A CROSS VALIDATION OF CONSUMER-BASED BRAND EQUITY MODELS:

DRIVING CUSTOMER EQUITY IN RETAIL BRANDS

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ABSTRACT

The Consumer-Based Brand Equity (CBBE) literature has, in recent years, introduced various CBBE models. This study aims to compare the validity of the two prominent CBBE models in the retail industry; those introduced by Yoo and Donthu (2011) and Nam, Ekinci and Whyatt (2011). In order to make this comparison, the study collected data from Turkish (n=285) and Spanish respondents (n=236) who had experience with global fashion brands and Private Labels (PL). The findings of the study suggest that Nam et al.'s (2011) CBBE model has better validity than Yoon and Donthu's (2011) model. When brand awareness is included in Nam et al.'s model, the psychometric properties of the model are improved and outperform the two models. The study discusses the theoretical contributions and managerial implications of the research.

Keywords: Consumer-based brand equity (CBBE), brand satisfaction, service quality, fashion retail industry, Private Labels (PL).

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1. Introduction

In today's marketplace successful brands must develop and maintain distinctive images in order to sustain their competitive advantage (Aaker, 1991; Pappu, Quester, & Cooksey, 2005). Consumer-Based Brand Equity (CBBE) is essential for driving customer equity, differentiating brands, assessing brand performance and gaining competitive advantage in the marketplace (Lassar, Mittal, & Sharma, 1995; Sun, Kim & Kim, 2014; Zhang, Ko & Kim 2010). Strong brand equity is achieved when consumers recognize brands, have favourable brand identification, and brand loyalty (Keller, 1993).

As brand equity positively associates with customer equity and brand success, CBBE receives significant attention from the academic and business community (Kim, Kim, & An, 2003; Kim, Ko, Lee, Mattila & Kim, 2014). As such the brand equity models introduced by Aaker (1991) and Keller (1993) are widely acknowledged (Pappu et al., 2005; Buil, Martinez, & de Chernatony, 2013). Using Aaker's (2001) four-dimensional brand equity model, scholars such as Yoo & Donthu (2001) introduce measurement scales for assessing CBBE. However, many of these measures are applied to goods dominant brands (Jung & Sung, 2008; Yoo & Donthu, 2001; Punj & Hillyer, 2004). Applications of the CBBE measures to service brands are limited. Also previous applications of Aaker's CBBE model to service organizations display poor validity (for example, Boo, Busser, & Baloglu, 2009). Nam, Ekinci, & Whyatt (2011) argue that the existing measurement scales based on Aaker's (1991) and Keller's (1993) CBBE models are not suitable for service-dominant brands because of the inherent characteristics of services: intangibility, perishability, heterogeneity and inseparability (Grönroos, 1984). Some of the brand equity dimensions seem to differ for services. Although Aaker (1991) states that perceived quality is uni-dimensional, services marketing scholars argue that service quality is multi-dimensional (Grönroos, 1984). Nam et al. (2011) show that service quality is formed with two dimensions:

physical quality and staff behavior. Furthermore, Aaker's (1991) CBBE model focuses mainly on the functional aspects of brands and ignores the brand's symbolic consumption that is an essential component of brand equity. To address this deficiency, Nam et al. (2011) introduce three symbolic consumption related brand equity dimensions: self-congruence, brand identification and lifestyle-congruence. Nam et al.'s (2011) empirical study support validity of their model in the UK hospitality industry, but their findings are limited to only hotel and restaurant brands. Hence, there is uncertainty as to whether their findings are valid when the CBBE model is applied to other service sectors and national cultures.

This study's aims are twofold. Firstly, to assess the external validity of Yoo & Donthu's (2011) and Nam et al.'s (2011) brand equity model in Turkish fashion retailing and Spanish grocery retailing selling private labels. Both countries are culturally different from the U.K and U.S, where these models had been developed and tested. Secondly, to improve Nam et al.'s (2011) CBBE model by introducing brand awareness. This study differs from previous studies by comparing the validity of the two prominent CBBE models in a new service sector, and contributes to the branding literature by advancing understanding of brand equity dimensions and their relationships with brand satisfaction and brand loyalty in cross-cultural settings. The research paper starts with a review of the CBBE models. Then the methodology of the two studies and their findings are presented. Finally, this paper discusses the theoretical and managerial implications for the retail industry.

2. **Background of the Study: Consumer-Based Brand Equity**

Attentions to measuring CBBE have been increasing in recent years (Moon, Park & Choi, 2010). The underlying reason for this interest is the impact that CBBE has on the consumer's brand choice, brand commitment (Cobb-Walgren, Beal, & Donthu, 1995), brand extension (Kim & Brandon, 2010), and business performance (Kim et al., 2003). Over the last three decades, different CBBE models and dimensions are introduced (Jung & Sung, 2008). Due to the differing conceptualizations of CBBE, there is no clear agreement on how brand equity should be measured (Maio Mackay, 2001). Nonetheless, the consumer-brand equity

models introduced by Aaker (1991) and Keller (1993) are widely utilized. Keller (1993; 2) defines brand equity as "the differential effect of brand knowledge on consumer response to the marketing of the brand". Whereas Aaker (1991) refers to brand equity as a set of assets and liabilities linked to a brand. According to Aaker (1991), CBBE has four dimensions: perceived quality, brand awareness, brand loyalty and brand associations. Perceived quality is described as "the consumer's judgment about a product's overall excellence or superiority" (Zeithaml, 1988; 3). Brand awareness refers to the consumer's brand recall or brand recognition (Aaker, 1991). Brand association is the brand knowledge stored in the consumer's mind, and brand loyalty is "the attachment that a customer has to a brand" (Aaker, 1991; 39). However, Aaker (1991) introduces this model for drawing attention to brand management in an ideal world, rather than demonstrating how brand equity should be measured.

Utilizing Aaker's (1991) and Keller's (1993) conceptualizations of brand equity, Yoo & Donthu (2001) develop a multi-dimensional scale to measure CBBE. They test the validity of the scale using goods dominant brands (athletic shoes, film for cameras, and colour television sets) among three cultural groups (Korean, Korean American and American). They claim that their measures are valid and reliable. Although other applications of Yoo & Donthu's (2001) brand equity scale confirm validity of their results, the validity of their model is questioned. Washburn, Brian, & Priluck, (2000) state that the discriminant validity of their measures used to assess three dimensions are poor: perceived quality, brand loyalty and brand associations/awareness. Washburn & Plank (2002) show that the scale items measuring brand association and brand awareness are not distinct. In addition to these criticisms, several researchers argue that Yoo & Donthu's brand equity measure is not suitable for service dominant brands (for example, Lee & Back, 2010; Nam et al., 2011) because service dominant brands are different from goods dominant brands (Kim et al., 2003) due to the inherent characteristics of services. Therefore, Aaker's model should be adapted to service brands where necessary (Lee and Back, 2010). Nam et al. (2011) introduce a new CBBE model for assessing service dominant brands based on seven dimensions: physical quality, staff behavior, ideal self-congruence, brand identification and lifestyle-congruence, brand satisfaction and brand loyalty. In their new conceptualisation of CBBE for services, Nam et

al. (2011) exclude brand awareness although Aaker (1991) and Keller (1993) recognize brand awareness as an important asset for brand equity. Keller (2003; 76) defines brand awareness as " the customers' ability to recall and recognize the brand as reflected by their ability to identify the brand under different conditions and to link the brand name, logo, symbol, and so forth to certain associations in memory". Brand recognition is usually assessed by nomial (that is, "yes" or "no") responses. Later Keller (2003) and Aaker (1996) introduce higher levels of brand awareness (or recall) besides recognition inlcuding brand dominance, brand knowledge, and brand opinion. The latter is the set of brand associations linked to the brand. Brand awareness is the degree of brand knowledge stored in the minds of consumers beyond simple name recognition. As stated in Keller's (1993) and Aaker's (1996) conceptualisation, brand awareness is a cognitive and knowledge-based brand equity dimension even though it is excluded from Nam et al.'s (2011) model. Hence, Figure 1 presents the three CBBE models introduced by Yoo and Donthu (2001), Nam et al. (2011) and the extended Nam et al. model that includes brand awareness.

(Please insert Figure 1 here)

As can be seen from Figure 1, Yoo and Donthu (2001) propose that brand loyalty is one of the components of CBBE and the three brand equity dimensions influence overall brand equity (Model 1). Furthermore, brand awareness and brand associations are formed into the same dimension. Nam et al. (2011) argue that brand loyalty is one of the components of CBBE but an outcome rather than antecedent of brand equity. Researchers (for example, Im, Kim, Elliot, & Han, 2012; Xu & Chan, 2010) acknowledge the direct relationship between brand equity dimensions and brand loyalty. Buil et al. (2013) confirm that brand associations, brand awareness, perceived quality and brand association influence brand loyalty.

As can be seen from Model 2, Nam et al. (2011) suggest that the six brand equity dimensions - physical quality, staff behavior, ideal self-congruence, brand identification and lifestyle-congruence, brand satisfaction - influence brand loyalty. Physical quality and staff behavior are service quality (SQ) dimensions in line with the

multi-dimensional nature of service quality (Ekinci et al., 2008, Grönroos, 1984). The two service quality dimensions represent the cognitive aspect of brand equity, whereas ideal self-congruence, brand identification and lifestyle-congruence represent the symbolic aspect of brand equity. Brand satisfaction embodies the consumer's post-purchase experience with brands and mediates the relationships between the five dimensions of brand equity and brand loyalty (Koo & Kang, 2004). Nam et al. (2011) argue that, if consumers do not have purchase experience with brands, brand satisfaction can be removed from the model. Consumer loyalty refers to the consumer's behavioral intentions with regards to purchasing and recommending.

According to Nam et al. (2011) physical quality is the image projected by the design, equipment, facilities, and materials associated with the retail shop; whereas staff behavior is the image projected by the retail employees' competence, helpfulness, friendliness, and responsiveness (Ekinci et al., 2008). Ideal self-congruence refers to the degree to which brand image coincides with the consumer's ideal self-concept (Ekinci et al., 2008). Hence people consume brands in order to sustain their self-esteem (Sirgy, 1982; Das, 2015). Recent research suggest that consumer-brand relationships are driven by a multifaceted self in the form of multiple social identities (Champniss, Wilson & Macdonald 2015; Reed, Forehand, Puntoni & Warlop, 2012). Brand identification refers to a situation where consumers express their social identity through brand association or brand consumption (Del Rio, Vazquez, & Iglesias, 2001). Consumers associate themselves with brands that have positive reputations (Long & Shiffman, 2000). Hence, brand identification enables consumers to integrate or disintegrate social groups. Furthermore consumers develop positive attitudes towards brands when they feel that those brands help them to express uniqueness and desired lifestyle (Phau, Teah, Lim & Ho, 2015). Lifestyle-congruence refers to the degree to which brand consumption supports the consumer's unique pattern of living as expressed by activities, interests, and opinions (Nam et al., 2011). All of these brand equity dimensions help to either differentiate individuals from one another, or to associate them to other individuals who have similar interests and activities (Foxall et al., 1998; Solomon, 2002). Finally, Model 3 includes all the brand equity dimensions suggested by Nam et al. as and brand awareness. This study compares validity of the three CBBE models in two different retail sectors in Turkey and Spain.

3. Study 1

Study 1 selects the global fashion retail sector because this is changing rapidly and therefore firms need to create strong brands to compete successfully. Despite the significant size of this sector, the research investigating CBBE in the global fashion retail brand context is limited (Tong & Hawley, 2009). Turkey is selected because previous CBBE studies draw empirical data from developed countries such as UK, USA, and Turkey's economy is growing rapidly. This offers the opportunity to examine the external validity of the two CBBE models in a very different culture and economy from Western and Asian societies.

3.1. Method

An online questionnaire including a list of 25 global fashion brands (for example, Adidas, Dolce and Gabbana, H&M, Lacoste, Marks and Spencer) was administered in Turkey. Respondents assessed one of the presented brands' perceived equity. Since the measurement scales were in English, a qualified interpreter translated the scale items into Turkish. Then, a bilingual researcher back-translated the scale items to English to confirm accuracy and consistency of their meaning. Most respondents were resident in one of the two largest cosmopolitan Turkish cities: Istanbul and Ankara. 350 consumers responded to the questionnaire. Of these, 285 questionnaires were found to be valid. The sample demographics were: 44% male, 56% female; 40% were between 16 and 24, 24% between 25 and 34% between 35 and 44, 2% over 45 years old.

The dimensions of CBBE include perceived quality, brand awareness/associations, brand loyalty, overall brand equity, physical quality, staff behavior, ideal self-congruence, brand identification, lifestyle-congruence and brand satisfaction assessed by a 7-point Likert type scale. This study adopted measurement items from Yoo & Donthu (2001) and Nam et al. (2011). In line with Anderson & Gerbing (1988), a two-stage Structural Equation Modelling (SEM) approach (the measurement model, followed by the structural model) tested Yoo &

Donthu's (2001), Nam et al.'s (2011) model and the extended model of Nam et al. (Model 3). Before any analysis was conducted, normality tests were performed using the skew-ness value of each item. The results suggested that the distribution of the data was normal since the skew-ness values are around the absolute value of 0 and 1 (Hair, Black, Babin, & Anderson, 2010). The two-stage approach was conducted with AMOS 21 employing the Maximum Likelihood (ML) method.

Based on Harman's single-factor test, common-method variance poses a problem if a single unrotated factor solution appears from the exploratory factor analysis (EFA) test or one general factor accounts for the majority of the covariance among the measures (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The EFA results of Yoo & Donthu's (2001) model revealed two factors from the unrotated factor solution, accounting for 60.83% of the total variance where the first factor accounts for 45.19%. The results of the EFA of Nam et al.'s (2011) model revealed five factors from the unrotated factor solution, accounting for 70.24% where the first factor accounts for 40.63%. The EFA results for the extended model of Nam et al. revealed seven factors with eigen values greater than one from the unrotated factor solution, accounting for 72.67% where the first factor accounts for 38.55%. These results suggest that common-method variance does not pose a significant problem for the extended model of Nam et al.

3.2.Results

In order to determine whether the measurement scales are valid, Confirmatory Factor Analysis (CFA) was conducted on the data and squared correlations and Average Variances Extracted (AVE) were examined to assess discriminate validity (Fornell and Larcker, 1981). Then Composite Reliability (CR) and Cronbach's alpha (α) estimated the scale's internal consistency reliability. The descriptive statistics and the scale's reliability scores are illustrated in Table 1.

[Insert Table 1 here]

As can be seen from Table 1, the mean scores of Yoo & Donthu's (2001) brand equity measure range from 3.92 to 5.37. CR and α scores range from 0.83 to 0.88. Fornell & Larcker (1981) suggest that AVE values should be greater than 0.50 and higher than the squared correlations in order to support convergent and discriminant validity. All measurement scales meet these criteria. Table 2 shows the results of descriptive statistics and discriminant validity for Nam et al.'s (2011) measures as well as the brand awareness scale.

[Insert Table 2 here]

As depicted in Table 2, the scale's CR and α scores are high (> 0.70). Each of the AVEs is higher than 0.50 and greater than the squared inter-correlations. Accordingly Nam et al.'s (2011) measures meet the requirements of reliability, convergent and discriminant validity suggested by Fornell & Larcker (1981). The model testing was done via the SEM approach and CFA. The structural model fit indices are shown in Table 3.

[Insert Table 3 here]

The results of the model testing suggest that Yoo & Donthu's (2001) model (Model 1) is valid as the CFA model fit indices are acceptable (Chi-square value: 95.15, df: 38 (p < 0.001), GFI: 0.95, CFI: 0.97, NFI: 0.95, AGFI: 0.91, RMSEA: 0.07, SRMR: 0.05, R^2 overall brand equity: 57%). The results of the study show that only brand loyalty (Standardized Path Coefficient -SPC- = 0.79, t = 7.36, p < 0.001) is positively associated with overall brand equity. The effects of perceived quality (SPC = -0.20, t = -0.31, p > 0.05) and brand awareness (SPC = -0.04, t = 0.40, p > 0.05) on overall brand equity are not statistically significant.

The data support validity of Model 2 (Chi-square value: 293.63, df: 149 (p < 0.001), GFI: 0.91, CFI: 0.97, NFI: 0.93, AGFI: 0.87, RMSEA: 0.06, SRMR: 0.05, R^2 brand satisfaction and brand loyalty: 33% and 68%). As can be seen from the model fit indices Nam et al.'s (2011) model (Model 2) has a slightly better fit

than Model 1. The results of Nam et al.'s (2011) model support the links between some of the brand equity dimensions and brand loyalty. Physical quality has a positive relationship with brand satisfaction (SPC = 0.27, t = 3.71, p < 0.001). The link between staff behavior and brand satisfaction is also supported (SPC = 0.24, t = 3.48, p < 0.001). Brand satisfaction is positively associated with brand loyalty (SPC = 0.42, t = 6.77, p < 0.001). Brand identification and lifestyle congruence do not have a statistically significant influence on brand satisfaction. Ideal self-congruence does not have a statistically significant influence on brand satisfaction or brand loyalty. Results also show that physical quality (SPC = 0.16, t = 2.79, p < 0.01), staff behavior (SPC = 0.20, t = 3.55, p < 0.001), brand identification (SPC = -0.15, t = -2.49, p<0.05), and lifestyle congruence (SPC = 0.26, t = 2.36, p < 0.05) have positive relationships with brand loyalty.

The results in Model 3 show that when brand awareness is included to Nam et al.'s (2011) model, goodness of fit indices are better than Model 1 and 2 (Chi-square value: 366.23, df: 202, (p < 0.001), GFI: 0.90, CFI: 0.97, NFI: 0.93, AGFI: 0.87, RMSEA: 0.05, SRMR: 0.05, R2 for brand satisfaction and brand loyalty: 41% and 72%). The results of the study show that brand awareness has a statistically significant effect on brand satisfaction (SPC = 0.37, t = 4.76, p < 0.001) as well as brand loyalty (SPC = 0.27, t = 4.16, p < 0.001). The results relating to the extended model of Nam et al. (Model 3) support physical quality's positive relationship with brand satisfaction (SPC = 0.18, t = 2.55, p < 0.05). The link between staff behavior and brand satisfaction is also supported (SPC = 0.19, t = 2.95, p < 0.01). Brand satisfaction is positively associated with brand loyalty (SPC = 0.34, t = 5.37, p < 0.001). Meanwhile ideal self-congruence, brand identification, lifestyle congruence do not have a statistically significant influence on brand satisfaction. Results also show that physical quality (SPC = 0.12, t = 2.07, p < 0.05), staff behavior (SPC = 0.19, t = 3.55, p < 0.001) brand identification (SPC = -0.15, t = -2.52, p < 0.01) and lifestyle congruence (SPC = 0.22, t = 2.14, p < 0.05) have positive relationships with brand loyalty.

A bootstrap test analysis, using 5,000 bootstrap samples, checks the mediation analysis on Model 3 (Zhao, Lynch, & Chen, 2010; Preacher & Hayes, 2008). The score for each construct was aggregated and bootstrapping procedures were done on each independent variable of brand loyalty, while treating the other

independent variables as covariates. For brand awareness, the mean indirect effect is positive and significant (a x b = 0.08, 95% CI [0.04, 0.15]). Since c is significant (c = 0.34, p<0.001) and a x b x c is positive (0.03), the mediation is complementary mediation. Physical quality's mean indirect effect is positive and significant (a x b = 0.07, 95% CI [0.02,0.14]). Since c is significant (c = 0.14, p<0.05) and a x b x c is positive (0.01), the mediation is complementary mediation. The mean indirect effect of staff behavior is positive and significant (a x b = 0.04, 95% CI [0.01,0.09]). Since c is significant (c = 0.21, p<0.001) and a x b x c is positive (0.01), the mediation is complementary mediation. The mean indirect effect of ideal-self congruence is negative and not significant (a x b = -0.00, 95% CI [-0.04,0.04]). C is not significant (c = 0.07, p>0.05), and therefore is no-effect non-mediation. For brand identification, the mean indirect effect is positive and not significant (a x b = 0.01, 95% CI [-0.02,0.04]). C is significant (c = -0.08, p<0.05), and therefore is direct only non-mediation. The mean indirect effect of lifestyle congruence is positive and not significant (a x b = 0.02, 95% CI [-0.01,0.07]). C is significant (c = 0.18, p<0.01), and therefore is direct-only non-mediation.

Based on the results above, brand satisfaction mediates three constructs' relationships with brand loyalty: brand awareness, physical quality, staff behavior. Since the mediations are categorized as complementary mediation (Zhao et al., 2010), brand satisfaction partially mediates the effect of brand awareness, physical quality, and staff behavior on brand loyalty.

4. Study 2

Study 2 aims to assess the external validity of Yoo & Donthu's (2001) and the extended model of Nam et al. (2011) with Private Labels (PL) in Spain. PL is a powerful commercial entity that impacts significantly on retail business performance (Pauwels & Srinivasan, 2004). Although PLs are of increasing interest to both academics and practitioners, particularly since 2000, studies examining PL brand equity are limited (Cuneo, López & Yagüe, 2012).

4.1. Method

Data were collected through a structured questionnaire. A Spanish marketing research company distributed the questionnaire which includes the measurement scales introduced by Yoo & Donthu (2001) and Nam et al. (2011). The back translation method was employed to ensure accurate understanding of the scale items in two languages. Quota sampling was employed to obtain a representative sample for the study. 236 respondents participated in the survey in December 2014. At the beginning of the questionnaire a list of 30 fashion and sportswear PLs is introduced. Respondents were asked to choose a familiar PL brand from the list and then to rate the brand equity items.

73% of the respondents stated that they had purchased the selected brands within the last 12 months at once. Most of the respondents were female (53%) and received an annual income of between 6,000 to 11,999 Euros (23%). The majority of the participants had undergraduate degree (24%). This is followed by high school diploma (23%). The age-group distribution was somewhat similar between the age group categories: 15-24 (24%), 25-34 (19%), 35-44 (19%), 45-54 (16%), 55-64 (11%), and above 65 (11%).

4.2.Findings

Following Fornell & Larcker's (1981) suggestion, the Average Variance Extracted (AVE) scores are used for testing the scales' convergent and discriminant validity. Composite Reliability (CR) tests and Cronbach's alpha statistic (α) used for assessing reliability of the scales. The AVEs, CR and α scores are shown in Table 4 and Table 5.

[Insert Table 4 here]
[Insert Table 5 here]

As shown in Table 4 and 5, the AVEs are all above 0.50 and higher than the squared inter-correlations, indicating that discriminant validity of the measures are supported. Reliability is also achieved, since both the

12

CR and α scores are above the threshold of 0.70 (Malhotra, 2010). The fit statistics of the two structural models are shown in Table 6 below.

[Insert Table 6 here]

As shown in Table 6, the model fit indices marginally support the validity of Yoo & Donthu's brand equity model (Chi-square value: 98.92, df: 38, $p < 0.001$, GFI: 0.92, CFI: 0.96, NFI: 0.93, AGFI: 0.87, RMSEA: 0.08, SRMR: 0.05, R^2 for overall brand equity: 71%.) but fully support the validity of the extended model of Nam et al. (Chi-square value: 349.86, df: 202, $p < 0.001$, GFI: 0.88, CFI: 0.96, NFI: 0.90, AGFI: 0.84, RMSEA: 0.06, SRMR: 0.04, R^2 for brand satisfaction and brand loyalty: 33% and 62%). Hence, Model 2 has better validity than Model 1. The results of Yoo & Donthu's model testing suggest that only perceived quality (SPC = 0.20, t = 3.00, $p < 0.01$) and brand loyalty (SPC = 0.69, t = 9.66, $p < 0.001$) are positively associated with overall brand equity. The link between brand awareness and overall brand equity is not statistically significant (SPC = 0.08, t = 1.14, $p > 0.05$).

The results of the extended model testing of Nam et al. support physical quality having a positive relationship with brand satisfaction (SPC = 0.50, t = 5.05, $p < 0.001$). The relationship between brand identification and brand satisfaction is also supported (SPC = 0.14, t = 1.91, $p < 0.10$; one tailed test). Furthermore, brand satisfaction is positively associated with brand loyalty (SPC = 0.23, t = 2.90, $p < 0.01$). Results also show that brand awareness (SPC = 0.41, t = 4.83, $p < 0.001$) and physical quality (SPC = 0.32, t = 3.61, $p < 0.001$) have positive relationships with brand loyalty. Staff behavior, ideal self-congruence and lifestyle congruence do not have a statistically significant influence on brand satisfaction and brand loyalty.

A bootstrapping analysis, using 5,000 bootstrap samples, checks the mediation effect of the extended model of Nam et al. Brand awareness's mean indirect effect is positive and not significant (a x b = 0.01, 95% CI [-0.01,0.05]). C is significant (c = 0.36, p<0.001), and therefore is direct only non-mediation. Physical quality's mean indirect effect is positive and significant (a x b = 0.10, 95% CI [0.03, 0.21]). Since c is significant (c =

13

0.47, p < 0.001) and a x b x c is positive (0.05), the mediation is complementary mediation. Staff behavior's mean indirect effect is positive and not significant (a x b = 0.01, 95% CI [-0.01, 0.05]). C is not significant (c = 0.05, p>0.05), and therefore is no-effect non-mediation. Ideal self-congruence's mean indirect effect is positive and not significant (a x b = 0.01, 95% CI [-0.02, 0.03]). C is not significant (c = 0.01, p > 0.05) and therefore is no-effect non-mediation. Brand identification's mean indirect effect is positive and significant (a x b = 0.02, 95% CI [0.00, 0.05]). Since c is not significant (c = -0.04, p > 0.05) the mediation is indirect-only mediation. Lifestyle congruence's mean indirect effect is negative and not significant (a x b = -0.01, 95% CI [-0.04, 0.02]). C is significant (c = 0.11, p < 0.05), and therefore is direct-only non-mediation.

Based on the results above, brand satisfaction mediates physical quality's and brand identification's relationships with brand loyalty. For physical quality, since the mediation is categorized as complementary mediation, brand satisfaction partially mediates the relationship between physical quality and brand loyalty. For brand identification, since the mediation is categorized as indirect-only mediation (Zhao et al., 2010), brand satisfaction fully mediates the relationship between brand identification and brand loyalty.

5. Conclusions

Consumer-Based Brand Equity (CBBE) is an essential driver of customer equity. The majority of existing CBBE research is based on Aaker's (1991) four-dimensional model: perceived quality, brand associations, brand awareness and brand loyalty. This framework also influences many scale development studies (for example, Pappu et al., 2005; Buil et al., 2013). Yoo & Donthu's (2001) measure, which is based on Aaker's model, is widely used for assessing brand equity (Washburn & Plan, 2002; Washburn et al., 2000). However, the application of Aaker's CBBE model to goods oriented brands prompts questions as to whether the model is suitable for service dominant brands. In order to address this deficiency, Nam et al. (2011) introduce an alternative brand equity model for services which includes seven dimensions and different sets of relationships

among them: physical quality, staff behavior, ideal-self congruence, brand identification, lifestyle congruence, brand satisfaction and brand loyalty.

The current study contributes to the existing body of knowledge through an investigation of the validity of Yoo & Donthu's (1991) and Nam et al.'s (2011) CBBE scale in the retail industry and across different cultural settings that is, Turkish and Spanish. Furthermore, the study assesses the external validity of the two prominent brand equity measures. The external validity of a measure is important because it assesses the usefulness and generalizability of the models in different social settings. The findings of the study demonstrate that although both brand equity scales are valid in the retailing sector, Nam et al.'s scale displays better validity than Yoo & Donthu's scale. Furthermore, the common method variance analysis supports previous concerns regarding Yoo & Donthu's scale, as some of its dimensions may not be distinct (Washburn et al., 2000; Washburn & Plank 2002).

This study suggests that physical quality and staff behaviour are the key antecedents of brand satisfaction and brand loyalty in the retail industry. Hence, these findings support Nam et al.'s (2011) brand equity research in the UK hotel and restaurant industry. Although brand identification and lifestyle congruence (two symbolic consumption related brand equity dimensions) influence brand loyalty, the effect of ideal self-congruence on brand loyalty is not statistically significant in the retail industry. This finding may have occurred because the study brands are utility oriented (PL) and publicly consumed (fashion retail brands) products. Hence brand identification, lifestyle congruence and physical quality may have concealed the effect of ideal self-congruence on brand satisfaction and brand loyalty. The two studies support brand satisfaction driving brand loyalty in the retail industry; this is in line with previous research (for example, Nam et al., 2011; Ekinci et al., 2008).

Also this study advances understanding of the relationship between brand awareness, brand equity, brand satisfaction and brand loyalty in several ways. First, including brand awareness into Nam et al.'s model advances understanding of CBBE in the retail industry. In particular, brand awareness is defined as a knowledge-based entity rather than brand recognition. Hence, this study provides evidence for Keller's (2003) and Aaker's (1996) definition of brand awareness suitable for established brands. Although, for new or niche

brands, recognition is important; for well- known brands, brand knowledge and brand opinion can be more relevant. Second, the study findings suggest that brand awareness influences brand satisfaction and brand loyalty. Therefore, brand knowledge is not only essential for assessing brand equity, but also an asset in developing powerful brands. Third, this research is the first attempt to empirically examine whether brand awareness advances the validity of Nam et al.'s (2011) model in the retail industry and across cultures. The study findings suggest that brand awareness is a key component of brand equity. It also enhances the predictive validity of Nam et al.'s model when used to understand brand loyalty.

5.1.Managerial implications

This study introduces a valid and reliable scale for measuring brand equity in the retail industry. As a result, brand managers can develop internal and external benchmarks that use this measure. They can observe brand performance from the customers' viewpoint and track the changes over time. In addition, the brand equity measures enable managers to assess the strengths and weaknesses of their brands, and compare their brand's performance with similar brands. This ability to compare helps in assessing the brand strategy's success and in designing new brand management programs to tackle competitive pressures.

Retail managers should ensure that the tangible aspects of brands, such as store environment and packaging, are visually appealing in order to enhance brand satisfaction and brand loyalty. As service personel interact with consumers on a daily basis, they are important in implementing brand strategy and enhancing brand loyalty in the retail industry. In particular, retail managers should develop and implement efficient recruitment policies to ensure that the quality of staff behavior is aligned with brand values. A carefully designed training program will enhance the quality of staff behavior and subsequently the retail brand equity.

This study's findings indicate that consumers develop brand loyalty because brand identification enhances their social identity. Retail managers must ensure that consumers' brand experience provides high social value in order to achieve consumers' interpersonal goals. Social value can be achieved through fostering interactions between brand and consumer, and through brand oriented interactions among consumers. In doing

so, a number of approaches such as event marketing can be implemented, and social brand communities can be formed (Park & Kim, 2015; Kim, 2015). Consumers are motivated to express their distinctiveness through brand experiences and develop loyalty to brands. Furthermore, retail managers should monitor current and potential consumers' lifestyles. Understanding consumers' brand expectations and brand interests will inform management decisions on how to position brands in the marketplace, how to achieve brand extentions and develop new brands. Finally, retail managers should continue to foster brand awareness through a myriad of traditional and modern marketing communication methods including advertising, sponsoring, merchandising, web design, social media, content marketing, corporate social marketing programs, etc (Hoeffler & Keller, 2002).

5.2. Limitations

This study advances understanding of brand equity in the retail industry, and is not without limitations. The most important of these limitations is the fact that the study draws causal relationships among the variables from cross-sectional survey data. Future research may be able to test this framework with alternative methodologies, such as experimental or longitudinal research design. Although this study provides evidence about the validity of the Extended model of Nam et al. in the retail industry, the results cannot be generalized to the manufacturing industry, or other service industry sectors, for example financial services, tourism, transportation, education, health. Future research should test the validity of this model with goods dominant brands in different cultures. Finally, establishing the relationships between the model's brand equity dimensions and business performance indicators, such as market share, profitability, return on investment, will be a challenging but worthwhile effort for future research.

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Figure 1

Consumer-Based Brand Equity: Three Competing Models

Model 1: Yoo & Donthu (2001)   Model 2: Nam *et al.* (2011)   Model 3: Extended model of Nam *et al.*
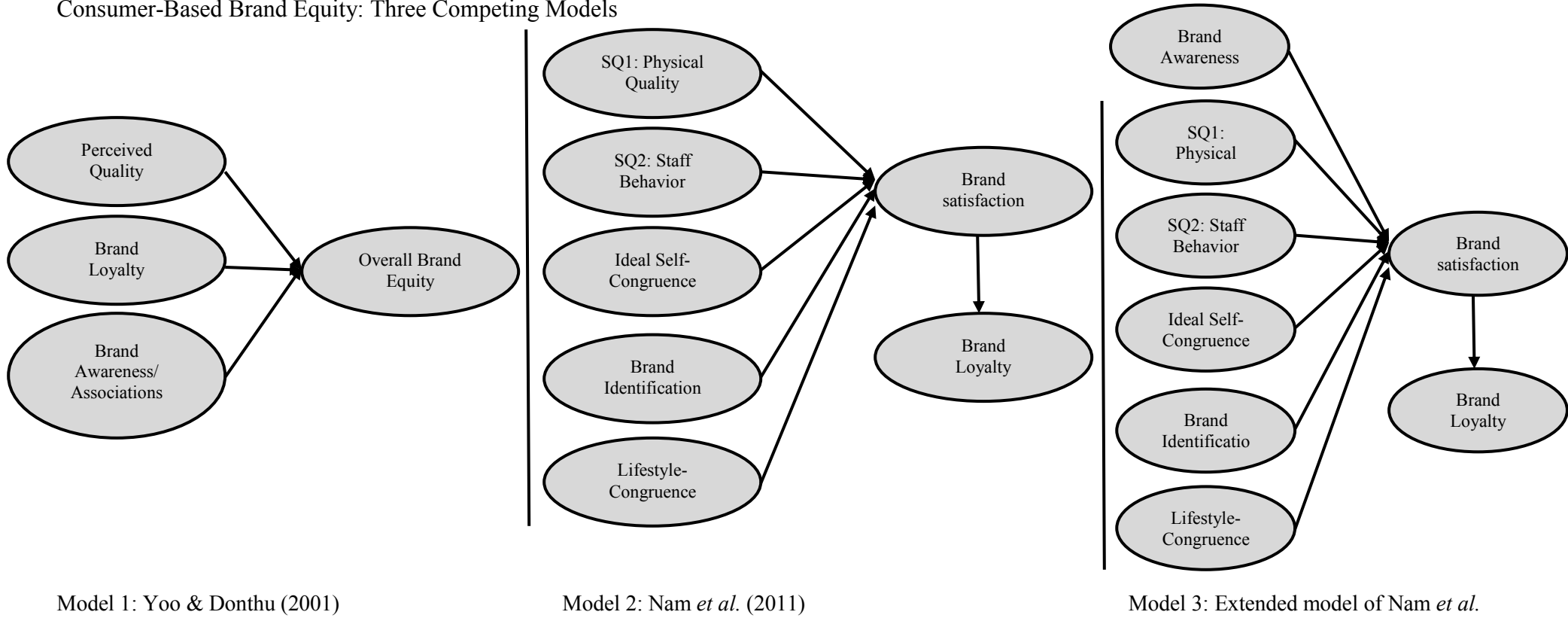
Table 1

Study1: Yoo & Donthu's (2001) CBBE Scale: Descriptive Statistics, Reliability, Correlations and

AVEs

Constructs	Mean	SD	CR	α	1	2	3	4
1. Perceived Quality	5.37	1.32	0.87	0.87	**0.70**	0.45*	0.42*	0.23*
2. Brand Loyalty	3.92	1.50	0.81	0.80	0.67	**0.59**	0.35*	0.56*
3. Brand Awareness/ Associations	5.37	1.19	0.83	0.83	0.65	0.59	**0.72**	0.18*
4. Overall Brand Equity	3.94	1.69	0.89	0.88	0.48	0.75	0.42	**0.72**

*p < 0.01. The scores in the left upper part of the table are squared correlations. The bold values in the diagonal are AVEs

Table 2

Study 1: Nam et al.s (2011) CBBE Scale and the Brand Awareness Scale: Descriptive Statistics,

Reliability, Correlations and AVEs

	Construct	Mean	SD	CR	α	1	2	3	4	5	6	7	8
1	Brand Awareness	5.37	1.32	0.87	0.87	**0.70**	0.25*	0.12*	0.31*	0.11*	0.32*	0.32*	0.49*
2	Physical Quality	5.48	1.15	0.87	0.86	0.50	**0.62**	0.12*	0.25*	0.06*	0.29*	0.22*	0.35*
3	Staff Behavior	4.92	1.34	0.85	0.84	0.35	0.34	**0.65**	0.12*	0.12*	0.13*	0.18*	0.26*
4	Ideal Self-Congruence	4.31	1.60	0.92	0.92	0.56	0.50	0.35	**0.80**	0.30*	0.76*	0.18*	0.35*
5	Brand Identification	2.61	1.61	0.81	0.81	0.33	0.25	0.34	0.55	**0.69**	0.30*	0.09*	0.08*
6	Lifestyle Congruence	4.26	1.66	0.95	0.94	0.57	0.54	0.36	0.87	0.55	**0.85**	0.21*	0.40*
7	Brand Satisfaction	5.55	1.03	0.87	0.86	0.57	0.47	0.42	0.43	0.30	0.46	**0.68**	0.50*
8	Brand Loyalty	5.63	1.28	0.86	0.85	0.70	0.59	0.51	0.59	0.29	0.63	0.71	**0.75**

*p < 0.01. The scores in the left upper part of the table are squared correlations. The bold values in the diagonal are AVEs.

Table 3

Study 1: Structural Model Fit Indices

Model	X^2	Df	X^2/df	GFI	CFI	NFI	AGFI	RMSEA	SRMR
Model 1: Yoo & Donthu (2001)	95.15	38	2.50	0.95	0.97	0.95	0.91	0.07	0.05
Model 2: Nam et al. (2011)	293.63	149	1.97	0.91	0.97	0.93	0.87	0.06	0.05
Model 3: Extended model of Nam et al.	366.23	202	1.81	0.90	0.97	0.93	0.87	0.05	0.05

Table 4

Study 2: Yoo and Donthu's (2001) CBBE Scale: Descriptive Statistics, Reliability, Correlations

and AVEs

Construct	Mean	SD	CR	α	1	2	3	4
1. Perceived Quality	5.41	1.18	0.79	0.77	**0.66**	0.20*	0.26*	0.30*
2. Brand Loyalty	3.67	1.36	0.86	0.86	0.45	**0.67**	0.22*	0.66*
3. Brand Awareness/ Associations	5.31	1.18	0.77	0.76	0.51	0.47	**0.53**	0.25*
4. Overall Brand Equity	4.38	1.43	0.90	0.89	0.55	0.81	0.50	**0.74**

  *$p < 0.01$. The scores in the left upper part of the table are squared correlations. The bold values in the
  diagonal are AVEs.

Table 5

Study 2: Nam et al.'s CBBE Scale and the Brand Awareness Scale: Descriptive Statistics,

Reliability, Correlations and AVEs

Construct	Mean	SD	CR	α	1	2	3	4	5	6	7	8
1 Brand Awareness	5.31	1.18	0.77	0.76	**0.53**	0.18*	0.05*	0.12*	0.01	0.18*	0.08*	0.18*
2 Physical Quality	5.56	0.91	0.86	0.85	0.42	**0.60**	0.17*	0.11*	0.00	0.04*	0.30*	0.40*
3 Staff Behavior	5.40	1.07	0.92	0.92	0.23	0.41	**0.80**	0.01	0.06*	0.01	0.10*	0.07*
4 Ideal Self-Congruence	4.05	1.36	0.89	0.89	0.34	0.33	0.11	**0.74**	0.05*	0.42*	0.04*	0.14*
5 Brand Identification	2.00	1.40	0.91	0.91	0.11	0.06	0.25	0.22	**0.83**	0.06*	0.03	0.00
6 Lifestyle Congruence	3.62	1.45	0.93	0.92	0.42	0.20	0.08	0.65	0.24	**0.81**	0.01	0.14*
7 Brand Satisfaction	4.98	0.93	0.78	0.78	0.28	0.55	0.31	0.21	0.18	0.12	**0.54**	0.26*
8 Brand Loyalty	5.30	1.18	0.77	0.76	0.42	0.63	0.26	0.38	0.06	0.37	0.51	**0.73**

*p < 0.01. The scores in the left upper part of the table are squared correlations. The bold values in the diagonal are AVEs.

Table 6

Study 2: Structural Model Fit Statistics

Model	X^2	df	X^2/df	GFI	CFI	NFI	AGFI	RMSEA	SRMR
Model 1: Yoo & Donthu (2001)	98.92	38	2.60	0.92	0.96	0.93	0.87	0.08	0.05
Model 2: Extended model of Nam et al.	349.86	202	1.73	0.88	0.96	0.90	0.84	0.06	0.04

Appendix 1: Study 1 Measures of the Nam, Ekinci, Whyatt (NEW) brand equity model

Brand Equity *(7-point Likert scale: '1' Disagree Strongly and '7' Agree Strongly*

Brand Awareness

I can recognize this brand among other clothing brands.	(0.76)*
I am aware of this brand.	(0.78)
Some characteristics of this brand come to my mind quickly.	(0.63)

Service Quality: Physical Quality

This brand has a visually appealing store atmosphere.	(0.79)
This brand has visually appealing presentations in store.	(0.72)
Materials and facilities associated with this brand service	
(e.g. decor, shopping bags, changing rooms) are visually appealing.	(0.76)
The store layout of this brand is tidy.	(0.82)

Service Quality: Staff Behavior

Employees of this brand listen to me.	(0.83)
Employees of this brand are helpful.	(0.95)
Employees of this brand are friendly.	(0.90)

Ideal Self-Congruence

The typical guest of this brand has an image similar to how I like to see myself.	(0.82)
The image of this brand is consistent with how I like to see myself.	(0.94)
The image of this brand is consistent with how I would like others to see me.	(0.81)

Brand Identification

If a story in the media criticizes this brand, I would feel embarrassed.   (0.95)

When someone criticizes this brand, it feels like a personal insult.   (0.88)

Lifestyle-Congruence

This brand reflects my personal lifestyle.   (0.85)

This brand is totally in line with my lifestyle.   (0.92)

This brand supports my lifestyle.   (0.93)

Brand satisfaction

Worse than I expected	1 2 3 4 5 6 7	Better than I expected	(0.68)
Worse than similar stores I shop	1 2 3 4 5 6 7	Better than similar stores I shop	(0.71)
Terrible	1 2 3 4 5 6 7	Delighted	(0.81)

Brand Loyalty

I will recommend this brand to someone who seeks my advice.   (0.92)

Next time I will purchase a clothing item from this brand.   (0.79)

(*) The figures in the brackets are the standardised path coefficients.