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Advertising and country-of-origin images as sources of brand equity and the moderating role of brand typicality

Abstract

Purpose: This research has two main purposes: (i) to explore the influence of an individual's attitude towards advertising and country-of-origin images (brand origin and country of manufacture) on brand equity creation; and (ii) to investigate how brand typicality moderates the effect of brand origin macro image on perceived quality.

Design/methodology/approach: The data to test the hypotheses were elicited from a consumer survey in the Greater Lisbon area (305 Portuguese consumers). The product category of smartphones was selected for two main reasons: (i) it has not been extensively analysed in previous studies on the subject of brand equity; (ii) it is a device well-known to Portuguese consumers (particularly in the Greater Lisbon area). Three criteria guided the selection of the brands. The first criterion is to select brands which are well-known to consumers. The second is to choose brands with a distinctive brand origin and a main country of manufacture. The third and final criterion is to consider brands in different positions in the brand ranking. In order to estimate structural path coefficients, R^2, Q^2, and Bootstrap techniques, the current study employs the Partial Least Squares (PLS) approach.

Findings: The results show that individuals' attitudes towards advertisements have a positive impact on brand equity creation, whereas those towards the country of manufacture do not significantly influence brand equity creation. Attitudes towards brand origin only have a partial influence. Brand typicality, however, exerts a significant direct effect on brand equity dimensions and, hence, does not have a significant moderating effect.

Research limitations/implications: The authors suggest analysing the influence of country-of-origin on dimensions of brand equity considering consumer segmentation, types of industry and a range of brands, as well as different levels of consumer involvement with the product category. Several brands with the same country-of-origin should be analysed in order to understand whether the effects on brand equity depend on the product category. Although the current study is a first attempt to combine the potential effect of individuals' attitudes towards advertisements and country-of-origin on creating brand equity, further research should examine additional potential antecedents of brand equity. Finally, cross-cultural studies are recommended.

Practical implications: Regarding managerial implications, three main aspects should be taken into consideration. First, creative, original and different advertising strategies are more effective than the country-of-origin in creating brand equity and, consequently, in building

loyalty among smartphone consumers. Secondly, consumers do not tend to care about the place, country or region where the smartphone is produced, but the image of the country where the brand originated may be important. Finally, managers should be aware that, at least, in the smartphone sector, the way consumers create favourable associations with the brand and typicality, trust the company and consider it good value for money, are more effective in building brand loyalty than the perceived quality of the product/brand.

Social implications: Relating to the interrelationship between country-of-origin and brand equity, the results of the current study prove that the effects of country-of-origin are category specific. Therefore, more studies focused on other contexts of products and brands are still needed to know in more detail how country-of-origin exerts an influence on brand equity dimensions. Even within a product category context, the results can depend on individual brands being analysed.

Originality/value: To the knowledge of the authors, this study is the first to investigate the dual (simultaneous) effect of individuals' attitudes towards advertisements and country-of-origin images on brand equity dimensions. Adding to the originality of the paper, the category of smartphone with respect to brand equity has not been extensively analysed in previous studies.

Keywords: *Brand Equity; Advertising; Brand Origin; Country of Manufacture; Smartphone.*

1. Introduction

Brand equity has attracted the interest of academics and practitioners, especially since the seminal studies of Aaker (1991) and Keller (1993; 2003). Aaker (1991) defines brand equity as the sum of assets that are associated with the brand name, awareness, loyalty, perceived quality and other proprietary assets. Keller (2003) claims that brand equity is based on brand knowledge and positive associations with the brand. Common to both definitions is the idea that brand equity adds value to goods or services and promotes business. Therefore, companies need to develop strategies to encourage the growth of brand equity and, consequently, better understand the factors which increase the customers' perceptions of

quality and favourable associations with their brands as respective sources of brand equity (Chen and Myagmarsuren, 2011).

Several studies indicate that marketing mix elements are key variables in building brand equity (e.g., Yoo, Donthu and Lee, 2000; Buil, de Chernatony and Martínez, 2013; Çifci et al., 2016). Other studies consider that brand origin (BO), meaning the "region or country where a brand is perceived to belong by its target customers" (Thakor and Kohli, 1996, p. 26), and country of manufacture (COM) (the country where the product is produced) are perceived by consumers as cues of quality (e.g., Hamzaoui-Essoussi, Merunka and Bartikowski, 2011) and are, therefore, sources of brand equity. In this vein, the literature renders evidence for the individual influence of advertising on brand equity and also for the individual effect of images on brand equity. Yet, the dual influence of advertising and images that consumers associate with the country-of-origin (BO and COM are the two dimensions of country-of-origin) as sources of brand equity have not previously been analysed. In this context, an interesting research question arises: can the way brands communicate and relate with their consumers be more effective in leveraging their brand equity?

As Keller (1993) points out, brand origin images produce a strong and stable association that exists in the consumers' long-term memory, and so the influence of BO on brand equity is expected to be stronger when a brand is regarded by consumers as being typical of a BO. Hence, typicality, defined as the degree to which an object represents a category (Barsalou, 1983), or a brand represents a BO may moderate the effect of BO on brand equity. Against this backdrop the second research question arises: does brand typicality affect the direction and/or the strength of the relation between brand origin macro image and perceived quality?

In this line of thought, the current study aims (i) to explore the influence of an individual's attitude towards advertising and country-of-origin images (brand origin and country of

manufacture) on brand equity creation; and (ii) to investigate brand typicality as moderating the effect of brand origin macro image on perceived quality. The findings on this topic about sources of brand equity are interesting and relevant for both, academics and practitioners; for the first, because the study sheds new light on the dual effect of sources of brand equity and for the latter, because they may gain insights to develop their business strategically and tactically.

Following this introduction, section 2 of the article provides a theoretical foundation pertaining to a review of previous research related to attitudes towards advertisements, country-of-origin images (BO and COM), brand equity, and brand typicality. Section 2 also presents a research model and proposes hypotheses. Section 3 describes the research methodology of the empirical study, comprising the procedure for data collection, variables used, measurement scales and the data analysis process. Section 4 reports on the measurement model, the structural model and the test of the hypotheses, and presents a discussion of the findings. Section 5, finally, provides a discussion of the findings, theoretical and practical implications, limitations of the research, and suggestions for further research.

2. Theoretical background and proposing a model

Brand equity is regarded as a tool for business strategy because it provides sustainable competitive advantages to the organizations (Bharadwaj, Varadarajan and Fahy, 1993; Chatzipanagiotou et al., 2016). In order to achieve high levels of perceived quality of products, strong brand awareness/associations and customer loyalty, two main sources are required: marketing-mix (particularly marketing communication, especially advertising) (Yoo, Donthu and Lee, 2000; Ruzzier, 2012; Buil, de Chernatony and Martínez, 2013; Çifci et al., 2016) and country-of-origin images (brand origin and country of manufacture). Based

on these assumptions and also attending to the following sub-sections, Figure 1 depicts the conceptually proposed model addressing consumers' attitudes towards advertising and country-of-origin images as influencing brand equity, the relationship among the core assets of brand equity (as dependent variables) and the hypothesized moderating effect of typicality.

2.1. Attitude towards advertisements

Advertising, a tool to communicate a brand's features and emotions (Mortimer, 2008) may create favourable and unique associations and higher levels of perceived quality (e.g., Keller, 2003; Mortimer, 2008). Previous studies have highlighted the favourable influence of individuals' positive attitudes towards advertisements on brand equity (e.g., Herrmann et al., 2007; Keller and Lehmann, 2003; Buil et al., 2013). Therefore, depending on the advertising strategy and level of creativity, the message communicated will be more or less likely to capture consumers' attention. Moreover, past research elicited the degree to which consumers perceive advertising as being creative, original and different from that of competing brands to be an important factor to leverage brand equity (Kapferer, 2004; Keller, 2007). Lieven and Hildebrand (2016) claim that brand gender perception influences on brand equity, in other words, if brands are communicated in advertising as male or as female may generate higher brand equity depending on the culture of the country.

The favourable attention towards advertising can generate a positive attitude towards the advertisements, which in turn modifies or reinforces associations in consumers' minds and so favourably influences brand awareness/associations and perceived quality (e.g., Aaker, 1991; Keller, 2003; Kerem et al., 2013). In other words, advertising can shape consumers' brand associations and perceptions of quality. Therefore, the following hypothesis is proposed (see figure 1).

***H1**: Attitude towards advertisements has a positive effect on (H1a) perceived quality and (H1b) brand awareness/associations*

2.2. Country-of-origin images

The influence of country-of-origin (COO) on consumer purchase intention has been one of the core issues in recent literature (e.g., Ghazali et al., 2008). The relevance attributed to the COO may depend on several factors, such as the level of knowledge of product category; familiarity with the brand's features; being a global and reputable brand. Yet, some researchers argue that consumers with a high level of knowledge about a certain product category are less likely to be influenced by COO at the time of purchase and product evaluation (e.g., Keller and Aaker, 1992; Lee and Lee, 2009).

Furthermore, COO may be decomposed into two image levels; micro and macro (Pappu, Quester and Cooksey, 2007). Micro and macro images may influence brand equity differently (Hamzaoui-Essoussi et al., 2011; Carneiro and Faria, 2016). Micro image is connected to a particular product category and refers to the associations that consumers create between a country and a product category (e.g., France and the perfume industry). Macro image, on the other hand, is related to a wide range of associations, which include national symbols, economic and political levels of industrialization and cultural values (Hooley, Shipley and Krieger, 1988; Lawrence et al., 1992; Papadopoulos and Heslop, 2003). In fact, both images act as drivers of brand quality and brand image (Hamzaoui-Essoussi et al., 2011; Costa et al., 2016).

Brand origin (BO) and country of manufacture (COM) are two dimensions of country of origin (COO), and these two dimensions can act as sources of brand equity (e.g., Karunaratna, Quester and Johnson, 2004; Hamzaoui-Essoussi, Merunka and Bartikowski, 2011; Carneiro and Faria, 2016).

BO and COM may affect brand equity differently depending on the product category (e.g., Pappu et al., 2007; Martin and Eroglu, 1993). Whilst BO is a stable association encoded in consumers' long-term memory (Keller, 1993), COM varies according to country or time (e.g., a company moves the production facility to another country) (Laufer, Gillespie and Silvera, 2009) making COM a weaker association in the consumer's mind. Samiee (1994) states that in cases where consumers are really sensitive to the COM effect, companies should develop their production strategies according to consumers' perceptions rather than making decisions based on cost efficiency and cost production logistics. Despite the impact that COM can cause, Ashill and Sinha (2004) regard the BO as having a much greater influence on consumer purchase intention than the COM. Based on the above considerations, the following hypotheses emerged (see figure 1):

H2: *The macro images associated with the BO have a positive effect on (H2a) perceived quality and (H2b) brand awareness/associations*

H3: *The micro images associated with the BO have a positive impact on (H3a) perceived quality and (H3b) brand awareness/associations*

Although previous studies tend to claim that COM may create a weaker association in the consumer's mind than BO (e.g., Phau and Prendergast, 2000; Laufer, Gillespie and Silvera, 2009; Costa et al., 2016), COM may influence brand awareness/associations in the case of the smartphone product category as some studies highlight that COM can affect perceived brand quality (Johansson and Nebenzahl, 1986; Ahmed and d'Astous, 1993; Thakor and Lavack, 2003). Therefore, the following hypotheses are proposed (see figure 1):

H4: *The macro images associated with the COM have a positive impact on (H4a) perceived quality and (H4b) brand awareness/ associations*

H5: *The micro images associated with the COM have a positive impact on (H5a) perceived quality and (H5b) brand awareness/associations*

2.3. Relationship among the core assets of brand equity

According to Aaker (1991) and Keller (1993), brand equity is composed of four core assets: perceived quality, brand loyalty, brand awareness and brand associations. Brand awareness reflects the importance of a brand in the consumer's mind relating to the consumer's ability to recognize or recall a brand as a member of a certain product category (Keller, 1993). Brand association, on the other hand, refers to the set of links to the brand that the consumer stores in her/his memory (Pappu et al., 2007).

The concept of perceived quality has been widely studied in the field of marketing and business. Grönroos (1984) considers service quality as an overall perceived judgment. Perceived quality is related to price premiums, price elasticity, notability and product use, returns and complaints. According to Aaker (1996), these indicators help to understand how consumers perceive the quality of a product/brand. Perceived quality is also used by consumers to compare the brand/product to those of the competitors, using measures such as high or inferior quality and consistent or inconsistent quality (Yoo et al., 2000; Pappu et al., 2005).

Brand loyalty means that consumers buy a brand regularly and resist switching to a competing one (Yoo et al., 2000; Romaniuk and Nenycz-Thiel, 2013; Chen and Ann, 2016). Yoo et al. (2000) argue that as consumers become loyal to the brand, the value of the latter increases. Brand associations/awareness and perceived quality affect the brand's value by influencing brand loyalty (e.g., Yoo et al., 2000; Loureiro and Miranda, 2011; Rundle-Thiele and Mackay, 2001; Pappu et al., 2005). Hence, whilst brand loyalty is a wider concept, albeit

related to brand equity, brand associations and perceived quality act as specific concepts in evaluating the brand. Therefore, the following hypothesis is suggested (see figure 1):

H6*: Brand loyalty is a function of perceived quality (H6a) and brand awareness/associations (H6b)*

2.4. Brand typicality

Typicality has been regarded as the degree to which an object represents a category (Barsalou, 1983). Typicality enables consumers to categorize or recall brands faster after having been exposed to a brand or a product category (e.g., Tversky, 1977; Loken and Ward, 1990). Tversky (1977) suggests that greater typicality facilitates spontaneous category associations.

A typical brand benefits from positive brand origin associations, whereas a brand with little or weak typicality gains much less effect from the transfer of brand origin images (e.g., Pappu et al., 2007; Hamzaoui-Essoussi et al., 2011). When consumers consider a product as being typical of a brand category and the same consumers associate the brand with the place or the country where a brand belongs to (as perceived by consumers), then they may transfer to the brand equity the knowledge they have about the place or country (e.g., Park et al., 1991; Hamzaoui-Essoussi et al., 2011).

As Baron and Kenny (1986) claim, moderating effects are evoked by variables whose variation influences the strength or the direction of a relationship between an exogenous and an endogenous variable. The consumers' perceptions about the typicality of a brand to a product category are hypothesized to have a significant effect on the strength of the relationship between the brand origin (how consumers perceive the place or country where the brand belongs to) and the brand equity. In other words, whether or not a brand is regarded as being typical of a category, the effect of the relationship between the place or country

where the brand belongs to, and the brand equity may vary, due to the transfer of brand associations and quality perceptions that occur. Therefore, it is suggested that brand typicality may moderate the relationship between brand origin macro image and the dimensions of brand equity: perceived quality and awareness/associations. Thus, the following hypothesis is proposed (see figure 1):

H7: *Brand typicality moderates the effects of brand origin macro image and (H7a) perceived quality and (H7b) brand awareness/associations*

INSERT FIGURE 1 ABOUT HERE

3. Methodology

3.1. Sample and data collection

The data to test the hypotheses was collected by a consumer survey conducted in Portugal. Smartphone was selected as the product category for two main reasons: (i) it has not been extensively analysed in previous studies in the context of brand equity (e.g., Yoo et al., 2000; Netemeyer et al., 2004; Hamzaoui-Essoussi et al., 2011; Buil et al., 2013; Çifci et al., 2016), (ii) it is a device well-known to Portuguese consumers (particularly in the Greater Lisbon area). Overall, Portuguese people enjoy using mobiles to communicate, and the smartphone segment represents 44% (2013) of total mobile phone sales in Portugal, a percentage that will increase in the near future (IDC, 2014). The popularity of Smartphone is reflected in Shin's (2015, p. 929) claim: "smartphone devices represent digital connections to friends, family, and resources." This might be even more the case in a collectivist society, such as that of the Portuguese, which likes to communicate all the time. Therefore, Portuguese consumers were regarded a good population for conducting the survey.

Three criteria guided the selection of the brands. The first criterion is to select brands well-known to consumers (Parameswaran and Yaprak, 1987; Krishnan, 1996). The second is to

choose brands with a distinctive brand origin and a main country of manufacture (e.g., Pappu et al., 2007). The third and final criterion is to consider brands in different brand ranking positions. For this last criterion, the Best Global Brands ranking by Interbrand (2014) was used. Therefore, the three brands selected are: Nokia (the brand origin being Finland and the main country of manufacture China occupying the 57th position in Interbrand ranking), Samsung (the brand origin being South Korea and the main country of manufacture South Korea occupying the 8th position) and Apple (the brand origin being the United States and the main country of manufacture China occupying 1stposition).

The current study uses three questionnaires, one for each brand with each participant only completing one version of the questionnaire and evaluating only one brand. A pilot sample of ten consumers was conducted to ensure that the wording of the questionnaire was clear and only a few adjustments needed to be made. Data were collected by self-administered questionnaires at several locations in the Greater Lisbon area using quota sampling, by age and sex, according to the latest Census of the Institute of National Statistics (with people between 16 and 74 years old). Of the 310 questionnaires received, 305 were valid, and the data from these was analysed. The sample profile represented the population of Greater Lisbon, which is akin to the general population of Portugal (urban centres). As such, 58.7% of respondents are 16 to 24 years old, 33.4% are 25 to 54 years old, and the remaining 7.9% are 55 to 74 years old. Females represent 51% of respondents. Before filling in the questionnaire, each participant was asked if he/she knew the country of manufacture and origin of the brand.

3.2. Variables and measurement

Each questionnaire contained items of the latent variables and a section with socio-demographic variables (gender and age) was built based on literature review. The

questionnaire was first developed in English (the original language of the scales adapted and used) and then translated into Portuguese. Back translation was then used to ensure that the questionnaire communicated conceptually equivalent information in the two languages (Sekaran, 1983).

The items used to measure the constructs were adapted from previous studies. Regarding independent variables, acting as sources of brand equity, the model proposes country-of-origin images and attitude towards advertising. Thus, five items measured BO macro image, and another group of five items measured COM macro image, all items adapted from Hamzaoui-Essoussi et al. (2011). Furthermore, BO micro image is assessed using three items, and COM micro image is also assessed through three items, all items based on Keller and Aaker (1992). The three items adapted from Buil et al. (2013) were used to measure the attitude towards advertisements.

As to dependent variables, the model proposes perceived quality, awareness/associations and brand loyalty which are the factors of brand equity. Four items were used to measure perceived quality based on Pappu et al. (2005). Fourteen items based on Yoo et al. (2000), Netemeyer et al. (2004) and Pappu et al. (2005) measured awareness/associations whilst three items adapted from Yoo et al. (2000) assessed brand loyalty.

Finally, the moderator variable, brand typicality, is measured using three items adapted from Loken and Ward (1990). For each item of all variables, respondents were asked to rate their degree of agreement and disagreement on a 5-point Likert-type scale.

3.3 Data analysis

The Partial Least Squares (PLS) approach (using SmartPLS 2.0) is employed to estimate structural path coefficients, R^2, Q^2, and Bootstrap techniques. PLS is based on an iterative combination of principal component analysis and regression analysis and aims to explain the

variance of the constructs in the model. R^2 indicates the amount of variance explained by the exogenous variables (Barclay et al., 1995). Q^2 (chi-squared of the Stone-Geisser Criterion) is used to evaluate the structural model, the cross-validated redundancy. When $Q^2>0$, the relations in the model have predictive relevance (Fornell and Cha, 1994). Tenenhaus et al. (2005) propose the geometric mean of the average communality (outer model) and the average R^2 (inner model) as the overall goodness of fit (GoF), which ranges from 0 to 1.

In terms of advantages, PLS simultaneously estimates all path coefficients and individual item loadings in the context of a specified model, and as a result, enables researchers to avoid biased and inconsistent parameter estimates. Moreover, it has demonstrated to be an effective analytical tool to test interactions by reducing type II errors (Chin et al., 2003; Hair et al., 2012). Based on the above and considering that the proposed model presents second-order formative factors for BO macro image, COM macro image and awareness/associations, as well as for testing the interaction effect of brand typicality as a moderator using small to medium sample sizes, PLS is the appropriate way to treat data (Chin et al., 2003; Hair et al., 2012). The repeated indicator method is applied to test the model with second-order formative factors (Kleijnen et al., 2007).

4. Findings

4.1. Measurement model

The adequacy of the measurements (see table 1) is assessed by evaluating the reliability of the individual measures and the constructs, as well as the discriminant validity of the constructs (Hulland, 1999). In this study all items have an item loading higher than 0.707, indicating that they are reliable (items with item loading <0.707 were eliminated). The reliability of the constructs was analysed using composite reliability since this has been

regarded a more accurate measurement than Cronbach's alpha (Fornell and Larcker, 1981). The composite reliability values are over 0.8, and so all constructs are reliable. The measures also demonstrated convergent validity as the average variance of manifest variables extracted by constructs (AVE) is at least 0.5, indicating that more variance is explained than unexplained in the variables associated with a given construct.

BO macro image, COM macro image and awareness/associations are measured as second order constructs. The first and the second contain two factors each (economic factor and technological factor) whilst the third comprises four factors (awareness, value association, personality association and trust association). In order to access the standard deviation estimate and t-value, a nonparametric bootstrapping procedure with 500 re-samples was employed.

INSERT TABLE 1 ABOUT HERE

Fornell and Larcker (1981) proposed a criterion used to assess the discriminant validity of constructs: the average variance extracted (AVE) should be greater than the variance shared between the construct and other constructs in the model, that is, the squared correlation between two constructs. All constructs have discriminant validity because all correlations are lower than the square root of variances extracted (see table 2). The last part of table 2 shows that the correlations between each first-order construct and the second-order construct are >0.71 revealing that they have more than half of their variance in common, as expected (MacKenzie, Podsakoff and Podsakoff, 2011).

INSERT TABLE 2 ABOUT HERE

4.2. Structural results

Table 3 shows the structured results for the full sample, as well as for each of the three sub-samples regarding the three brands. The two-step score construction procedure (Chin et al.,

2003) was used to test the seven hypotheses. The PLS approach allows explicit estimation of latent variable (LV) scores, after saving the standardized LV scores (Tenenhaus et al., 2005). A nonparametric bootstrapping procedure with 500 re-samples was performed to obtain the path coefficients, their respective standard errors, and t-statistics for their path coefficients. From the beta coefficient values and the results of the bootstrap re-sampling procedure, H1 is fully supported (H1a and H1b are supported for the three brands, see table 3). The hypotheses H2, H3, H5, and H6 are partially supported: concerning H2, H2a is supported only for Nokia, and H2b is not supported; regarding H3, H3a is partially supported, and H3a is fully supported; with respect to H5, H5a is not supported, and H5b is partially supported; and referring to H6, H6a is partially supported and H6b is fully supported. Finally, H4 is not supported (both, H4a and H4b are not supported). The Q^2statistic (i.e., the Stone–Geisser test) is used to evaluate the predictive relevance of the model. All values of Q^2 are positive, and, therefore, the relationships in the model have predictive relevance meaning that the model can predict brand equity. The model also demonstrated a high level of predictive power (R^2) as the modelled constructs explained 46.8% of the variance in awareness/associations, 43.9% of the variance in brand loyalty and 35.6% of the variance in perceived quality. The values of R^2 for Nokia and Apple are even higher than for the full sample (see main effects model in table 3). The GoF reveals a good fit.

A product indicator approach in conjunction with PLS is proposed (Henseler and Fassott, 2010) to test the moderator effect (see table 3). Considering the full sample, the results show a standard beta of 0.096 from BO macro image to perceived quality, 0.429 from brand typicality to perceived quality and an interaction effect of -0.064 with a total R^2 of 0.478. Thus, these results imply that brand typicality not only impacts on perceived quality by 0.429, but that it would also decrease the impact of BO macro image on perceived quality from

0.096 to 0.032. The main effects model, as expected, shows a slightly higher standardized beta and a lower R^2 of 0.356. Although the strength of moderating effects is moderate, the bootstrap re-sampling procedure indicates that the interaction effect is not significant.

Moreover, the results reveal a standard beta of 0.030 from BO macro image to awareness/associations, 0.589 from brand typicality to awareness/associations and an interaction effect of -0.105 with a total R^2 of 0.677. Thereby, these results imply that brand typicality not only impacts on awareness/associations by 0.589, but that it would also decrease the impact of BO macro image on awareness/associations from 0.030 to -0.075. The main effects model resulted in slightly higher standardized beta and a lower R^2 of 0.468. Although moderating effects are strong, the bootstrap re-sampling procedure (500 resample) indicates that the interaction effect is not significant. The results for the full sample show that the direct effects of brand typicality on both, perceived quality and awareness/associations are significant, and these direct relationships are stronger than the interaction effect. Similar results are found for the three brands considered in this study, and so hypothesis H7 is not supported (H7a and H7b are not supported).

Considering H1 (both H1a and H1b supported), the findings demonstrate that an individual's attitude towards advertisements has a positive and significant influence on building brand equity for each of the three smartphone brands. The direct relationship between the individual attitude towards advertisements and brand awareness/associations is particularly strong for Nokia (β=0.563, t=8.804) and Samsung (β=0.625, t=10.040). Therefore, the individual attitude towards advertisements seems to determine brand equity in the Smartphone context.

Regarding H2 (H2a is supported only for Nokia), BO macro image has a positive and significant impact on perceived quality only for Nokia (β=0.328, t=3.690). On the other hand,

when considering H3 (where H3a is partially supported), BO micro image exerts a significant influence on perceived quality for Apple and Samsung, but not in the case of Nokia (β=-0.131, t=1.443).

Noticeable is the fact that H4 is not supported. COM macro image relating to the technological and economic image of the country of manufacture of the smartphone brand does not influence the perception of quality and the awareness of and associations to the brand. Similarly, H5 is only partially supported when considering the relationship among COM micro image and awareness/associations for the full sample. Hence, in the case of smartphone, consumers do not tend to create strong associations between the country where the smartphone is manufactured and the perception about the smartphone itself. COM macro and micro image do not seem to have a significant influence on building brand equity in the smartphone context.

Regarding the inter-relationships between brand equity dimensions (H6), the direct relationship between perceived quality->brand loyalty is positive and significant for Apple (β=0.209, t=1.970) and Samsung (β=0.310, t=3.439). Brand awareness/associations has a positive and significant effect on brand loyalty for each of the three brands.

Considering the interaction effects model (H7), (i) the path coefficient between brand typicality and perceived quality is stronger for Apple and Samsung; (ii) the effect of brand typicality on brand awareness/association is positive and significant for the three brands, but the relationship is stronger for Apple and Samsung than for Nokia; (iii) the moderating effect of brand typicality as product indicator is not statistically significant.

INSERT TABLE 3 ABOUT HERE

5. Discussion and implications

In a globalized and competitive world, understanding the factors that can enhance the growth of brands and their brand equity is critical for developing business strategies. As far as the authors know, this study is the first attempt to examine the dual (simultaneous) effect of individuals' attitudes towards advertisements and country-of-origin images on brand equity dimensions. The moderating effects of brand typicality were also modelled, using the product indicator approach. The proposed model was tested in the smartphone context, considering Apple, Nokia, and Samsung.

The findings show that an individual's attitude towards advertisements may be regarded as a determinant of brand equity in the smartphone context, which is in line with previous research developed in other contexts (e.g., Keller and Lehmann, 2003; Herrmann et al., 2007). The importance of using original, creative and differentiated advertising strategies is regarded as quintessential for creating brand equity, a finding, which is in line with that of Buil et al. (2013) for sportswear, consumer electronics, and cars. Indeed, innovative advertising may be more effective for capturing consumers' attention and enhancing brand awareness and perceived quality at the same time as creating unique associations (Yoo et al., 2000; Keller and Lehmann, 2003).

The results, furthermore, suggest that consumers' perception of quality does not depend on country of manufacture, that is, the country (or region) where the products of a given brand are produced. However, the brand origin, or rather, the country where the smartphone brand was created can influence perceived quality. Brands like Nokia (not as representative of the smartphone as Apple and Samsung) may benefit if consumers perceive that the brand's country-of-origin has a high level of industrialization and technological and economic development. By contrast, brands more representative of the smartphone category (such as Apple and Samsung) benefit from enhanced perceived quality if consumers believe that the

features of the brand are well suited to its country-of-origin. The fact that China manufactures these two brands does not affect the dimensions of brand equity unfavourably or significantly. Thus, according to Ashill and Sinha (2004), BO has a much greater impact than the effect of the COM on consumers' perceived quality and loyalty. Regarding brand awareness/associations, the findings reveal that BO micro image, that is, the suitability of the brand to the country where it was born, contributes to creating favourable associations and consumers tend to become more familiar with such brands.

Based on the discussion above, the findings of the current study do not fully corroborate the results of Hamzaoui-Essoussi et al. (2011) for cars and television sets, since the production location is not very important for business brand strategy in the case of smartphone. Smartphone consumers seem to attach more meaning to the country where the smartphone brand originates than to the country of manufacture. Moreover, brand typicality has an important role in influencing perceived quality and brand awareness/associations, but does not moderate the effect of BO macro image on brand equity.

This study revealed that the brand equity factors have a differentiated effect on brand loyalty. Perceived quality is more important in enhancing brand loyalty in the case of Samsung than in the case of Apple. In contrast, the strength of the relationship between awareness/associations and brand loyalty is greater for Apple than for Samsung. Hence, loyalty in the case of Apple seems to be more connected to the strong awareness/associations of the brand in the consumer's mind. This finding corroborates those presented by Chen and Ann (2016) considering a sample in the Greater Taipei metropolitan region, where Apple obtained a lower level of satisfaction than Samsung but a higher level of loyalty. Although more studies are needed, it seems that Apple customers want a smartphone mainly because they consider them good value for money, trust the company, identify with the brand

personality and give less importance to the evaluation of service quality (e.g., excellent features, consistent quality or reliability of the product).

Agreeing with the suggestion presented in prior studies (e.g., Hamzaoui-Essoussi et al., 2011; Lee and Lee, 2009), the results of the current study reveal that the effects of country-of-origin are category specific. Therefore, more studies focusing on other contexts of products and brands are still needed to improve knowledge on how country-of-origin exerts influence on brand equity dimensions. Even inside a specific product context, the results can depend on individual brands being analysed, as found in this study.

5.1. Theoretical implications

Overall, individuals' attitudes towards advertisements seem to be more effective than country-of-origin images in the brand equity creation process for a smartphone. In addition, the region or country where a brand is perceived to belong to by its target customer (BO) influences the awareness of and associations with the smartphone brand. In the case of smartphone, favourable brand associations reveal to be more effective than perceived quality in enhancing loyalty to a brand. Finally, in the case of smartphones, the factor brand typicality has a direct significant effect on brand equity and not a moderating one.

In this vein, this study brings valuable theoretical insights regarding the marketing communication process to be more important than images when aiming to enhance brand equity. In the case of smartphones, country of manufacture does not play an important role to increase brand equity.

5.2. Practical implications

Regarding managerial implications, three main aspects should be taken into consideration. First, creative, original and differentiated advertising strategies are more effective than the country-of-origin perceptions in creating brand equity and, consequently, in building loyalty

among smartphone consumers. Secondly, consumers do not tend to care about the place, country or region where the smartphone is produced whilst the image of the country where the brand originated may be important. Finally, managers should be aware that specifically in the smartphone sector, the ways consumers create favourable associations with the brand and typicality, trust the company and consider it good value for money, are more effective in building brand loyalty than the perceived quality of the product/brand. In other words, favourable associations with brands are more important than a good perception of quality in building loyalty to a smartphone brand.

5.3. Limitations and future research

Despite the high level of care taken when conducting this study, several limitations exist which may represent avenues for further research. For example, it is suggested analysing the influence of country-of-origin on dimensions of brand equity considering consumer segmentation, types of industry and a range of brands and different levels of consumer involvement with the product category. Several brands with the same country-of-origin should be analysed in order to understand whether the effects on brand equity depend on the product category. Although the current study is a first attempt to combine the potential effect of individuals' attitudes towards advertisements and country-of-origin on creating brand equity, further research should examine additional potential antecedents or sources of brand equity. Finally, cross-cultural studies are recommended.

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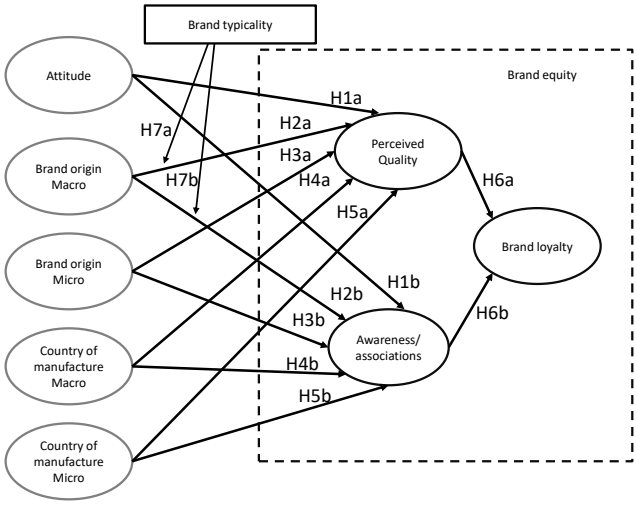

Figure 1. *Proposed conceptual model*

Table 1. Measurement results and second order formative factors: full sample

Latent variables and items	Mean (SD) item	Mean LV	Item loading (range)	Composite reliability	AVE
Individuals' attitude towards the advertisements		3.4		0.915	0.783
AA1 The advertisements for brand X are creative	3.5(0.902)		(0.780-0.935)		
AA2 The advertisements for brand X are original	3.5(0.898)				
AA3The advertisements for brand X are different from the advertisements for competing brands of smartphone	3.4(1.006)				
Brand origin macro-economic factor		3.9		0.889	0.728
BOMA1 Country X has a high level of economic development	4.0(0.752)		(0.752-0.909)		
BOMA2 Country X has a high level of economic stability	3.7(0.756)				
BOMA3 Country X has a high standard of living	3.9(0.725)				
Brand origin macro-technological factor		4.0		0.923	0.856
BOM44 Country X has a high level of industrialization	3.9(0.753)		(0.921-0.930)		
BOMA5 Country X has a high level of technological development	4.0(0.752)				
Brand origin micro		3.8		0.887	0.725
BOMI1 The features of the brand X are well suited to the country of origin of the brand	3.7(0.722)		(0.784-0.889)		
BOMI2 The brand X makes sense (logical) for the country of origin of the brand	3.9(0.830)				
BOMI3 The brand X is very suitable for the country of origin	3.8(0.780)				
Country of manufacture macro-economic factor		3.1		0.890	0.730
CMMA1 Country X has a high level of economic development	3.2(0.874)		(0.821-0.907)		
CMMA2 Country X has a high level of economic stability	3.5(0.855)				
CMMA3 Country X has a high standard of living	2.7(0.963)				
Country of manufacture macro-technological factor		3.7		0.895	0.810

CMMA4 Country X has a high level of industrialization	3.8(0.847)		(0.885-0.915)		
CMMA5 Country X has a high level of technological development	3.6(0.908)				
Country of manufacture micro		3.0		0.899	0.748
CMMI1 The features of the brand X are well suited to the country of manufacture	3.0(0.792)		(0.840-0.882)		
CMMI2 The brand X makes sense (logical) for the country of manufacture	3.0(0.877)				
CMMI3 The brand X is very appropriate for the country of manufacture	3.0(0.865)				
Perceived quality		4.1		0.903	0.700
BQ1 Brand X offers very good quality products	4.1(0.724)		(0.799-0.871)		
BQ2 Brand X offers products of consistent quality	4.0(0.812)				
BQ3 Brand X offers very reliable products	4.1(0.808)				
BQ4 Brand X offers products with excellent features	4.1(0.725)				
Awareness/associations- Awareness		3.7		0.881	0.650
BI1 I am aware of brand X*	3.9(0.857)		(0.780-0.853)		
BI2 When I think of smartphone, brand X is one of the brands that comes to mind	3.4(1.201)				
BI3 X is a brand of smartphone I am very familiar with	3.4(1.162)				
BI4 I know what brand X looks like	3.8(0.994)				
BI5 I can recognize brand X amongst other competing brands of smartphone	4.0(0.938)				
Awareness/associations-Value		3.6		0.869	0.689
BI6 Brand X is good value for the money	3.6(0.849)		(0.778-0.878)		
BI7 Within smartphone I consider brand X a good buy	3.8(0.992)				
BI8 Considering what I would pay for brand X, I would get much more than my money's worth	3.5(0.939)				
Awareness/associations-Personality		3.9		0.901	0.820
BI9 Brand X has a personality	4.0(0.890)		(0.896-0.915)		
BI10 Brand X is interesting	3.9(0.897)				
BI11I have a clear image of the type of person who would use the brand X *	3.0(1.055)				
Awareness/associations-Trust		3.9		0.860	0.672
BI12 I trust the company which makes brand X	3.9(0.789)		(0.745-0.857)		
BI13 I like the company which makes brand X	3.5(0.910)				
BI14 The company which makes brand X has credibility	4.3(0.694)				
Brand loyalty		2.4		0.935	0.827
BL1 I consider myself to be loyal to brand X	2.3(1.198)		(0.893-0.920)		
BL2 Brand X would be my first choice when considering smartphone	2.7(1.243)				
BL3 I will not buy other brands of smartphone if brand X is available at the store	2.2(1.230)				
Brand typicality		3.5		0.931	0.818
BT1 Brand X is representative of smartphone	3,5(1.033)		(0.893-0.922)		
BT2 Brand X is a typical brand in the segment of smartphone	3,4(1.048)				
BT3 Brand X is a good example in the segment of smartphone	3,7(0.941)				

Path estimate (formative factors)	Std. Estimate	t-value
Economic factor->Brand origin macro	0.653***	12.507
Technological factor->Brand origin macro	0.506***	10.547
Economic factor->Country of manufacture macro	0,635***	21.864
Technological factor->Country of manufacture macro	0.452***	16.973
Awareness->Awareness/associations	0.359***	15.833
Value->Awareness/associations	0.296***	12.541
Personality->Awareness/associations	0.221***	16.162
Trust-> Awareness/associations	0.282***	14.480

AVE: average variance extracted; ***p < 0.001; SD-standard deviation; * item eliminated due to the value of item loading below 0.707.

Table 2 in another file due to its length.

Table 3. *Structural results*

Path	Full sample (n=305)	Apple (n=103)	Nokia (n=102)	Samsung (n=100)	Hypothesis
	Coefficient beta (t-value)				
Structural results: main effects model					
Attitude->Perceived quality	0.482*** (5.829)	0.470*** (7.289)	0.542*** (7.330)	0.404*** (4.334)	H1a: fully supported
Attitude->Awareness/ass.	0.538*** (7.566)	0.408*** (5.361)	0.563*** (8.804)	0.625*** (10.040)	H1b: fully supported
Brand origin macro ->Perceived quality	0.060 ns (0.474)	0.001 ns (0.009)	0.328*** (3.690)	0.024 ns (0.198)	H2a: supported only for Nokia
Brand origin macro ->Awareness/ass.	-0.036 ns (0.367)	0.152 ns (1.755)	0.115 ns (1.709)	-0.121 ns (1.147)	H2b: not supported
Brand origin micro-> Perceived quality	0.149 ns (1,223)	0.349** (3.022)	-0.131 ns (1.443)	0.231** (2.730)	H3a: partially supported
Brand origin micro-> Awareness/ass.	0.280** (2.640)	0.339** (3.267)	0.332*** (4.152)	0.238** (2.640)	H3a: fully supported
Country of manufacture Macro->Perceived quality	0.036 ns (0.318)	0.100 ns (1.374)	0.047 ns (0.430)	a)	H4a: not supported
Country of manufacture Macro->Awareness/ass.	-0.045 ns (0.463)	0.016 ns (0.232)	0.051 ns (0.671)	a)	H4b: not supported
Country of manufacture micro->Perceived quality	0.126 ns (1.286)	0.118 ns (1.550)	-0.072 ns (0.803)	a)	H5a: not supported
Country of manufacture micro->Awareness/ass.	0.198* (2.151)	0.139 ns (1,673)	-0.019 ns (0.270)	a)	H5b: partially supported
Perceived quality->Brand loyalty	0.024 ns (0.189)	0.209* (1.970)	0.037 ns (0.366)	0.310*** (3.439)	H6a: partially supported
Awareness/ass,->Brand loyalty	0.642*** (5.009)	0.884*** (8.568)	0.662*** (6.842)	0.406*** (3.363)	H6b: fully supported
Awareness/ass. R^2	0.468	0.513	0.617	0.439	
Perceived quality R^2	0.356	0.480	0.435	0.275	
Brand loyalty R^2	0.439	0.518	0.472	0.476	
Awareness/ass Q^2	0.507	0.395	0.412	0.351	
Perceived quality Q^2	0.246	0.350	0.253	0.185	
Brand loyalty Q^2	0.362	0.421	0.392	0.379	
GoF	0.667	0.598	0.581	0.532	
Structural results- Interaction effects model					
Interaction effect of Brand typicality as moderator	Coefficient beta (t-value) Full sample	Coefficient beta (t-value) Apple	Coefficient beta (t-value) Nokia	Coefficient beta (t-value) Samsung	Hypothesis
Brand origin macro-> Perceived quality	0.096 ns (0.757)	-0.048 ns (0.418)	0.308** (3.156)	-0.030 ns (0.361)	

Brand origin macro-> Awareness/ass.	0.030 ns (0.325)	0.086 ns (1.087)	0.024 ns (0.385)	-0.152 ns (1.723)	
Brand typicality->Perceived quality	0.429*** (4.157)	0.544*** (9.125)	0.195 ns (1.864)	0.553*** (5.587)	
Brand typicality-> Awareness/ass.	0.589*** (7.283)	0.662*** (9.125)	0.541*** (7.690)	0.628*** (11.782)	
Brand origin macro* Brand typicality->Perceived quality	-0.064 ns (0.891)	-0.127 ns (1.178)	0.005 ns (0.045)	-0.196 ns (0.775)	H7a: not supported
Brand origin macro* Brand typicality-> Awareness/ass.	-0.105 ns (1.037)	-0.059 ns (0.758)	-0.136 ns (2.321)	-0.214 ns (1.172)	H7b: not supported
Perceived quality R^2(B. typicality as moderator)	0.478	0.608	0.453	0.563	
Awareness/ass. R^2(B. typicality as moderator)	0.677	0.715	0.764	0.681	
f^2 Perceived quality	0.230	0.330	0.030	0.660	
f^2 Awareness/ass.	0.650	0.710	0.620	0.760	

Note: *p<0.05; **p<0.01; ***p<0.001; ns- not significant. a) Path not considered since the brand origin and the main country of manufacture are the same f^2 effect size