The influence of brand equity on consumer responses

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Abstract

Purpose – The purpose of this paper is to propose and test a model to better understand brand equity. It seeks to investigate the effects of this construct on consumers' responses using data from two European countries.

Design/methodology/approach – Hypotheses were tested using structural equation modeling (SEM). Measurement invariance and stability of the model across the two national samples was assessed using multigroup confirmatory factor analysis.

Findings – Results indicate that brand equity dimensions inter-relate. Brand awareness positively impacts perceived quality and brand associations. Brand loyalty is mainly influenced by brand associations. Finally, perceived quality, brand associations and brand loyalty are the main drivers of overall brand equity. Findings also corroborate the positive impact of brand equity on consumers' responses. In addition, the general framework proposed is found to be empirically robust across the studied countries. Only a few differences are observed.

Research limitations/implications – A limited set of product categories, brands and countries were used.

Practical implications – Findings provide useful guidelines for brand equity management. Managers can complement financial metrics with consumer-based brand equity measures to track brand performance over time and to benchmark against other brands. Building brand equity generates more value for corporations since a more favourable consumer response results from positive brand equity.

Originality/value – This study contributes to the scarce international brand equity literature by testing the proposed model using data from a sample of consumers in two European countries. It also enriches the brand equity literature by empirically examining the relationships among consumer-based brand equity dimensions and its effects on consumers' responses.

Keywords Consumer-based brand equity, Consumer responses, Consumers, Brand equity, Brands

Paper type Research paper

1. Introduction

The emergence of international brands competing in diverse geographical markets has given rise to the issue of how brands should be managed in a global landscape. However, while the importance and management of brands from the perspective of domestic marketing has been notably addressed in the literature, studies examining brands from an international perspective are limited (Wong and Merrilees, 2007). Specifically, the role of brand equity in international marketing has not been explored in detail (Pappu *et al.*, 2006; Whitelock and Fastoso, 2007; Broyles *et al.*, 2010).

Assessing brand equity in global markets becomes a complex task (Hsieh, 2004). Surprisingly, in the literature rooted in the cognitive psychology paradigm, few studies to date have explored consumer-based brand equity simultaneously in different countries. However, to ensure a successful strategy in building strong brands globally, an understanding of brand equity in different markets is needed

(Yoo and Donthu, 2002). This will help companies to protect and enhance this valuable asset.

In addition to the measurement of brand equity, it is important to understand how brand equity influences attitudes and consumer behaviour (Hoeffler and Keller, 2003). Ultimately, the value of a brand is derived in the market through the actions of consumers. The study of its outcomes has become, therefore, an urgent and challenging task (Wang *et al.*, 2008; Broyles *et al.*, 2009). Yet, most articles assume that brand equity has positive effects on consumer responses (Cobb-Walgren *et al.*, 1995) and those that empirically try to investigate this issue use different proxies of brand equity, such as familiarity or market share (Hoeffler and Keller, 2003). Thus, there is a paucity of empirical research which explores the relationship between consumer-based brand equity and consumer response.

Addressing these gaps, this paper proposes and tests a model to better understand brand equity and investigate the effects of this construct on consumers' responses using data from two European countries. In particular, it examines the effect of brand equity on consumers' willingness to pay price premiums, consumers' attitude towards brand extensions, brand preference and purchase intention.

This research is intended to add to the extant literature in several ways. First, much of the published brand equity research has focused on a single country – The USA. In addition, with some exceptions (e.g. Hsieh, 2004; Buil *et al.*, 2008), those few studies that have explored brand equity simultaneously in different countries have examined the American and Asian markets and suffer from limitations, for example the use of student samples (e.g. Yoo and Donthu, 2001, 2002; Broyles *et al.*, 2010). This study therefore broadens the scope by testing the proposed model using data from a sample of consumers in two European countries. Second, as noted before, there are numerous assertions concerning the positive relationship between brand equity and consumers' responses (i.e. product-market outcomes). However, few studies empirically examine this. Therefore, this research is a further step in this direction.

The paper is organised as follows. It opens with a brief, general discussion of brand equity. The conceptual model and hypotheses are presented. The methodology is next described followed by the analysis and empirical findings. The paper then outlines the conclusions, implications and limitations of the research.

2. Brand equity

Brand equity is a core concept of marketing. Although extensive research has been conducted on brand equity, the literature on this subject is largely fragmented and inconclusive. Numerous definitions of brand equity have been proposed. Most of them, from a consumer perspective, are based on the premise that the power of brands lies in the minds of consumers (Leone *et al.*, 2006). Others, from a financial perspective, consider brand equity as the monetary value of a brand to the firm (Simon and Sullivan, 1993). The financial value of a brand is, however, the final outcome of consumer responses to brands (Christodoulides and de Chernatony, 2010) and as such previous research on brand equity has tended to focus on the consumer perspective.

Aaker (1991) and Keller (1993) developed the foundation for consumer-based brand equity research. From a cognitive psychology approach, Aaker (1991, p. 15) defines brand equity as "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". These assets are brand awareness, perceived quality, brand associations, brand loyalty and other proprietary assets. Keller (1993) develops an alternative view and defines the concept of consumer-based brand equity as the differential effect of brand knowledge on consumer response to the marketing of the brand. Keller views brand equity in terms of brand awareness and the strength, favourability and uniqueness of brand associations that consumers hold in memory.

Following these two approaches, this study uses a consumer-based brand equity measure that consists of four key constructs: brand awareness, perceived quality, brand associations, and brand loyalty. These brand equity dimensions are widely accepted and used by numerous researchers (e.g. Yoo *et al.*, 2000; Kim *et al.*, 2003; Pappu *et al.*, 2005; Lee and Back, 2010; Pike *et al.*, 2010; Kim and Hyun, 2011).

3. Conceptual framework and hypotheses

The proposed model investigates the effects of brand equity on consumer responses towards brands. A literature review was carried out to investigate key consumer responses with capability to provide sustainable competitive advantages to firms. Special attention was given to those consumer responses that can provide greater sales and ability to grow, which in turn positively impact on firm performance. In particular, as can be seen in Figure 1, this study examines the effect of brand equity on four factors: consumers' willingness to pay price premiums, consumers' attitude towards brand extensions, brand preference, and purchase intention. The influence of brand equity on these variables, which is discussed next, can provide greater performance and profitability to firms, given the brand's ability to command higher prices and achieve greater sales as a consequence of the higher preference and purchase intention. In addition, consumers' response to extensions captures the ability to grow.

3.1 Relationships among brand equity dimensions

This study proposes causal relations among the four brand equity dimensions. The existence of a hierarchy among brand equity dimensions has been postulated in the literature (e.g. Maio Mackay, 2001; Yoo and Donthu, 2001; Keller and Lehmann, 2003, 2006). However, few studies have empirically investigated how brand equity dimensions inter-relate. As such, most studies only propose associative relationships among brand equity dimensions (e.g. Yoo *et al.*, 2000; Pappu *et al.*, 2005).

Most researchers advocate that the traditional hierarchy of effects model is a useful framework for studying the causal order among the dimensions of brand equity (Cobb-Walgren *et al.*, 1995; Agarwal and Rao, 1996; Yoo and Donthu, 2001; Keller and Lehmann, 2003, 2006). This sequential process that consists of cognitive, affective and conative stages has been incorporated into the contemporary brand theories, such as the customer-based brand equity pyramid proposed by Keller (2003).

According to the postulated framework, the evolution of brand equity can be described as a consumer learning process where consumers' awareness of the brand leads to attitudes (e.g. perceived quality and brand associations), which in turn will influence attitudinal brand loyalty (Lavidge and Steiner, 1961; Gordon *et al.*, 1993; Konecnik and Gartner, 2007).

Brand awareness is the first step to creating brand equity. This dimension refers to whether consumers can recall or recognise a brand and is related to the strength of a brand's presence in consumers' minds (Aaker, 1996). Perceived quality and brand associations are also two key dimensions of brand equity. Perceived quality refers to the perception of the overall quality or superiority of a product or service relative (Keller, 2003), while brand associations are the concepts that have links to the brand name in consumer memory (Keller and Lehmann, 2006).

Brand awareness involves linking the brand to different associations in memory (Keller, 2003). Therefore, consumers must first be aware of a brand to later have a set of brand associations (Aaker, 1991). Brand awareness affects the formation and the strength of brand associations, including perceived quality (Keller, 1993; Pitta and Katsanis, 1995; Keller and Lehmann, 2003; Pike *et al.*, 2010). Thus, this

Figure 1 Conceptual framework
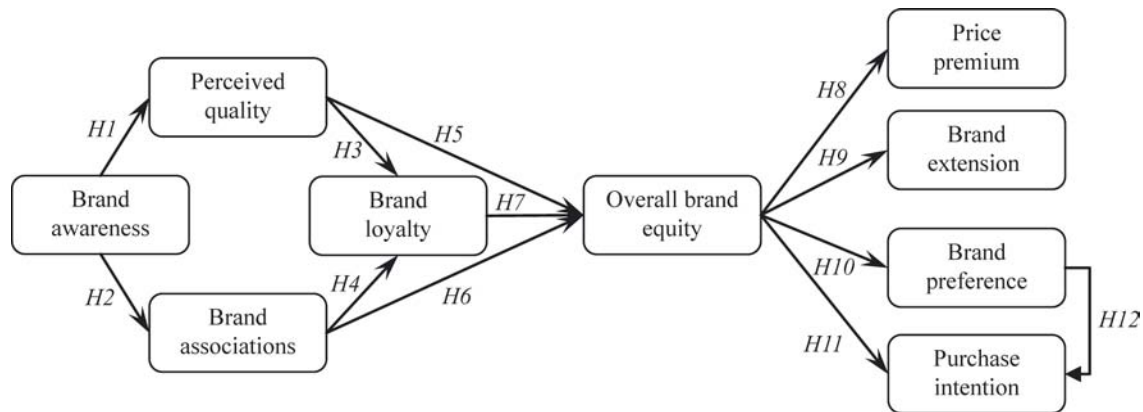
brand equity dimension is an important antecedent to brand associations and perceived quality, as the following hypotheses propose:

H1. Brand awareness has a positive influence on perceived quality.
H2. Brand awareness has a positive influence on brand associations.

Perceived quality and brand associations represent the antecedent step leading to brand loyalty (Keller and Lehmann, 2003). Brand loyalty is the attachment or deep commitment to a brand (Aaker, 1991). When consumers acquire a more positive perception of a brand, loyalty results. Previous research suggests that high levels of perceived quality and positive associations can enhance brand loyalty (Chaudhuri, 1999; Keller and Lehmann, 2003; Pike et al., 2010). Thus, the following hypotheses are postulated:

H3. Perceived quality has a positive influence on brand loyalty.
H4. Brand associations have a positive influence on brand loyalty.

3.2 Relationships among brand equity dimensions and overall brand equity
Consistent with other studies (e.g. Bravo et al., 2007; Yasin et al., 2007; Jung and Sung, 2008), and following Yoo's et al. (2000) framework, this study includes a separate construct, overall brand equity, between the dimensions of brand equity and the effects on consumers' responses. In line with other brand equity definitions, overall brand equity is designed to measure the incremental value of the focal brand due to the brand name (Yoo et al., 2000). This individual construct helps to understand how brand equity dimensions contribute to brand equity.

Focusing on the direct effects that brand equity dimensions can have on overall brand equity, the greatest influences are expected to come from perceived quality, brand associations and brand loyalty. Brand awareness is a necessary but not sufficient condition to create value (Maio Mackay, 2001; Keller, 2003). As explained earlier, awareness is a prerequisite for brand equity since consumers must be aware that the brand exists. However, when consumers are aware of the main brands in the market, brand awareness is secondary (Maio Mackay, 2001). Therefore it is proposed that brand awareness will have a positive, though indirect, influence on overall brand equity.

Overall brand equity will depend on perceived quality since it is essential to develop a positive evaluation of the brand in consumers' memories (Farquhar, 1989). Furthermore, perceived quality can lead to greater differentiation and superiority of the brand. Therefore it is proposed that the higher the perceived quality of the brand, the greater the likelihood that there will be higher brand equity (Yoo et al., 2000; Kim and Hyun, 2011). Similarly, through brand associations, firms can differentiate and position their products, as well as building favourable attitudes and beliefs towards their brands (Dean, 2004). This, in turns, can lead to higher brand equity (Yoo et al., 2000; Chen, 2001). Finally, brand loyalty has been found to be one of the main drivers of brand equity (e.g. Yoo et al., 2000; Atilgan et al., 2005; Yasin et al., 2007). Loyal consumers show more favourable responses to a brand. Thus, brand loyalty will contribute to growing brand equity. This discussion leads to the following hypotheses:

H5. Perceived quality has a positive influence on overall brand equity.
H6. Brand associations have a positive influence on overall brand equity.
H7. Brand loyalty has a positive influence on overall brand equity.

3.3 Overall brand equity effects on consumers' responses
Building a strong brand with positive equity positively influences firms' performance through its effect on consumers' responses towards brands. This study explores four of these consumer responses: willingness to pay a price premium, attitude towards extensions, brand preference and purchase intention.

The willingness to pay a price premium reflects the amount a consumer is willing to pay for a brand in comparison with other brands offering similar benefits. The literature indicates that brand equity has a notable impact on consumers' willingness to pay a price premium (Lassar et al., 1995; Netemeyer et al., 2004). Brand equity makes consumers less sensitive to price increases (Hoeffler and Keller, 2003; Keller and Lehmann, 2003) and more willing to pay a higher price since they perceive some unique value in the brand that no

other alternative can provide (Chaudhuri, 1995; Seitz *et al.*, 2010). Thus the following hypothesis is postulated:

H8. Overall brand equity has a positive influence on consumers' willingness to pay price premiums.

Firms with higher brand equity can also extend their brands more successfully (Rangaswamy *et al.*, 1993). One of the main reasons is that endowing a new product with a well-known brand name provides consumers with a sense of familiarity and trust that positively influences their attitude towards the extension, even when they do not have specific knowledge about it (Milberg and Sinn, 2008). The strong support for transfer of knowledge and affect from the parent brand to the extension clearly justifies the key role that brand equity plays in consumers' evaluations of brand extensions (Czellar, 2003). Therefore, brands with higher equity are expected to generate more positive consumer responses towards potential extensions, as the following hypothesis propose:

H9. Overall brand equity has a positive influence on consumers' attitude towards brand extensions.

Brand equity also has a positive impact on consumers' brand preferences. The literature suggests that strong brands get preferential evaluations as well as higher overall preference (Hoeffler and Keller, 2003). Similarly, customers who perceive a higher value in a brand are more likely to buy it (Aaker, 1991). Researchers have found a positive effect of brand equity on consumers' brand preferences and purchase intentions. For instance, Cobb-Walgren *et al.* (1995) found across two categories, hotels and household cleaners, that those brands with higher equity generated greater brand preferences and purchase intentions. Similar results are reported by Tolba and Hassan (2009).

We also propose a relationship between these two constructs: brand preference and purchase intention (Hellier *et al.*, 2003). The theory of reasoned action has been used to explain the relationships between attitudes, intentions and behaviour (Fishbein and Ajzen, 1975). According to this theory, a favourable attitude towards a brand leads to purchase intention.

The following hypotheses synthesise the previous arguments:

H10. Overall brand equity has a positive influence on consumers' brand preference.
H11. Overall brand equity has a positive influence on consumers' purchase intention.
H12. Brand preference has a positive influence on consumers' purchase intention.

As indicated previously, the role of brand equity in international marketing has not been explored in detail. Among the studies rooted in the cognitive psychology paradigm, Yoo and Donthu (2002) explored the generalisability of Yoo's *et al.* (2000) brand equity creation process model across American and Korean samples. Following this work, Jung and Sung (2008) measured and compared the consumer-based brand equity of clothing products through three consumer groups (Americans in the USA, South Koreans in the USA and South Koreans in Korea). Both studies used students' samples and differences were found between the groups. Further, Hsieh (2004) developed a survey-based method for the measurement of brand equity in a cross-national context, whereas Buil *et al.*

(2008) focused on the dimensionality of brand equity and the construct's invariance among cultures. More recently, Broyles *et al.* (2010) tested whether a brand equity model developed with Americans held up with Chinese. Using again a sample of students, this study found some significant differences, although the authors conclude that the model does hold up in the cross-cultural setting analysed. In sum, only a few studies have examined brand equity across countries and/or cultures. In addition, these articles mainly include the American and Asian markets. Therefore, more research is needed to understand the brand equity creation process and its effects on consumers' responses across different countries.

As can be seen in Figure 1, the conceptual model proposed does not include any nation-level variable. Our aim testing the model having data from two European countries, the UK and Spain, is to provide information on its stability across these two national samples (Cadogan, 2010). Any differences found will be discussed in the findings and discussion sections.

4. Research methodology

The framework in Figure 1 was tested by collecting data in two European countries, the UK and Spain, since much of the published brand equity research has been developed in the USA or other non-European countries, as explained earlier.

4.1 Stimuli
Three product categories and six brands were chosen to examine the impact of brand equity on consumers' responses: Adidas and Nike for sportswear; Sony and Panasonic for consumer electronics; and BMW and Volkswagen for cars. Following previous works in this area (e.g. Yoo *et al.*, 2000; Netemeyer *et al.*, 2004), brands were selected from a ranking using the Best Global Brands from Interbrand.

Construct equivalence was considered in the selection process (Craig and Douglas, 2005). The product categories and brands selected are familiar, widely available and well-known to UK and Spanish consumers. Product categories are interpreted similarly by individuals across these two countries and the functional benefits are similar between the two countries. Our approach ensured the conceptual, functional and category equivalence related to these aspects. The product categories and brands also reflect a broad set of consumer products providing some generalisability.

4.2 Sample and procedure
Data were collected through a survey at several locations in the cities of Birmingham (the UK) and Zaragoza (Spain) using quota sampling (by age and sex) to achieve between-country comparability. To deal with administration and response equivalence, field workers in both countries were provided with identical training to do the surveys (Craig and Douglas, 2005).

The empirical study used six questionnaires, one for each brand. The questionnaire was administered in English in the UK and Spanish in Spain. A back-translation process was employed to ensure the development of comparable versions of the questionnaire in English and Spanish. Each respondent completed one version of the questionnaire and evaluated only one brand. To be eligible for the study, respondents needed to be aware of the focal brand on their questionnaire.

A total of 615 questionnaires were completed. Non-valid questionnaires were discarded, resulting in 302 valid

questionnaires for the UK and 305 for Spain. The profile of the sample represented the population of Birmingham and Zaragoza, which are akin to the general national population of the UK and Spain, respectively. In the UK, 24.3 per cent of respondents are 15 to 24 years old; 37.5 per cent are 25 to 39 years old and the remainders are 40 to 69 years old. Males represent 50.9 per cent of respondents. In Spain, 21.6 per cent of respondents are 15 to 24 years old; 38.7 per cent are 25 to 39 years old and the remainders are 40 to 69 years old. Males represent 49.1 per cent of respondents.

Data for dependent and independent variables was collected from the same respondents. The data were tested for common method variance in accordance with Harman's one-factor test (Podsakoff et al., 2003). The results of the factor analyses revealed that for both samples more than a single factor emerged with no single factor accounting for the majority of variance. Thus, there is no evidence to suggest the presence of common method bias.

4.3 Measurement

Well-established scales were employed to measure the constructs included in the model. In all cases, seven-point Likert-type questions were used (1 = strongly disagree and 7 = strongly agree). A list of the items used to measure each construct is provided in the Appendix (see Table AI).

To conceptualise consumer-based brand equity this study builds on Keller's (1993) and Aaker's (1991) definitions. Brand awareness was measured with five items that assess recall, recognition and familiarity with the brand (Yoo et al., 2000; Netemeyer et al., 2004). The four items to operationalise perceived quality analyse the overall perceived quality and were adopted from the works of Pappu et al. (2005, 2006). Extant research on brand equity advocate that brand equity dimensions, such as brand image, may be expanded to clarify the structure of this construct in detail (Yoo and Donthu, 2001). Thus, three kinds of associations widely recognised in the literature were included: perceived value, brand personality and organisational associations (Lassar et al., 1995; Aaker, 1996; Chen, 2001; Netemeyer et al., 2004; Pappu et al., 2005). Finally, the scale proposed by Yoo et al. (2000) was used to measure brand loyalty as overall attitudinal loyalty to the brand.

Overall brand equity measure was taken from Yoo et al. (2000). This scale measures the incremental value of a specific brand due to the brand name in comparison with an unbranded product with the same characteristics.

Regarding consumers' responses to brand equity, three of the items used in Netemeyer et al. (2004) were adopted to measure the willingness to pay a price premium. Consumers' attitude towards brand extensions was measured using the scale proposed by Martínez and Pina (2009). Based on Sirgy et al. (1997), brand preference was measured using a three-item scale. Finally, purchase intention was measured using three items adapted from a previous study by Erdem et al. (2006).

5. Results

5.1 Measurement model

Multi-item scales were evaluated using exploratory and confirmatory techniques to assess the reliability, dimensionality and validity of the measures for both UK and Spanish samples.

To assess the initial reliability of the measures, Cronbach's alpha and the item-total correlation for all scales were used. Cronbach's alpha for all the constructs were above 0.70. Furthermore, the item-to-total correlations were all above the threshold of 0.30. Subsequently, exploratory factor analyses were performed to explore the dimensionality of each construct. Results suggested that the corresponding items of each scale grouped into a single factor. As expected, items of brand associations dimension loaded on three different factors (items AS1, AS2 and AS3 refer to perceived value; items AS4, AS5 and AS6 refer to brand personality; and items AS7, AS8 and AS9 are related to organisational associations) in both data sets. All the indicators were significant, with factor loadings higher than 0.5, and there was no evidence of cross-loading. The explained variance exceeded 60 per cent in each case.

Confirmatory factor analyses (CFA) were then performed using EQS 6.1 and the robust maximum-likelihood estimation. CFAs suggested deleting items NOT5, AS6 and PRI1 in both data sets since the R^2 were below 0.4. After these deletions, CFAs of the multi-item scales produced an acceptable fit to the data (see Table I). All factor loadings were above 0.5 and were statistically significant (see the Appendix, Table AI). Likewise, the coefficients had a clear relation with the underlying factor ($R^2 > 0.3$). In addition, the average variance extracted (AVE) and composite reliability (CR) values were greater than 0.5 and 0.7 respectively, which guarantee the internal validity of the measurement model (see the Appendix). Results also supported the discriminant validity of the scales. First, none of the confidence intervals around the correlation estimate between any two factors included one. Further, the variance extracted for any two constructs was always greater than the squared correlation estimate.

5.2 Measurement invariance

As the study was conducted in two different countries, measurement invariance was assessed using multigroup confirmatory factor analysis. This ensures the applicability of measures across multiple countries and allows pooling data across different groups of respondents (Rungtusanatham et al., 2008) and making valid cross-national comparisons (Steenkamp and Baumgartner, 1998). A sequential testing procedure with increasingly restrictive forms of measurement invariance was performed. To evaluate the models and determine whether the fit declines substantially as invariance parameters are imposed, three criteria were employed (Byrne, 2006): the difference in the S-Bχ^2 values, the fit of the model to the data, and the difference in the CFI values between nested models. Three types of measurement invariance are pertinent to this study: configural, metric, and factor variance invariance (Steenkamp and Baumgartner, 1998).

Configural invariance exists when the same factor structures are identified across the analysed groups. No constraints are imposed on the parameters. The final models obtained previously were used to test this first level of

Table I Measurement analysis results: fit indices

Model fit indices	S-Bχ^2	df	P	NNFI	CFI	IFI	RMSEA
The UK	783.97	472	$p < 0.01$	0.952	0.960	0.960	0.047
Spain	937.09	472	$p < 0.01$	0.919	0.932	0.932	0.057

invariance. The multigroup analysis of the baseline models for the UK and Spain had acceptable fit indices (see Table II). All the factor loadings were highly significant in both countries. Therefore the proposed model exhibited configural invariance. Metric invariance ensures equality of metrics or scale intervals. The test of metric invariance requires constraining the factor pattern coefficients to be equal across countries. As Table II shows, the increase in the S-Bχ^2 test was not significant. The estimation results suggested that this model fits the data well. Furthermore, CFI declined insubstantially (0.001). Full metric invariance was therefore supported. Finally, factor variance invariance allows that measures of association (e.g. correlation or regression coefficients) can be meaningfully compared across countries. Constraints of factor variance invariance were added. Again, the increase in S-Bχ^2 between the metric and factor variance invariance model was not significant (see Table II). Similarly, this model had acceptable fit indices. Thus, it can be concluded that the scales exhibited factor variance invariance across both groups.

Based on these results, there is adequate support for a reasonable invariance of the constructs across both samples. As such it is suitable to pool the two data sets to test all the hypotheses proposed in the model. In addition, substantive cross-group comparisons can be conducted.

5.3 Structural model

Structural relationships proposed in the model were analysed at two levels: pan-country (data pooled across the two countries) and intra-country. It is important to note that our conceptual framework posited brand associations as a single variable; yet, our analysis indicated a three factor structure. Some researchers have advocated studying brand associations individually to better guide brand decisions (del Río *et al.*, 2001). Hence, we distinguish between these factors in our discussion which follows.

The pan-country analysis yielded a good overall fit (S-Bχ^2 (506) = 1581.56, $p < 0.01$; RMSEA = 0.059; NNFI = 0.919; CFI = 0.927; IFI = 0.927). Table III shows the results.

Regarding the relationships between the brand equity dimensions, results reveal a significant positive relation between brand awareness and perceived quality and brand awareness and the different brand associations dimensions, in support of *H1* and *H2*. By contrast, the relationship between perceived quality and brand loyalty is negative and significant. This finding fails to support *H3*. With regards to *H4*, the first two brand associations, perceived value and brand personality, have a positive and significant effect on brand loyalty. However, the relationship between organisational associations and brand loyalty is weak and insignificant. Therefore, *H4* is only partially supported.

With regard to the relationships between the brand equity dimensions and overall brand equity, the results support *H5*. Therefore overall brand equity will improve when there exists a higher level of perceived quality. Perceived value and organisational associations have a positive effect on overall brand equity. Contrary to expectations, brand personality has an insignificant influence on this construct. Therefore, *H6* is partially supported. Finally, as *H7* predicted, brand loyalty has a positive effect on overall brand equity.

Regarding the effect of overall brand equity on consumer responses, results show that overall brand equity has a positive effect on consumers' willingness to pay price premiums, supporting *H8*. Results also provide support for *H9*. As such, consumers' evaluations of brand extensions will be more favourable for brands with high overall brand equity. Likewise, results support *H10* and *H11*, which postulated a positive effect of overall brand equity on brand preference and purchase intention. Finally, as *H12* predicted, brand preference has a positive impact on purchase intention.

Next, intra-country analyses were performed. The aim of these analyses is to test the stability of the model across the national samples. For this purpose, multigroup analysis was used. To test differences in the magnitude of the effects, first, a model in which structural parameters in both groups are allowed to vary across samples was estimated. Then, a model with both the measurement and structural parameters constrained to be equal in both groups was re-estimated. The difference in the corrected S-Bχ^2 test was significant (ΔS-Bχ^2 (42) = 63.64, $p < 0.01$). To locate parameters that are non-invariant across groups, the Lagrange Multiplier Test was used (Byrne, 2006). Review of these values reveals only three structural parameters that are not operating equivalently across both countries.

The first one refers to the effect of brand awareness on perceived quality. The influence of brand awareness on perceived quality was positive in the UK (non-standardised coefficient = 0.650, $p < 0.05$) and Spain (non-standardised coefficient = 0.761, $p < 0.05$), but this effect was significantly stronger in Spain (LM test $\chi^2 = 5.860$, p = 0.015). The intra-country analysis found a positive and significant relationship between the organisational associations and the overall brand equity in the UK (non-standardised coefficient = 0.282, $p < 0.05$) but no significant relationship between these constructs in Spain (non-standardised coefficient = 0.061, $p > 0.1$; LM test $\chi^2 = 8.783, p = 0.003$). Finally, overall brand equity had a significant positive effect on brand preference in the UK (non-standardised coefficient = 0.920, $p < 0.05$) and Spain (non-standardised coefficient = 0.863, $p < 0.05$), with the relationship being significantly stronger in the UK (LM test $\chi^2 = 4.465, p = 0.035$). No differences were found in the remaining relationships in both markets.

Table II Assessment of measurement invariance

Model specification	S-Bχ^2	df	p	NNFI	CFI	IFI	RMSEA	ΔS-Bχ^2 [*]	Δdf	ΔCFI
Configural invariance	1714.62	944	$p < 0.01$	0.936	0.947	0.947	0.052	–	–	–
Metric invariance	1738.75	967	$p < 0.01$	0.938	0.946	0.947	0.051	21.64[ns]	23	0.001
Factor variance invariance	1751.39	978	$p < 0.01$	0.938	0.946	0.947	0.051	11.83[ns]	11	0.000

Note: [*]The corrected value is presented since ΔS-Bχ^2 is not distributed as χ^2 (Byrne, 2006); n.s.: non significant

Table III Structural results

Hypotheses		Standardised coefficient	t	Hypotheses support
H1	Brand awareness → Perceived quality	0.704**	13.75	Yes
H2	Brand awareness → Perceived value (ass)	0.591**	11.54	Yes
	Brand awareness → Brand personality (ass)	0.543**	11.37	
	Brand awareness → Organisational ass. (ass)	0.459**	10.60	
H3	Perceived quality → Brand loyalty	−0.102**	−2.70	No
H4	Perceived value (ass) → Brand loyalty	0.477**	6.87	Partially supported
	Brand personality (ass) → Brand loyalty	0.167**	2.57	
	Organisational ass. (ass) → Brand loyalty	0.083	1.49	
H5	Perceived quality → Overall brand equity	0.051*	1.76	Yes
H6	Perceived value (ass) → Overall brand equity	0.138**	2.45	Partially supported
	Brand personality (ass) → Overall brand equity	0.086	1.62	
	Organisational ass. (ass) → Overall brand equity	0.194**	4.43	
H7	Brand loyalty → Overall brand equity	0.529**	11.38	Yes
H8	Overall brand equity → Price premium	0.689**	17.53	Yes
H9	Overall brand equity → Attitude towards extension	0.646**	15.24	Yes
H10	Overall brand equity → Brand preference	0.814**	24.65	Yes
H11	Overall brand equity → Purchase intention	0.175**	2.70	Yes
H12	Brand preference → Purchase intention	0.644**	9.36	Yes

Note: $**p < 0.05$; $*p < 0.1$

6. Discussion and implications

In the brand equity literature, there is little empirical research which has focused on the relationships between consumer-based brand equity and consumers' responses. The present study proposes and tests a model to better understand these relationships. This model has assessed how the underpinning dimensions of brand equity contribute to this concept. It has also analysed the effect of overall brand equity on consumers' willingness to pay price premiums, consumers' attitudes towards brand extensions, brand preference and purchase intention. Further, the stability and robustness of the model has been tested across two national samples (i.e. the UK and Spain).

The results indicate that a causal order in the creation of brand equity exists. First, brand awareness has a positive influence on perceived quality and brand associations. Second, brand loyalty is significantly and positively influenced by two of the brand associations dimensions considered in the study: perceived value and brand personality. However, there is no significant effect of organisational associations on brand loyalty. Similarly, and contrary to predictions, perceived quality has a negative influence on brand loyalty. This finding is consistent with previous studies (e.g. Bravo et al., 2007). Finally, perceived quality, brand loyalty and brand associations all have a positive effect on overall brand equity, with the exception of brand personality associations. Although all these dimensions contribute to enhance brand equity, brand loyalty was found to have a dominant effect on brand equity, in line with previous studies (Yoo et al., 2000; Atilgan et al., 2005; Wang et al., 2006; Bravo et al., 2007).

Findings also corroborate the positive impact of brand equity on consumers' responses. Most papers automatically assume that brand equity positively influences consumer responses. This paper empirically demonstrates that the price premium consumers are willing to pay for the brand depends positively on the overall brand equity. Similarly, overall brand equity has a positive effect on consumers' attitude toward potential brand extensions. In this sense, brand equity does not only promote a better acceptance of brand extensions but also provides a defence against potential dilution or negative effects. Finally, both brand preference and purchase intentions increase with brand equity.

The general framework proposed was empirically robust across the focal countries. Only a few differences were observed. The concurrence between the models suggests that relationships among the brand equity dimensions and the effect of overall brand equity on consumers' response were similar.

6.1 Managerial implications
These results have important research and managerial implications. First, the framework enriches brand equity research addressing some of the limitations regarding other consumer-based brand equity studies. In particular this study uses a sample of consumers (non-students) and incorporates different types of brand associations (Yoo and Donthu, 2001) and multiple measures for all brand equity dimensions (Pappu et al., 2005). It also addresses the lack of clarity regarding the number of dimensions since previous research does not clarify for example whether awareness and associations are distinct dimensions (Yoo et al., 2000; Washburn and Plank, 2002). Furthermore it incorporates relationships between brand equity dimensions and considers its consequences.

This research also contributes to the understanding of the brand equity creation process from an international point of view, which is very important. First, because of the growing number of brands competing in international markets, and second, because there is a lack of studies examining brand management and brand equity from an international perspective (Wong and Merrilees, 2007).

Results provide empirical evidence of the benefits that brand equity can offer to companies. Brand equity is a significant predictor of a positive consumer response. As such,

the strengthening of brand equity is a vital strategy for companies to improve their position in markets. Building brand equity should generate more value for corporations since a more favourable consumer response can result from positive brand equity.

Results can provide managers with useful insights into brand building efforts. Findings show that brand equity dimensions inter-relate. This is consistent with classic models of consumer decision making and brand building theories that advocate a hierarchy of effects. As authors such as Lehmann *et al.* (2008) note, capturing the relationships among these factors is an important task. Managers should first build brand awareness as a means of improving perceived quality and building positive brand associations. Any influential drivers, including marketing mix efforts, should be undertaken to increase the level of familiarity or recall. Special attention should also be paid to one type of brand associations: perceived value. This variable is considered to be a core facet of consumer-based brand equity in several frameworks (Netemeyer *et al.*, 2004) and has the greatest influence on brand loyalty. Finally, brand loyalty makes the most positive contribution to overall brand equity, and for that reason, marketing management should establish consumer loyalty as one of its main priorities.

Recent studies have found that mindset metrics, such as the customer-based brand equity dimensions, do not only have a diagnostic value; they also explain future sales performance and can be used as advance warning signals (Srinivasan *et al.*, 2010). Therefore, marketing managers can complement financial metrics with these measures to track brand performance over time across the variables of the model and to benchmark against other brands.

Finally, the comparative analysis also has important implications for brand managers. Because of the globalisation processes, marketing brands internationally has become a common practice for many firms. According to our findings and within the analysed context, companies with international brands competing in the UK and Spain can benefit from a similar strategy, since brand equity creation process and its consequences were found to be similar in both these countries. More commonalities than differences were found. Nevertheless, companies need to be aware that the relative importance or strength of some variables can be different.

6.2 Limitations and future research

The present study has certain limitations that suggest directions for further research. First, this study was conducted within two specific countries: the UK and Spain. Findings must be interpreted with caution when attempting to generalise to other contexts. Future research should consider the applicability of findings in other countries and cultures. Likewise, in order to see if the results can be generalised, further research should consider the extent to which the relations analysed may occur in other products, services and brands. Second, additional outcomes of brand equity might be included in the model to reach a better understanding of the brand equity creation process and its consequences. Furthermore, the findings are based on consumers' perceptions. Future studies could link these perceptual measures with behavioural outcomes or observable metrics, and finally, with firms' financial performance.

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Appendix

Table AI Constructs and findings of confirmatory factor analyses

Constructs	Operationalisation of the constructs	The UK				Spain			
		λ	t	CR	AVE	λ	t	CR	AVE
Brand awareness	*AW1.* I am aware of brand X	0.78[a]	–	0.87	0.62	0.79[a]	–	0.89	0.67
Yoo *et al.* (2000); Netemeyer *et al.* (2004)	*AW2.* When I think of *PC*, brand X is one of the brands that comes to mind	0.81	15.48			0.75	7.41		
	AW3. X is a brand of *PC* I am very familiar with	0.78	11.56			0.86	7.01		
	AW4. I know what brand X looks like	0.76	14.74			0.86	8.64		
	AW5. I can recognize brand X among other competing brands of PC (*)								
Perceived quality	*PQ1.* Brand X offers very good quality products	0.89[a]	–	0.93	0.77	0.88[a]	–	0.94	0.81
Pappu *et al.* (2005, 2006)	*PQ.2* Brand X offers products of consistent quality	0.88	25.39			0.92	31.75		
	PQ3. Brand X offers very reliable products	0.93	22.47			0.92	25.72		
	PQ4. Brand X offers products with excellent features	0.81	14.79			0.88	21.78		
Perceived value	*AS1.* Brand X is good value for the money	0.79[a]	–	0.87	0.69	0.83[a]	–	0.88	0.71
Lassar *et al.* (1995); Aaker (1996); Netemeyer *et al.* (2004)	*AS2.* Within *PC* I consider brand X a good buy	0.90	17.61			0.90	21.06		
	AS3. Considering what I would pay for brand X, I would get much more than my money's worth	0.79	14.95			0.80	19.39		
Brand personality	*AS4.* Brand X has a personality	0.84[a]	–	0.88	0.78	0.88[a]	–	0.89	0.80
Aaker (1996)	*AS5.* Brand X is interesting	0.92	15.71			0.90	14.70		
	AS6. I have a clear image of the type of person who would use the brand X (*)								
Organisational associations	*AS7.* I trust the company which makes brand X	0.91[a]	–	0.92	0.80	0.95[a]	–	0.95	0.87
Aaker (1996); Pappu *et al.* (2005, 2006)	*AS8.* I like the company which makes brand X	0.90	25.34			0.92	36.32		
	AS9. The company which makes brand X has credibility	0.88	23.43			0.92	32.96		
Brand loyalty	*LO1.* I consider myself to be loyal to brand X	0.87[a]	–	0.89	0.73	0.84[a]	–	0.90	0.76
Yoo *et al.* (2000)	*LO2.* Brand X would be my first choice when considering *PC*	0.89	23.04			0.95	26.17		
	LO3. I will not buy other brands of *PC* if brand X is available at the store	0.90	20.02			0.82	19.55		
Overall brand equity	*OBE1.* It makes sense to buy brand X instead of any other brand of *PC*	0.86[a]	–	0.94	0.80	0.86[a]	–	0.95	0.84
Yoo *et al.* (2000)	*OBE2.* Even if another *PC* brand has the same features as brand X	0.94	27.58			0.96	30.83		
	OBE3. If there was another brand of *PC* as good as X	0.93	26.13			0.96	28.99		
	OBE4. If another brand of *PC* is not different from X in any way	0.83	17.45			0.88	25.30		
Consumer willingness to pay a price premium	*PRI1.* The price of brand X (PC) would have to go up quite a bit before I would not consider buying it (*)			0.91	0.83				
Netemeyer *et al.* (2004)	*PRI2.* I am willing to pay a higher price for brand X (*PC*) than for other brands of *PC*	0.93[a]	–			0.93[a]	–	0.89	0.81
	PRI3. I am willing to pay a lot more for brand X (*PC*) than for other brands of *PC*	0.89	23.25			0.87	17.90		
Brand extension attitude	*EXT1.* Favourability of the extension	0.80[a]	–	0.80	0.58	0.82[a]	–	0.83	0.61
Martínez and Pina (2009)	*EXT2.* Perceived quality of the extension	0.64	8.88			0.75	10.58		
	EXT3. Likelihood of trying the extension	0.82	12.61			0.78	15.67		
Brand preference	*PRE1.* I like brand X better than other brands of *PC*	0.91[a]	–	0.93	0.82	0.94[a]	–	0.94	0.85
Sirgy *et al.* (1997)	*PRE2.* I would use brand X *PC* more than other brands of *PC*	0.93	34.04			0.97	35.17		
	PRE3. In *PC* brand X is my preferred brand	0.87	26.43			0.85	23.30		
Purchase intention	*PI1.* I would buy brand X (*PC*)	0.90[a]	–	0.92	0.80	0.85[a]	–	0.93	0.81
Erdem *et al.* (2006)	*PI2.* I would seriously consider buying brand X (*PC*)	0.89	25.01			0.93	19.60		
	PI3. It is very likely that I would buy brand X (*PC*)	0.89	24.29			0.91	18.72		

Note: *PC*: product category. [a]Fixed parameter (*) Item deleted in the validation process

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Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of this article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefits of the material present.

Considerable marketing attention has been afforded to brand equity. Numerous definitions of the concept have been proposed and the literature is largely inconclusive as a result. However, the common ground shared by many approaches is a belief that the equity of any brand is determined by the consumer. At the core of consumer-based brand equity is the notion that various assets are connected to the brand. But different researchers have considered different combinations of these assets in their work.

Brand awareness, perceived quality, brand associations and brand loyalty are extensively used constructs and are thus deployed in the current study. In addition to investigating how brand equity shapes consumer behavior, relationships between the four dimensions are explored. Some scholars believe in the existence of a hierarchical framework where awareness leads to attitudes in the shape of perceived quality and brand associations. In turn, these factors impact on the attitudinal element of brand loyalty.

The first step towards creating brand equity is brand awareness. It is argued that the position of a brand in the mind of a consumer is determined by how easy it is to recognize or recall. Awareness also typically involves connecting the brand with a set of associations that are stored in the consumer's memory. These associations are only formed as a result of people being aware of the brand, which likewise determines their strength. Positive associations are closely linked with perceived quality, different scholars claim. Indications are that high levels of both can help improve brand loyalty.

Based partly on earlier work, this study proposes an additional construct labeled 'overall brand equity'. A core aim here is to ascertain how each equity dimension contributes to equity overall. Buil et al argue that value is not created through awareness, although they acknowledge its status as a necessary precondition. They instead assume that perceived quality, brand associations and brand loyalty will have the most impact. On the premise that brand equity is consumer determined, it is proposed that:

- a favorable impression of a brand is crucial and can enable differentiation and brand superiority;
- associations help to position and differentiate the brand and develop positive attitudes and faith towards it; and
- evidence indicates that loyal customers respond more positively to a brand, thus confirming the role of brand loyalty in brand equity creation.

Consumers are generally more favorable towards brands boasting positive equity and this can enhance performance of the organization concerned. Under such circumstances, firms might reasonably expect customers to:

- perceive the brand as having 'unique value' and exhibit lower sensitivity to price increases and greater willingness to pay more;
- show greater favorability towards extensions of the brand, even when knowledge of it is limited. This positive attitude emerges because the consumer is familiar with the brand name and trusts that the extension will be of similar quality;
- be more likely to demonstrate a preference for brands regarded as strong; and
- purchase such brands instead of any available alternatives.

The last instance assumes a relationship between preference and purchase intention in line with theories which indicate that a positive attitude impacts on intentions and actual purchase behavior.

Globalization has increased the importance of investigating brand equity in an international context. Only a few studies

have compared the impact of the construct across different nations or cultures though. Furthermore, this limited focus has only addressed markets in Asia and the United States. This means that further insight is needed in order to better understand brand equity and how consumer responses in different nations are shaped by the process.

The current study therefore focuses on two European countries, Spain and the United Kingdom (UK). Automobiles, sportswear and consumer electronics were chosen as product categories, with two brands included in each. Categories and brands selected are similarly recognized and available in both study contexts and functional benefits of the products are likewise comparable. Quota sampling was used to collect data from a city within each country. Questionnaires relating to the six brands were distributed and the authors obtained 305 usable responses in Spain and 302 in the UK. The age-spread was similar across the two samples and gender representation was almost equal in both cases.

Various hypotheses were tested and the findings indicated that:
- perceived quality is positively influenced by brand awareness;
- brand awareness positively impacts on brand associations;
- a positive relationship exists between perceived quality and overall brand equity;
- brand loyalty positively influences overall brand equity;
- overall brand equity is likely to make consumers more inclined to pay higher prices, be favorable towards brand extensions, prefer the brand, and purchase it; and
- consumer purchase intention is positively influenced by brand preference.

Contrary to expectation, no support was found to suggest a positive relationship between perceived quality and brand loyalty. Results similarly indicated that only certain brand associations positively impact on brand loyalty and overall brand equity.

A comparison between the two samples revealed:
- markedly stronger positive influence of brand awareness on perceived quality in Spain;
- the relationship between organizational associations and overall brand equity was positive and strong in the UK but insignificant in Spain; and
- overall brand equity had a considerably stronger positive impact on brand preference in the UK.

Given this minimal number of differences, the authors conclude that the nature of brand equity relationships and consumer reaction to overall brand equity is comparable across the two study contexts.

The work largely confirms the existence of a hierarchy of brand-equity dimensions. Firms are thus advised to make consumers more aware of their brand in order to improve quality perceptions and create favorable brand associations. Improving familiarity and recall might be achieved through marketing mix elements or other 'influential drivers'. Buil et al note the significance of perceived value and urge marketers to give serious attention to this brand association type in order to maximize influence on brand loyalty. The diagnostic function of brand equity means that managers are able to anticipate future sales, monitor how the brand performs over time and identify potential future dangers.

Findings here indicate that international brands can feasibly adopt a similar strategy to consumers in Spain and the UK. However, evidence that certain variables can differ in strength demands caution for those operating in additional markets. Further research addressing other nations and cultures is therefore imperative before any wider assumptions can be made. A consideration of different products, services and brands is required for the same reason. The authors suggest that understanding can be further enhanced through examination of other brand equity outcomes.

(A précis of the article "The influence of brand equity on consumer responses". Supplied by Marketing Consultants for Emerald.)