Brand personality and brand equity: evidence from the sportswear industry

By: Jin Su and Xiao Tong

Abstract:

Purpose
– This paper aims to explore the personalities of sportswear brands and their relationship to brand equity using Aaker's methodology in the context of sportswear brands.

Design/methodology/approach
– This paper used Aaker's brand personality framework to empirically investigate the personality of sportswear brands and the impact of brand personality on brand equity based on data collected from 420 college students.

Findings
– Results revealed that the personality of sportswear brands can be described in seven dimensions and 53 personality traits: competence, attractiveness, sincerity, innovation, activity, excitement and ruggedness. The study identified that four dimensions among all the seven personality dimensions, namely, competence, attractiveness, Sincerity and innovation, are the positive and significant contributing factors to the creation and enhancement of sportswear brand equity.

Originality/value
– This study makes an important contribution to the understanding of brand personality and brand equity in the context of sportswear brands. It confirmed that consumers do associate particular brand personality dimensions with sportswear brands, and certain dimensions of brand personality have a direct impact on brand equity. The study showed that not all brand personality dimensions have the same influence in increasing the value of a sportswear brand from a consumer perspective, some dimensions being more efficient than others. The findings provide insights as to what dimensions of brand personality would deliver the best result in today's competitive sportswear market.

Keywords: brand personality | brand equity | sportswear | industry

Article:

Introduction

Brand management is considered useful in fully exploiting the assets of an organization and in generating additional value from the investments already made into brands (Pappu et al., 2005). Brand building can create a powerful and effective communication between marketers and consumers which brings advantages such as defending against competitors and building market share. Therefore, branding strategy, as a key element in the marketing mix, is increasingly viewed as a powerful tool to obtain sustainable competitive advantages as well as to fully utilize available resources (Wang et al., 2008; Keller, 2009).

Almost every marketing activity works, successfully or unsuccessfully, to build, manage and exploit brand equity (Aaker, 1991; Keller, 1993; Yoo and Donthu, 2001). Building brand equity is considered an important part of brand building (Keller, 2008). Brand equity is regarded as a very important concept in business practices as well as in academic research because marketers can gain competitive advantages through strong brands (Keller, 1993; Aaker, 1996a; Keller, 2008). For example, high brand equity levels are known to lead to higher consumer preferences, brand purchase intentions and brand choice behavior (Cobb-Walgren et al., 1995; Freling et al., 2011; Romaniuk and Nenycz-Thiel, 2013). Firms that have strong brands with positive brand equity are also known to have better product-market outcomes such as brand extensibility and price flexibility (Wang et al., 2008), and brand market performance outcomes (Chaudhuri and Holbrook, 2001).

According to Aaker (1996a), brand personality is a key component of brand equity, and it can contribute to brand equity. Brand personality indicates consumer's perceptions of personality traits of brands and further helps create and build meaningful consumer–brand relationships. A well-established brand personality can help leverage a set of unique and favorable brand images and thus enhance the value of brand equity (Aaker, 1991; Keller, 1993; Aaker, 1996a).

The global sportswear market is highly competitive, and it is one of the most heavily branded areas in the global apparel market (Tong and Hawley, 2009). The sportswear brands are dedicated to create strong brand equity and build brand loyalty through creating strong and distinctive brand personality. Sportswear brand personality enhances the effectiveness of marketing communications efforts (Arora and Stoner, 2009; Brakus et al., 2009).

This study demonstrates our effort in examining the brand personality structure and its impact on brand equity in a dynamic context – global sportswear brands. Previous research has identified the need for creating an appropriate scale and specific personality traits in particular sectors (Ekinci and Hosany, 2006; Arora and Stoner, 2009; Valette-Florence and De Barnier, 2013). Furthermore, researchers are encouraged to determine how brand personality affects brand equity and whether there is a certain type of brand personality that leads to greater brand equity (Keller, 1993; Aaker and Fournier, 1995). Recognizing the need and the suggestions from previous research and considering there is little research on examining the consequences of brand personality dimensions, this study fills a gap in literature by focusing on the relationships between brand personality dimensions and brand equity. Our study contributes to the literature by specifically examining the effects of brand personality dimensions on brand equity in the sportswear context. Understanding the concepts of brand personality and brand equity and

developing further insights into the relationships between brand personality dimensions and brand equity is important in the face of the prominence of branding in the sportswear industry and is essential for an enriched practice of sportswear brand management. This study aims to explore the personalities of sportswear brands and their relationships with brand equity using Aaker's methodology. We examined two key questions that pertained to the personality of sportswear brands:

Q1. Are sportswear brands perceived to possess personalities? If so, what are the underlying personality dimensions of sportswear brands?

Q2. What are the relationships between the brand personality dimensions of sportswear brands and overall brand equity?

Theoretical development of conceptual framework

Brand personality: definition and its main dimensions

According to anthropomorphic theory, human beings feel the need to personify objects to help their interactions with the intangible world. The concept of brand personality offered in the literature recognizes the use of human descriptors to portray brands (Plummer, 2000; Freling and Forbes, 2005; Geuens et al., 2009; Maehle et al., 2011). All interactions that consumers have with a brand, whether direct or indirect, generate and impact the perceptions of the brand personality traits (Plummer, 2000). More formally, the seminal work of Aaker (1997, p. 347) defines brand personality as "the set of human characteristics associated with a brand". Brand personality enables consumers to identify themselves with a brand and to express their own personality through the brand, as individuals tend to consider possessions to be part of their "self" (Belk, 1988; Azoulay and Kapferer, 2003). A consumer can thus identify himself in relationship to a brand based on the adequacy between his own personality and that ascribed to the brand (Sirgy, 1982; Louis and Lombart, 2010).

Aaker (1997) developed a 42-item measurement scale and identified five distinct personality dimensions that are associated with brands which she labeled as:

1. excitement (traits such as daring, spirited and imaginative);
2. sincerity (wholesome, down-to earth and honest);
3. competence (reliable, intelligent and successful);
4. sophistication (glamorous, upper class and charming); and
5. ruggedness (outdoorsy, masculine and tough).

Other researchers have also sought to develop factor models of brand personality. For example, Bosnjak et al. (2007) obtained a four-factor structure, including:

1. drive (exciting, adventurous and boring);
2. conscientiousness (competent, orderly and reliable);
3. emotion (loving, cordial and sentimental); and
4. superficiality (selfish, arrogant and hypocritical).

Geuens et al. (2009) identified five factors (activity, responsibility, aggressiveness, simplicity and emotionality).

Brand personality, defined as all personality traits used to characterize a person and associated with a brand, is an important concept within the field of relational marketing (Louis and Lombart, 2010). Understanding brand personality is necessary for creating and building meaningful consumer–brand relationships. It explains how those relationships impact individual-level consumer behavior (Fournier, 1998; Sung et al., 2009; Sung and Kim, 2010) and also product-level performance measures (Freling and Forbes, 2005). In addition, brand personality is an effective and efficient way in product differentiation and helps influence brand performance.

Brand equity

In Farquhar's (1989, p. 24) seminar work on brand equity, brand equity was defined as the "added value" with which a given brand endows a product. Brand equity from an individual consumer's perspective is reflected by the increase in attitude strength for a product using the brand (Farquhar, 1989, p. 27). Farquhar's pioneering work laid the foundation for later research on brand equity. Two most widely cited brand equity conceptualizations are those of Aaker (1991) and Keller (1993). Although Aaker (1991) and Keller (1993) conceptualized brand equity differently, both defined brand equity from a consumer perspective based on consumers' memory-based brand associations, and they both argued that collectively, brand equity comprises different dimensions which underlie the incremental value that a brand provides for its consumers. Keller (1993) referred to brand equity as customer-based brand equity and defined it as "the differential effect of brand knowledge on consumer response to the marketing of a brand" (Keller, 1993, p. 2). Keller's conceptualization focuses on brand knowledge which involves two components:

1. brand awareness (recall and recognition); and
2. brand image (a combination of favorability, strength and uniqueness of brand associations).

According to Keller, a brand can have positive (negative) customer-based brand equity when consumers react more (less) favorably to an element of the marketing mix for the brand than they do to the same marketing mix element for other brands. Customer-based brand equity occurs when consumers are familiar with the brand and hold some "favorable, strong and unique" brand associations in memory (Keller, 1993, 2008). By contrast, Aaker (1991, p. 15) provided one of the most generally accepted and comprehensive definitions of brand equity:

A set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers.

In effect, from the consumer perspective, Aaker's conceptualization focuses on four most important dimensions – brand awareness, brand associations, perceived quality and brand loyalty.

Brand awareness refers to "the ability of a potential buyer to recognize or recall that a brand is a member of a certain product category" (Aaker, 1991, p. 61). This construct is related to the strength of a brand's presence in consumers' minds. Keller (1993) conceptualized brand awareness as consisting of both brand recognition and brand recall. Brand recall refers to consumers' ability to retrieve the brand from memory, while brand recognition is the basic and first step in brand communication. Brand associations can be defined as "anything linked to the memory of a brand" (Aaker, 1991, p. 109). Brand associations are believed to contain the meaning of the brand for consumers, and these associations can be from a wide range of sources and vary according to their favorability, strength and uniqueness (Keller, 1993). Although brand associations can be classified into different types, three main groups related to the product, the personality and the organization are identified in the literature (Aaker, 1996b; Buil et al., 2008). Aaker (1991) argued that the link to a brand (from the association) will be stronger when it is based on many experiences or exposures to communications and when a network of other links supports it. Further, Aaker (1991) suggested that brand associations could provide value to the consumer by providing a reason for consumers to buy the brand and by creating positive attitudes/feelings among consumers. Perceived quality is defined as "the consumer's judgment about a product's overall excellence or superiority" (Zeithaml, 1988, p. 3). It is not the objective quality of the product but consumers' subjective evaluations which depend on their perceptions. Similar to brand associations, perceived quality also provides value to consumers by providing them with a reason to buy and by differentiating the brand from competing brands. Brand loyalty can be conceptualized in several ways, based on attitudinal perspective and consumer perception or on behavioral perspective. Aaker (1991, p. 39) defined brand loyalty as: "the attachment that a customer has to a brand". Yoo and Donthu (2001, p. 3) defined brand loyalty on an attitudinal perspective as "the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice". Oliver (1999, p. 34) defined brand loyalty, in a comprehensive way, 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, despite situational influences and marketing efforts having the potential to cause switching behavior.*

Cobb-Walgren et al. (1995) conducted the pioneering research to measure consumer-based brand equity (CBBE) based on the conceptualization of Aaker (1991) and Keller (1993). Their study relies on a consumer-based perceptual measure of brand equity, namely, brand awareness, brand associations and perceived quality. Yoo and Donthu (2001), in an effort to find a parsimonious measure for CBBE, developed a multidimensional model and tested the model using the cross-cultural data. They found that CBBE was a three-dimensional construct composed of brand loyalty, perceived quality and brand awareness/associations (combining brand awareness and brand associations into one dimension). Yoo and Donthu's (2001) CBBE scale was later validated by Washburn and Plank (2002). Netemeyer et al. (2004) suggested that core facets of brand equity should be measured by three elements, including perceived quality/perceived value, uniqueness and willingness to pay a price premium.

The relationship between brand personality and brand equity

How can we increase brand equity? This question is currently a major challenge for professionals and constitutes an endless research issue for researchers. In response to the trend of increasing brand globalization and competition, research has focused on understanding how to build, measure and manage brand equity, which is considered as a significant asset for a firm (Keller, 2008).

Brand equity is an additional effect in a consumer's response to a brand that stretches beyond the product itself and its attributes. Aaker (1996a) argued that brand personality contributes to brand equity. Yoo and Donthu (2001) suggested that the dimensions of Aaker's brand personality construct may be related to brand equity for further research. Pappu et al. (2005) maintained that brand personality is one of the most important types of brand associations and brand personality influences the brand's equity. Similarly, Keller (1993, 2008) considered that brand equity is influenced by brand image which is the collection of associations with a brand as found in a consumer's memory. Such associations can be functional, attitudinal and symbolic. The symbolic, abstract association assigned by a consumer to a brand helps create brand personality, which is one of the components of brand image. Branding researchers generally agree that consumers store brand associations in a memory-based brand network and that these associations may be accessed during decision making. As such, brand personality is a cornerstone of customer-based brand equity (Freling et al., 2011). Strong, unique and favorable perceptions of a brand personality can help leverage a set of unique and favorable brand images, thus have the capacity to positively affect a brand's overall equity (Kim et al., 2010; Freling et al., 2011).

Marketers and brand managers view brand personality as an efficient way to distinguish the brand from its competitors, thereby enhancing the effectiveness of marketing communications efforts (Arora and Stoner, 2009; Sung, 2011). The concept of brand personality offers a major managerial advantage in that it can impact the relationship that a consumer has with a brand and explain that consumer's behavior (Louis and Lombart, 2010). Thus, brand personality concept clearly offers a new prospect for brand management and performance. Brand personality is a central driving force of consumer's positive attitude and preference for a brand (Biel, 1993).

The consequences of brand personality include perceived brand quality, attitude toward the brand, intentions of future behavior, trust in the brand and attachment and commitment to the brand (Louis and Lombart, 2010). Sung and Kim (2010) also provided evidence that brand personality traits can be used as a central driver in enhancing persuasion and increasing brand trust and brand affect.

Few studies empirically examined the relationship between brand personality dimensions and brand equity, although some researchers, as stated above, recognized and advocated the influence of brand personality on brand equity. To fulfill this gap, we have chosen to empirically examine the effect of brand personality on brand equity. Specifically, we propose that a well-established sportswear brand personality structure enhances the value of brand equity. Furthermore, we are also interested in identifying the dimensions of sportswear brand personality that are most relevant and most significant for their impact on sportswear brand equity. For the purpose of this study, a conceptual framework was developed and is shown in Figure 1: brand personality dimensions are considered latent-independent (exogenous) variables, while brand

equity is considered latent-dependent (endogenous) variable. In our model, brand equity is conceived as a second-order factor that is determined and measured by brand equity dimensions.

Research design and methodology

Measures

The Brand Personality Scale (BPS) developed by Aaker (1997) is reliable, valid and generalizable, and appears to best explain the way American consumers perceive brands across symbolic and utilitarian product and service categories. However, Aaker's BPS and most of the studies after Aaker (1997) measure brand personality on an aggregate level across multiple brands of different product categories (Aaker et al., 2001; Sung and Tinkham, 2005; Bosnjak et al., 2007; Milas and Mlačić, 2007; Geuens et al., 2009). Studies have suggested that personality perceptions may vary by product category and different settings and that specific brand personality dimensions are associated with particular product categories (Arora and Stoner, 2009). Several studies applied Aaker's (1997) framework in specific sectors and offered unique variations of personality dimensions that were drawn from a particular market context (Ekinci and Hosany, 2006; Kaplan et al., 2010; Kim et al., 2010). There is evidence of the advantages of focusing on a specific area of application in brand personality research: the more exact semantics of items, facets and dimensions, directly related to the area investigated (Ekinci and Hosany, 2006; Arora and Stoner, 2009; Kaplan et al., 2010; Valette-Florence and De Barnier, 2013). Motivated by recent studies that argued for creating an appropriate scale and specific personality traits in particular sectors, we think there is a need to first identify and validate the personalities that are specifically associated with sportswear brands before testing their relationships with brand equity. The measures for sportswear brand equity were drawn from previous research. A brief discussion of how each study variable was operationalized follows.

Figure 1 Conceptual framework for this study
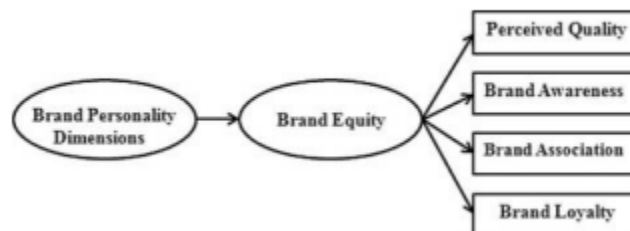
Selection of sportswear brand personality attributes

Guided by the brand personality study by Aaker (1997), the selection of sportswear brand personality attributes followed a three-step process. In the first step, we conducted a free-association task to ensure familiarity and relevance of the attributes. In total, 80 undergraduates at a large southeastern university in the USA (60 per cent female, average age = 22) were asked to write down the personality attributes that first came to mind when thinking about well-known sportswear brands. Based on a research report on sportswear brands from Commerzbank (2008), the top ten sportswear brands by market share were chosen as the product stimuli in this study, namely, Nike, Adidas, Reebok, Puma, New Balance, Converse, K-Swiss, Sketchers, Under

Armour and ASICS. A total of 210 unique traits were generated in this process. Second, to maximize the content representation of personality attributes, we incorporated the 42 original personality traits proposed by Aaker (1997) into our inventory. We also identified 32 additional attributes from Arora and Stoner's (2009) study of personality characteristics of athletic brands and Brakus et al.'s (2009) study of brand experience of athletic brands, yielding a total of 284 attributes. Guided by Aaker, Benet-Martinez and Garolera's brand personality study (2001), the third stage looked to reduce the 284 attributes to a more manageable number by eliminating those "redundant", "ambiguous" and "irrelevant to the construct". Two experienced researchers in apparel marketing were asked to delete items from the list that seemed inappropriate for sportswear brands to derive a more manageable number of personality attributes. Furthermore, a group of students from two US universities were asked to review the final list to make sure the traits were suitable for describing sportswear brands. This resulted in a final set of 63 traits being used to examine the sportswear brands' personality.

Brand equity

As previously discussed, brand equity is conceived as a second-order factor that is determined by brand equity dimensions. More specifically, four brand equity dimensions – perceived quality, brand awareness, brand association and brand loyalty – were considered in the customer-based brand equity measure of this study. The scales of brand equity dimensions came primarily from previous research, with some adoptions. Perceived quality measured consumers' subjective judgments about a brand's overall excellence or superiority, using three items adopted from Aaker (1991) and Pappu et al. (2005). Measures for brand awareness were adopted from Aaker (1991) and Yoo et al. (2000), with four items measuring the strength of the brand in a consumer's memory as reflected by the consumer's ability to identify various elements of it. Brand personality (uniqueness and favorableness) and organizational associations were used as measures for brand association, five items for which were developed based on Aaker (1996a, 1996b), Keller (1993) and Pappu et al. (2005). Borrowed from Yoo et al. (2000) and Pappu et al. (2005), five items were used to capture the consumer's overall commitment to being loyal to a specific brand.

Sample and data collection procedure

A pretest of the questionnaire was conducted prior to the actual survey to enable the refinement of the measurement scales and the checking for any ambiguous or loaded questions. The pre-test was conducted among 30 undergraduates at a large southeastern university in the USA. The final questionnaire was administered to students enrolled at two large universities in the USA (one from the North and one from the South). A total of 460 copies of the questionnaire were delivered, and 420 responses were found usable. The participants ranged in age from 18 to 30 (M = 21). In total, 70 per cent of the sample were female. The most prevalent ethnic group was Caucasian (77.4 per cent), followed by African-American (10.3 per cent), Asian (8.4 per cent) and Hispanic or Latino (1.1 per cent). We used a sample of college students in this study because young people, including college students, constitute the largest and most important target market for sportswear, as their physically active lifestyle creates a strong demand for sportswear products (Deng, 2009).

Respondents were first asked to pick one sportswear brand from the list of top ten sportswear brands (Commerzbank, 2008) (Nike, Adidas, Reebok, Puma, New Balance, Converse, K-Swiss, Sketchers, Under Armour and ASICS) they were most familiar with; then, the participants received a modified version of the Aaker (1997, p. 350) instructions (see below); next they were asked to rate the extent to which the 63 personality traits described their most familiar sportswear brand along a scale that ranged from 1 (not at all descriptive) to 5 (extremely descriptive). To control for order effects, the personality attributes in the questionnaire were presented in random order. Finally, respondents were asked to evaluate brand equity dimensions of their most familiar sportswear brand using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

If I asked you to give me your impression of a particular person, you might answer with a set of personality attributes, such as friendly, cheerful, and reliable. Now, let's think about brands in the same way. In this study, we are interested in finding out your perception of human personalities associated to your most familiar sportswear brand. While evaluating the subsequent set of attributes, please ask yourself, "If this sportswear brand was a person, how would you describe him/her?".

Data analysis and results

BPS for sportswear brands

Exploratory factor analysis

To ensure the reliability and validity of the BPS for sportswear brands developed in this study, we followed the Aaker method (Aaker, 1997; Kim et al., 2010), randomly splitting the data set into two equal samples: an estimation sample and a validation sample. Based on the first half of the data set (n = 210, 420/2), we first examined personality dimensions of sportswear brands through Exploratory factor analysis (EFA) using principal component analysis with varimax rotation. During the EFA, ten items that were not related to any factor were excluded from the next steps of the analysis. In the result, a total of seven factors were extracted from the remaining 53 traits. The adequacy of this seven-component solution was determined by the following criteria:

- all seven factors had eigenvalues larger than 1;
- the seven-factor solution explained a high level of variance (56 per cent);
- a significant dip in the scree plot followed by the seventh factor;
- the factor loading score for each factor (> 0.4); and
- the meaningfulness of each dimension (Aaker, 1997; Kim et al., 2010).

Figure 2 Seven sportswear brand personality dimensions and their facets
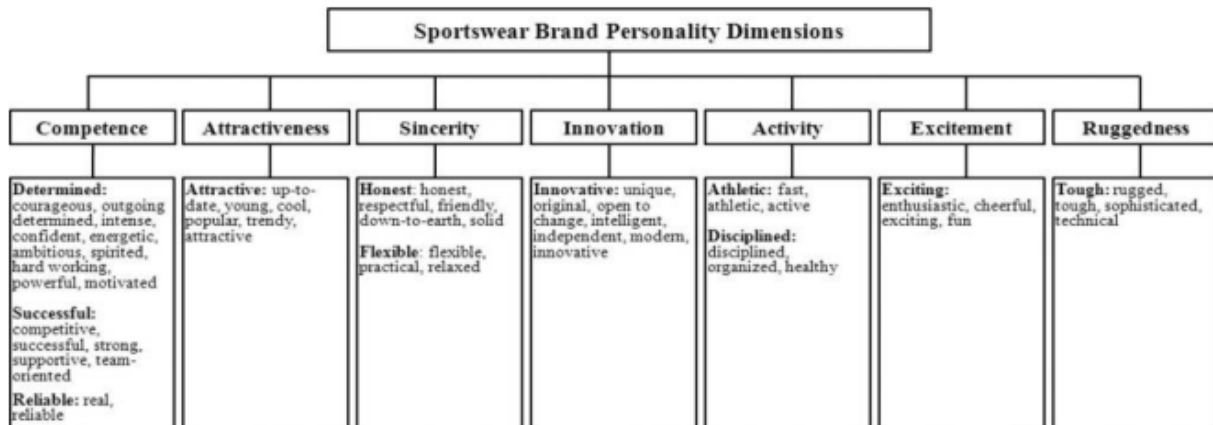
The seven factors accounted for approximately 56 per cent of the total variance and met all the criteria we used. To represent each brand personality dimension accurately, the analysis also included a facet identification step. Figure 2 depicts all the brand personality traits and their corresponding facets and dimensions.

Confirmatory factor analysis

Confirmatory factor analysis (CFA) was next used to check validity and reliability of the BPS for sportswear brands. Cronbach's alpha coefficients were used to examine the internal consistency of the items before conducting a CFA. Cronbach's alpha coefficients calculated for each of the seven dimensions indicated high levels of internal reliability because all were greater than 0.70, as Nunnally (1978) proposed: competence = 0.94, attractiveness = 0.86, sincerity = 0.88, innovation = 0.87, activity = 0.79, excitement = 0.80 and ruggedness = 0.69. The CFA used the second half of the data set (n = 210, 420/2) as the secondary holdout sample for validation and predication. Fit indices of the measurement model were satisfactory overall: χ2/df (2.00), goodness-of-fit index (GFI) (0.88), adjusted goodness-of-fit index (AGFI) (0.83), comparative fit index (CFI) (0.90), root mean square residual (RMR) (0.05) and root mean square error of approximation (RMSEA) (0.05), suggesting that the seven-component model is stable within the holdout data. All factor loadings were significant and varied from 0.60 to 0.78, satisfying the convergent validity criteria. In addition, all the average variance extracted (AVE) estimates were greater than the squared correlations between all the constructs in this study, satisfying the discriminant validity criteria (Fornell and Larcker, 1981). Thus, both convergent validity and discriminant validity were considered to have been established for the BPS identified in this study.

Reliability and validity of sportswear brand equity

First, an EFA was done on the 17 items measuring four dimensions of brand equity with a varimax rotation. EFA produced four distinct factors among the items (perceived quality, brand awareness, brand associations and brand loyalty), which were consistent with the findings from previous research studies. Cronbach's alpha coefficients were then used to examine the internal consistency of the items, and items with adequate Cronbach's alphas were retained for the scales.

The result was that one brand awareness statement was excluded from the final scale due to a low item-total correlation. All the four constructs met the recommended cut-off value of 0.70. As a result, all of the constructs were acceptable, and a total of 16 items were retained for the four brand equity dimensions in the study.

Next, a CFA with Amos 19.0 Graphics software (SEM package) for the measurement model with four constructs was performed. The goodness-of-fit statistics indicated that all the criteria met the recommended values in the measurement model ($\chi 2$/df = 2.16; GFI = 0.93; AGFI = 0.90; CFI = 0.97; RMR = 0.03 and RMSEA = 0.06). All factor loadings were significant and varied from 0.64 to 0.98, satisfying the convergent validity criteria. Unidimensionality and convergent validity of the constructs were assessed by the composite reliability measure and the AVE, respectively. The composite reliability varied from 0.61 to 0.79, satisfying the criteria of 0.6. The AVE varied from 0.50 to 0.72, thus satisfying the criteria of 0.50. Table I shows the factor loadings, composite reliability and AVE. In addition, all the AVE estimates were greater than the squared correlations between all the constructs in this study, demonstrating good discriminant validity of all scales (Fornell and Larcker, 1981).

Table I Confirmatory factor analysis for the constructs

Latent variables and observed indicators		Standardized factor loading	t-value[d]
Perceived quality (α = 0.87, CR = 0.79, AVE = 0.64[a])			
PQ1	I trust the quality of products from X [b]	0.86	– [c]
PQ2	Products from X would be of very good quality	0.98	21.81
PQ3	Products from X offer excellent features	0.90	13.24
Brand awareness (α = 0.77, CR = 0.64, AVE = 0.50)			
BAW1	Some characteristics of X come to my mind quickly	0.76	–
BAW2	I can recognize X quickly among other competing brands	0.78	15.58
BAW3	I am familiar with X brand	0.85	17.03
Brand association (α = 0.86, CR = 0.61, AVE = 0.57)			
BAS1	X has very unique brand image, compared to competing brands	0.80	16.03
BAS2	I respect and admire people who wear X	0.87	17.56
BAS3	I like the brand image of X	0.74	–
BAS4	I like and trust the company, which makes X products	0.72	12.38
BAS5	X is a unique brand	0.71	11.84
Brand loyalty (α = 0.90, CR = 0.63, AVE = 0.72)			
BL1	I consider myself to be loyal to X	0.64	–
BL2	When buying athletic shoes, X would be my first choice	0.85	13.15
BL3	I will keep on buying X as long as it provides me satisfied products	0.67	10.93
BL4	I am still willing to buy X even if its price is a little higher than that of its competitors	0.78	12.16
BL5	I would love to recommend X to my friends	0.75	13.79

Notes: [a] α = Cronbach's alpha, CR = composite reliability, AVE = average variance extracted; [b] "X" means the specific brand; [c] "–" means the path parameter was set to 1, therefore, no t-value was given; [d] all loadings are significant at 0.001 level

Results of the structural model

According to the purpose of this study, a structural equation model (Figure 2) was developed to assess the statistical significance of the relationships between the seven personality dimensions of sportswear brands and overall brand equity using Amos 19.0 software. The seven personality dimensions of sportswear brands were all taken as the exogenous variables, and overall brand equity was the endogenous variable. Here, all of the seven exogenous variables were proposed to be intercorrelated.

The results of the goodness-of-fit tests of the overall structural model are rather satisfactory (χ^2/df = 2.02, GFI = 0.91, AGFI = 0.88, CFI = 0.97, RMR = 0.09 and RMSEA = 0.05) in relations to generally accepted standards (Hu and Bentler, 1999). It seems thus feasible to carry out the analysis of the results of the structural model. The value of the parameters and their degree of significance, as indicated in Table 1, allow us to confirm the existence of the relationships between the exogenous and endogenous constructs (Hair et al., 2009).

The statistical results obtained from this study clearly indicated the existence of the significant links between four brand personality dimensions and brand equity. More specifically, the competence (β = 0.13, t = 2.80), attractiveness (β = 0.13, t = 3.91), sincerity (β = 0.15, t = 4.04) and innovation (β = 0.09, t = 1.67) dimensions of brand personality had a positive and significant influence on brand equity of sportswear brands. In comparison, the influence of the other three dimensions, activity (β = −0.04, t = −1.17), excitement (β = 0.02, t = 0.56) and ruggedness (β = 0.02, t = 0.52), of brand personality were not significant (Figure 3).

Discussion and implications

Branding remains the sportswear industry's largest source of competitive advantage, and sportswear brands are dedicated to using a distinct and memorable brand identity to get customers' attention and build brand loyalty (Tong and Hawley, 2009). This study aims to explore the personalities of sportswear brands and their relationships to brand equity using Aaker's methodology. The study makes an important contribution to the understanding of brand personality and brand equity in the context of sportswear brands. It has both theoretical and practical implications. Theoretically, it developed a valid and reliable scale that measures personality for sportswear products, and it confirmed that consumers do associate particular brand personality dimensions with specific brand categories (such as sportswear) and certain dimensions of brand personality have a direct impact on brand equity. Practical applications of this research also exist. Below we summarize the results and discuss the key practical implications of the results.

Figure 3 Brand personality–equity relationship
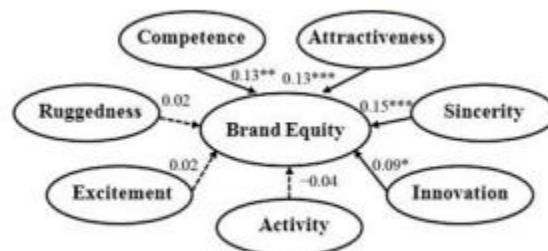
Notes: ---→ No effect; ──→ significant effect; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Personality of sportswear brands

Our results indicate that consumers do ascribe personality characteristics to sportswear brands, and the personality of sportswear brands can be described in seven dimensions and 53 personality traits: competence, attractiveness, sincerity, innovation,activity, excitement and ruggedness. Among the seven personality dimensions of sportswear brands, five of them – competence, attractiveness, sincerity, excitement and ruggedness – are congruent with the five dimensions of brand personality developed by Aaker (1997), and two new dimensions, namely, innovation and activity, appeared in this study as dimensions of brand personality specifically for sportswear brands.

The personality dimension of competence consists of traits such as determined, confident, successful and reliable. The brand personality described by this category clearly fits the top sportswear brands' (e.g. Nike, Adidas and Reebok) leading position and good reputation in the sportswear market. The attractiveness dimension, including up-to-date, popular, young and cool, seems to reflect the stylistic and attractive aspect of sportswear products and celebrity-athletes who represent well-known sportswear brands. The sincerity dimension encompasses traits like honest, friendly, practical and flexible, which appears to reflect consumers' perceptions of high quality, high performance and the family-oriented image of the major sportswear brands (Maehle et al., 2011). Innovation in this study depicts being unique, modern and innovative. The emergence of the innovation dimension in this study may be explained by the fact that consumers portray sportswear brands as innovative and modern. The activity dimension refers to characteristics such as fast, active, disciplined and organized. This dimension is the reflection of characteristics defining athletes based on sportswear brands' personality. The personality dimension of excitement consists of traits such as enthusiastic, fun and cheerful, which implies that sportswear brands are considered to be fun and are thus highly capable of generating interest. The ruggedness dimension, including tough, technical and sophisticated, suggests that sportswear brands are seen as outdoorsy and tough. This result comes as no surprise because sportswear products powered by cutting-edge technology and performance can protect people during their outdoor sports and activities.

According to Aaker (1997) and Shank and Langmeyer (1994), the measurement and defining the personality of the brand can be managerially interesting, because it allows description of brands' personalities and contrasting personalities of competing brands, and more importantly, it allows marketers to gain a complete understanding of what consumers learn from all the communication, product usage, competitive environment and the rest of the external factors. In the sportswear industry, there is evidence that the top brands compete fiercely against each other for market share and customer loyalty. In such an environment, successful positioning and differentiation of the brand becomes crucial (Tong and Hawley, 2009). Thus, the scale and the distinctive brand personality dimensions identified by this study can be used as a practical marketing tool for brand managers in the sportswear market. Specifically, our findings would help managers better understand the image of their brand in the minds of consumers, better distinguish their brand from competing brands and further identify the target market that is sensitive to the personality traits attached to their brand. For example, the results of this study revealed that Nike was rated statistically significantly higher than its rival Adidas on items such as competitive, trendy, sincere and exciting. However, Under Armour's personality appeared to be as clear and strong as Nike's, which provided further evidence for the market analysis suggesting that Under Armour is no longer just a scrappy underdog, and its image of elite

athleticism gives it incredible growth potential in the market (Townsend, 2014). A brand's personality is born out of its tangible characteristics, but the creation of brand personality also involves active corporate communication. Hence, sportswear marketers should concentrate on developing efficient marketing communications and campaigns appealing to customers in the process of creating effective brand personalities in reference to the competence, attractiveness, sincerity, innovation, activity, excitement and ruggedness for sportswear brands. In terms of antecedents of brand personality, it has been suggested that brand personality is created by a multitude of marketing variables, such as celebrity/star endorsement, sports event sponsorship and advertising (Batra et al., 1993; Plummer, 2000; Tong and Hawley, 2009).

The impact of brand personality on brand equity

Building brand equity is crucial for a heavily branded product category, like sportswear (Tong and Hawley, 2009). Effective brand equity management by encompassing brand personality is of paramount importance in reaching the overall company goals of satisfaction, loyalty and profitability in the sportswear market (Rajagopal, 2006). The results of this study indicate that certain dimensions of brand personality have a direct impact on brand equity of sportswear brands. This is in line with previous studies, in which researchers have posited that brand personality traits influence attitude toward a brand, brand preferences and brand loyalty among consumers (Sirgy, 1982; Aaker, 1999; Ambroise et al., 2005; Keller, 2008), and development of a strong brand personality could increase perceived value and positive brand perception among consumers (Aaker, 1991; Arora and Stoner, 2009; Tong and Hawley, 2009).

This study showed that not all brand personality dimensions have the same influence in increasing the value of a sportswear brand from a consumer perspective, some dimensions being more efficient than others. Specifically, we have identified that four dimensions among all the seven personality dimensions, namely, competence, attractiveness, sincerity and innovation, are the positive and significant contributing factors to the creation and enhancement of sportswear brand equity. These findings imply that the more the personality/identity of a sportswear brand is considered competent, attractive, sincere and innovative, the higher the consumer perceived value of that brand. Given marketing/brand managers often have limited resources (e.g. money, time and manpower) to implement branding strategies, our findings provide insights as to what dimensions of brand personality would deliver the best result in today's competitive sportswear market. Sportswear marketers should capitalize on these findings by focusing on these four dimensions in developing brand personality and communicating to their target customers with right marketing strategies to create favorable attitudes and behaviors toward the brand. More specifically, the four most important dimensions of personality (competence, attractiveness, sincerity and innovation) should be incorporated into the marketing strategies and campaigns that are heavily used in the process of personality and equity creation in the sportswear industry such as advertising, celebrity athlete endorsements and sports event sponsorship (Radder and Huang, 2008; Tong and Hawley, 2009). For example, when sportswear marketers use star athletes to promote their brands, they should use athletes who are perceived as competitive, attractive, sincere and innovative to create a good "fit" between brand and celebrity image and build great brand equity (Misra, 1990). Nike, the market leader, has successfully associated its brand with famous athletic celebrities (e.g. Michel Jordan) and top sport events (e.g. the Olympics) to

increase its brand awareness and has conveyed an image of Nike as superior, consistent, fun and innovative brand to its target market.

Although consumers also perceived the sportswear brands to have an active, exciting and rugged brand personality, these three personality dimensions are not strong enough to produce statistically significant advantage in creating brand value for young consumers in the context of choosing a sportswear brand. Based on our empirical evidence, we believe that perhaps, the sportswear brand should avoid trying so hard to be active and exciting or investing so heavily for the tough and sophisticated look.

Limitations and future research

This research has a number of limitations, which constitute areas for future research. First of all, the study was carried out on a convenience sample. Even if the young consumers surveyed, aged 19-30, are part of the target of sportswear brands, it would seem interesting to replicate this survey on a much more diversified sample of consumers. Then, this study only examined the impact of brand personality on overall brand equity. We think future studies should also investigate the influence of brand personality on the four dimensions of brand equity: perceived quality, brand awareness, brand association and brand loyalty (Aaker, 1991). Finally, the influence of brand personality could also vary depending on demographic variables or consumption-related variables (e.g. involvement and price sensitivity), thus this would let a company to act more specifically depending on the target.

References

Aaker, D.A. (1996a), Building Strong Brands, The Free Press, New York, NY. Aaker, D.A. (1996b), "Measuring brand equity across products and markets", California Management Review, Vol. 38 No. 3, pp. 102-120.

Aaker, J. and Fournier, S. (1995), "A brand as a character, a partner and a person: three perspectives on the question of brand personality", in Kardes, F.R. and Sujan, M. (Eds), Advances in Consumer Research, Association for Consumer Research, Provo, UT, pp. 391-395.

Aaker, J.L. (1997), "Dimensions of brand personality", Journal of Marketing Research, Vol. 34 No. 3, pp. 347-356. Aaker, J.L. (1999), "The malleable self: the role of self-expression in persuasion", Journal of Marketing Research, Vol. 36 No. 1, pp. 45-57.

Aaker, J.L., Benet-Martínez, V. and Garolera, J. (2001), "Consumption symbols as carriers of culture: a study of Japanese and Spanish brand personality constucts", Journal of Personality and Social Psychology, Vol. 81 No. 3, pp. 492-508.

Ambroise, L., Ben Sliman, S., Bourgeat, P., De Barnier, V., Ferrandi, J.M., Merunka, D., Roehrich, G. and Valette-Florence, P. (2005), "The impact of brand personality on attitude and commitment toward the brand", CD-ROM, Proceedings of the 32nd

International Research Seminar in Marketing, Marketing Communications and Consumer Behavior, La Londe les Maures.

Arora, R. and Stoner, C. (2009), "A mixed method approach to understanding brand personality", Journal of Product & Brand Management, Vol. 18 No. 4, pp. 272-283. Azoulay, A. and Kapferer, J.-N. (2003), "Do brand personality scales really measure brand personality?", Journal of Brand Management, Vol. 11 No. 2, pp. 143-155.

Batra, R., Lehmann, D.R. and Singh, D. (1993), "The brand personality component of brand goodwill: some antecedents and consequences", in Aaker, D.A. and Biel, A.L. (Eds), Brand Equity & Advertising: Advertising's Role in Building Strong Brands, Lawrence Erlbaum Associates, Hillsdale, NJ, pp. 83-96.

Belk, R.W. (1988), "Possessions and the extended self", Journal of Consumer Research, Vol. 15 No. 2, pp. 139-168.

Biel, A.L. (1993), "Converting image into equity", in Aaker, D.A. and Biel, A.L. (Eds), Brand Equity and Advertising, Lawrence Erlbaum Associates, Hillsdale, NJ, pp. 67-82.

Bosnjak, M., Bochmann, V. and Hufschmidt, T. (2007), "Dimensions of brand personality attributions: a person-centric approach in the German cultural context", Social Behavior and Personality: An International Journal, Vol. 35 No. 3, pp. 303-316.

Brakus, J.J., Schmitt, B.H. and Zarantonello, L. (2009), "Brand experience: what is it? How is it measured? Does it affect loyalty?", Journal of Marketing, Vol. 73 No. 3, pp. 52-68.

Buil, I., Chernatony, L.D. and Martínez, E. (2008), "A cross-national validation of the consumer-based brand equity scale", Journal of Product & Brand Management, Vol. 17 No. 6, pp. 384-392.

Chaudhuri, A. and Holbrook, M.B. (2001), "The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty", Journal of Marketing, Vol. 65 No. 2, pp. 81-93.

Cobb-Walgren, C.J., Ruble, C.A. and Donthu, N. (1995), "Brand equity, brand preference, and purchase intent", Journal of Advertising, Vol. 24 No. 3, pp. 25-40. Commerzbank (2008), "'Adidas', equity research", available at: www.wikinvest.com/ (accessed 8 August 2012).

Deng, T. (2009), "'Just done it' - nikes new advertising plan facing global economic crisis", International Journal of Business and Management, Vol. 4 No. 3, pp. 102-105.

Ekinci, Y. and Hosany, S. (2006), "Destination personality: an application of brand personality to tourism destinations", Journal of Travel Research, Vol. 45 No. 2, pp. 127-139.

Farquhar, P.H. (1989), "Managing brand equity", Marketing Research, Vol. 1 No. 3, pp. 24-33.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", Journal of Marketing Research, Vol. 18 No. 1, pp. 39-50.

Fournier, S. (1998), "Consumers and their brands: developing relationship theory in consumer research", Journal of Consumer Research, Vol. 24 No. 4, pp. 343-373.

Freling, T.H. and Forbes, L.P. (2005), "An empirical analysis of the brand personality effect", Journal of Product & Brand Management, Vol. 14 No. 7, pp. 404-413.

Freling, T.H., Crosno, J. and Henard, D. (2011), "Brand personality appeal: conceptualization and empirical validation", Journal of the Academy of Marketing Science, Vol. 39 No. 3, pp. 392-406.

Geuens, M., Weijters, B. and De Wulf, K. (2009), "A new measure of brand personality", International Journal of Research in Marketing, Vol. 26 No. 2, pp. 97-107.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2009), Multivariate Data Analysis, 7th ed., Prentice Hall-Pearson Education, Upper Saddle River, NJ.

Hu, L. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives", Structural Equation Modeling, Vol. 6 No. 1, pp. 1-55.

Kaplan, M.D., Yurt, O., Guneri, B. and Kurtulus, K. (2010), "Branding places: applying brand personality concept to cities", European Journal of Marketing, Vol. 44 Nos 9/10, pp. 1286-1304.

Keller, K.L. (1993), "Conceptualizing, measuring, and managing customer-based brand equity", Journal of Marketing, Vol. 57 No. 1, pp. 1-22. Keller, K.L. (2008), Strategic Brand Management: Building, Measuring, and Managing Brand Equity, 3rd ed., Prentice Hall, Upper Saddle River, NJ.

Keller, K.L. (2009), "Building strong brands in a modern marketing communications environment", Journal of Marketing Communications, Vol. 15 Nos 2/3, pp. 139-155.

Kim, J., Baek, T.H. and Martin, H.J. (2010), "Dimensions of news media brand personality", Journalism & Mass Communication Quarterly, Vol. 87 No. 1, pp. 117-134.

Louis, D. and Lombart, C. (2010), "Impact of brand personality on three major relational consequences (trust, attachment, and commitment to the brand)", Journal of Product & Brand Management, Vol. 19 No. 2, pp. 114-130

Maehle, N., Otnes, C. and Supphellen, M. (2011), "Consumers' perceptions of the dimensions of brand personality", Journal of Consumer Behaviour, Vol. 10 No. 5, pp. 290-303.

Milas, G. and Mlacˇicˊ, B. (2007), "Brand personality and human personality: findings from ratings of familiar Croatian brands", Journal of Business Research, Vol. 60 No. 6, pp. 620-626.

Misra, S. (1990), "Celebrity spokesperson and brand congruence: an assessment of research and effect", Journal of Business Research, Vol. 21 No. 1, pp. 159-173.

Netemeyer, R.G., Krishnan, B., Pullig, C., Wang, G., Yagci, M., Dean, D., Ricks, J. and Wirth, F. (2004), "Developing and validating measures of facets of customer-based brand equity", Journal of Business Research, Vol. 57 No. 2, pp. 209-224.

Nunnally, J.C. (1978), Psychometric Theory, 2nd ed., McGraw-Hill, New York, NY.

Oliver, R.L. (1999), "Whence consumer loyalty?", Journal of Marketing, Vol. 63 No. 1, pp. 33-44.

Pappu, R., Quester, P.G. and Cooksey, R.W. (2005), "Consumer-based brand equity: improving the measurement - empirical evidence", Journal of Product & Brand Management, Vol. 14 No. 3, pp. 143-154.

Plummer, J.T. (2000), "How personality makes a difference", Journal of Advertising Research, Vol. 40 No. 6, pp. 79-84.

Radder, L. and Huang, W. (2008), "High-involvement and low-involvement products: a comparison of brand awareness among students at a South African university", Journal of Fashion Marketing and Management, Vol. 12 No. 2, pp. 232-243.

Rajagopal, R. (2006), "Brand excellence: measuring the impact of advertising and brand personality on buying decisions", Measuring Business Excellence, Vol. 10 No. 3, pp. 56-65.

Romaniuk, J. and Nenycz-Thiel, M. (2013), "Behavioral brand loyalty and consumer brand associations", Journal of Business Research, Vol. 66 No. 1, pp. 67-72.

Shank, M.D. and Langmeyer, L. (1994), "Does personality influence brand image?", The Journal of psychology, Vol. 128 No. 2, pp. 157-164.

Sirgy, M.J. (1982), "Self-concept in consumer behavior: a critical review", Journal of Consumer Research, Vol. 9 No. 3, pp. 287-300.

Sung, Y. (2011), "The effect of usage situation on Korean consumers' brand evaluation: the moderating role of self-monitoring", Journal of Consumer Behaviour, Vol. 10 No. 1, pp. 31-40.

Sung, Y. and Kim, J. (2010), "Effects of brand personality on brand trust and brand affect", Psychology and Marketing, Vol. 27 No. 7, pp. 639-661.

Sung, Y., Kim, J. and Jung, J.H. (2009), "The predictive roles of brand personality on brand trust and brand affect: a study of Korean consumers", Journal of International Consumer Marketing, Vol. 22 No. 1, pp. 5-17.

Sung, Y. and Tinkham, S.F. (2005), "Brand personality structures in the United States and Korea: common and culture-specific factors", Journal of Consumer Psychology, Vol. 15 No. 4, pp. 334-350.

Tong, X. and Hawley, J.M. (2009), "Measuring customer-based brand equity: empirical evidence from the sportswear market in China", Journal of Product & Brand Management, Vol. 18 No. 4, pp. 262-271.

Townsend, M. (2014), "Under armour falls after 'conservative' sales forecast", available at: www.bloomberg.com/news/2014-04-24/under-armour-falls-afterconservative-sales-forecast.html (accessed 2 June 2014).

Valette-Florence, R. and De Barnier, V. (2013), "Towards a micro conception of brand personality: an application for print media brands in a French context", Journal of Business Research, Vol. 66 No. 7, pp. 897-903.

Wang, H., Wei, Y. and Yu, C. (2008), "Global brand equity model: combining customer-based with product-market outcome approaches", Journal of Product & Brand Management, Vol. 17 No. 5, pp. 305-316.

Washburn, J.H. and Plank, R.E. (2002), "Measuring brand equity: an evaluation of a consumer-based brand equity scale", Journal of Marketing Theory & Practice, Vol. 10 No. 1, pp. 46-61.

Yoo, B. and Donthu, N. (2001), "Developing and validating a multidimensional consumer-based brand equity scale", Journal of Business Research, Vol. 52 No. 1, pp. 1-14.

Yoo, B., Donthu, N. and Lee, S. (2000), "An examination of selected marketing mix elements and brand equity", Journal of the Academy of Marketing Science, Vol. 28 No. 2, pp. 195-211.

Zeithaml, V.A. (1988), "Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence", Journal of Marketing, Vol. 52 No. 3, pp. 2-22.