency of usage of their respective brand. 56.5% of the respondents across the different product categories use the brand once per week to 2–3 times a month, While 32.4% of the respondents reported that they use their respective brand more than once a week. Based on the sample characteristics and frequency of brand usage, respondents are appropriate for the analyses.

5.2. Convergent and discriminant validity

According to Danaher and Haddrell (1996), scale convergent and discriminant validity can be determined by examining the correlations between scale ratings of related concepts, where correlations are supposed to be high, and across unrelated concepts, where correlations are supposed to be low.

To determine the scale convergent validity, the correlations of the conceptually related dimensions of both scales, namely, sophistication, excitement and competence were examined. Table 4 provides the values of correlation among these dimensions. All the pairs of dimensions show moderate (Cohen, 1988) significant correlations thus establishing convergent validity.

Next, for the scale discriminant validity, the correlations of the culture specific dimensions of both scales, namely, sincerity, ruggedness, popularity, trendiness and integrity were examined. Table 5 shows that only three of the six pair wise correlations are significant. Moreover, the values correspond to a low correlation (Cohen, 1988) which indicates small degree of content overlap between culture specific dimensions. Thus, both scales appear to have discriminant validity.

Table 4
Correlation between culturally common dimensions.

Dimensions	Correlation
Sophistication (US) and Sophistication (India)	0.290[**]
Excitement (US) and Excitement (India)	0.411[**]
Competence (US) and Competence (India)	0.352[**]

[**] Correlation is significant at the 0.01 level.

Table 5
Correlation between culture specific dimensions.

	Sincerity	Ruggedness
Popularity	0.118[**]	0.076
Trendiness	0.000	0.104[**]
Integrity	0.139[**]	−0.015

[**] Correlation is significant at the 0.01 level.

5.3. Predictive validity

With a view to compare the predictive validity of both scales, this study compares two models namely Indian model (brand personality is operationalized as a six dimensional construct) and US model (brand personality is modeled as five dimensional construct) using AMOS Version 21.

5.4. Indian model

First the influence of all brand personality dimensions in Indian context put together on overall brand equity was examined. The values of various fit indices reflect that the proposed model fits the data (χ^2 =631.141, χ^2/df =2.382, RMSEA =0.048, GFI =0.923, CFI =0.948, IFI =0.948, NFI =0.914). The influence of brand personality on brand equity is positively significant (β=0.56, p=0.000). With R^2 =0.32, the Indian brand personality dimensions explain 32% of overall brand equity.

Next a structural model comprising culturally common dimensions namely sophistication, excitement and competence was tested for the influence of these dimensions on brand equity. The dimension with highest influence is sophistication which has a significant positive influence on brand equity (β=0.32, p=0.000). The influences of dimensions excitement (β=0.16, p=0.039) and competence (β=0.30, p=0.000) are also positively significant.

The structural model for culture specific dimensions was also tested. The popularity dimension has the highest significant influence on brand equity (β=0.30, p=0.000). The influences of dimensions trendiness (β=0.14, p=0.011) and integrity (β=0.19, p=0.000) are also positively significant.

5.5. US model

In this model, first the influence of Aaker's brand personality dimensions on overall brand equity was examined. The values of fit indices were satisfactory but CFI showed a poor fit (χ^2 =800.857, χ^2/df =3.624, RMSEA =0.066, GFI =0.902, CFI =0.872, IFI =0.903, NFI =0.904). Brand personality has a positively significant influence on brand equity (β=0.39, p=0.000). With R^2 =0.15, the American brand personality dimensions explain 15% of overall brand equity.

Next, a structural model comprising only the culturally common dimensions namely sophistication (United States), excitement (United States) and competence (United States) was tested for their influence on brand equity. The dimension with highest influence is competence, it has a significant positive influence on brand equity (β=0.24, p=0.000). Excitement (β=0.15, p=0.010) and sophistication (β=0.14, p=0.014) dimensions were also found to positively influences brand equity.

The structural model for dimensions specific to US culture was tested. The proposed model comprising two dimensions namely sincerity and ruggedness. Both sincerity (β=0.10, p=0.083) and ruggedness (β=0.08, p=0.200) have no significant effect on brand equity.

Table 6
Comparison of model fit indices.

Fit Indices	Indian model	US model
Absolute Fit Measures		
χ^2/df	2.382	3.624
GFI	0.923	0.902
RMSEA	0.048	0.066
Incremental Fit Measures		
IFI	0.948	0.903
NFI	0.912	0.904
CFI	0.948	0.872
TLI	0.941	0.889
Parsimonious Fit Measures		
PNFI	0.807	0.762
AIC	751.141	910.857

Table 7
Chi Square difference test.

Model	CMIN	DF	P
Indian Model	800.857	221	0.00
US Model	631.141	265	0.00
	169.716	44	0.00

5.6. Model comparison

In examining the aggregate effect of all the dimensions, both models explain the brand equity construct. While Indian model explains 32% of the variance of brand equity, the US model explains only 15%. Moreover, when model fit indices are compared; the Indian brand personality model indicates a better fit. Besides Absolute Fit measures and Incremental Fit Measures, both models were compared on two Parsimonious Fit Measures: Parsimonious Normed Fit Index (PNFI) and Akaike Information Criterion (AIC). PNFI value of Indian model is higher than the US model which shows the better fitness of Indian model (Ho, 2006). Moreover, the AIC value of Indian model is smaller than the US model indicating better fit of Indian model (Ho, 2006). Thus Indian brand personality model is more parsimonious. Table 6 compares the fit indices of two models.

A chi-square difference test was conducted to know the significance of difference between Indian model and US model. The chi-square difference value of 169.716 with 44 degrees of freedom is significant at 0.01 level (see Table 7). Hence Indian model is significantly better than US model.

The comparison of the effects of culturally common brand personality dimensions reveals that competence (India) and sophistication (India) dimensions have higher positive influence on brand equity than competence (US) and sophistication (US). The dimension excitement (India) has slightly higher effect on brand equity (see Table 8) than

excitement (US). Furthermore, culturally common dimensions (India) explain 22% of the variance of brand equity while culturally common dimensions (US) explain 14% of the variance.

The dimensions specific to Indian culture namely popularity, trendiness and integrity have significant effect on brand equity but the dimensions specific to US culture could not produce any significant effect on brand equity (see Table 9).

6. General discussion

6.1. The purpose of this study was twofold

First, we examine the structure of brand personality dimensions in India. We identify six dimensions of brand personality in Indian context. The dimensions are, namely, (1) sophistication, (2) excitement, (3) popularity, (4) competence, (5) trendiness, and (6) integrity. Three dimensions, namely, sophistication, excitement and competence correspond to Aaker's (1997) brand personality framework and hence are common between Indian and US culture. Other three dimensions, namely, popularity, trendiness and integrity are specific to Indian culture. The scale comprised 39 items and was tested for convergent and discriminant validity. Further, for easy administration of the questionnaire, the scale was shortened to 18 items and validated.

Second, we empirically compare the Indian brand personality scale and American brand personality scale. We use three criteria for evaluating the measurement scales: convergent validity, discriminant validity, and predictive validity. Moderate correlations among conceptually related dimensions of both scales indicated convergent validity and low to no correlations among culture specific dimensions of both scales showed discriminant validity. For predictive validity, two models were developed: (1) an Indian model in which brand personality is operationalized as a six dimensional construct, and (2) a US model in which brand personality is modeled as a five dimensional construct. These models were compared based on (1) aggregate effect of all brand personality dimensions, (2) effect of culturally common brand personality dimensions, and (3) effect of culture specific brand personality dimensions, on brand equity. The findings showed that brand personality scale developed in Indian context was more predictive of brand equity and yielded better fit indices than US model. Indian brand personality measure, thus, may be a suitable alternative to Aaker's brand personality scale for studies on consumer behavior in India.

7. Managerial implications

The findings of this study indicate several implications for brand managers. The marketers must recognize the importance of culture in determining Indian consumer's perception of brands so that their purchase behavior can be better predicted. Brands can be matched with personality attributes and then targeted to customers whose personality profile matches the personality of the brand. The six dimensions of Indian brand personality framework can also be used as ingredients of marketing communication for describing brands. For example, the use of celebrity endorsers who exhibit personality traits of popularity or

Table 8
Comparison of standardized estimates for culturally common dimensions.

Indian brand personality model			US brand personality model		
Dimensions	Standardized Estimates	Effect on BE	Dimensions	Standardized Estimates	Effect on BE
Excitement	0.16[*]	Significant	Excitement	0.15[*]	Significant
Competence	0.30[**]	Significant	Competence	0.24[**]	Significant
Sophistication	0.32[**]	Significant	Sophistication	0.14[*]	Significant

BE = Brand equity.
[*] $p < 0.05$.
[**] $p < 0.001$.

Table 9
Comparison of standardized estimates for culture specific dimensions.

Indian Brand Personality Model			US Brand Personality Model		
Dimensions	Standardized Estimates	Effect on BE	Dimensions	Standardized Estimates	Effect on BE
Popularity	0.30**	Significant	Sincerity	0.11	Not Significant
Trendiness	0.14*	Significant	Ruggedness	0.08	Not Significant
Integrity	0.19**	Significant			

BE = Brand equity.
* $p < 0.05$.
** $p < 0.001$.

trendiness dimension in advertisements will help in creating a favorable brand image of a popular, stylish and trendy brand in the minds of consumers. The brand personality dimensions can also be used to create association with the values central to the life of consumers. For example, the traits of excitement dimension can be emphasized to individuals who want to live an exciting life. Competence dimension of brand personality can be used to target consumers who are concerned with reliability and efficiency. It is important for brand mangers to understand how consumers perceive the brand. At present, Aaker's five brand personality dimensions are widely used to measure the consumer's perception of the personality of a brand. This study suggests a more parsimonious brand personality measurement tool that comprises six dimensions namely sophistication, excitement, popularity, competence, trendiness and integrity.

8. Limitations and future research directions

Similar to all other researches, this study also possesses some limitations. First, only 18 brands were employed to identify the dimensions of Indian brand personality. Future research can examine the results of this study using large number of individual brands in different product categories. Second, cultural heterogeneity is quite evident in India regarding subcultures and their distinct values, rituals and traditions. Future research could examine the appropriateness of brand personality dimensions for the culturally diversified markets in India taking into account the cultural and religious diversity found in India.

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