A redefined measure of the tendency to use brand name in purchasing decisions

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Abstract

The literature on brands has focused on the importance and determinants of their use by consumers and the implications brands have for firms. However, many studies that analyze the tendency of consumers to use the brand name in their purchasing decisions (TBN) do not use any scales that have been proven reliable and valid to measure this TBN. Our study, carried out in Spain and Russia using a web survey system, finds that the existing proposals are not valid and accurate. Confirmatory factor analysis is used for dimensionality, and a redefined scale with high validity and reliability indices is presented. This scale is invariant in both countries. The empirical data adjust well to Johnson’s SB Distribution.

Keywords: Brand Name, Scale, Tendency, Consumer Decision-Making, Brand Dependence.

JEL codes: M31, C18.

1. Introduction

Brand names (BN) are an important feature in our lives since they offer confidence and enhance the feeling of belonging to a group (Wilcox et al., 2009). Gardner and Levy (1955) stated the importance of BN, defining them as a complex system of symbols (ideas and attributes). Since then, it is widely accepted that BN are crucial in identifying products, often giving them meaning that goes beyond words and symbols. Nevertheless, Hui (2010) states the literature has paid scant attention to
the role BN play in consumers’ decision making, even though it is widely known that consumers are inclined to use BN when deciding what to buy (Bristow et al., 2002).

It is well known that consumers use BN as a guide to assess different products that may either reduce perceived risk or compensate for a lack of information when making purchasing decisions (Strizhakova et al., 2008). Therefore, BN will have a key influence on consumers (Aaker and Keller, 1990), and this is widely accepted in marketing literature. Liao and Wang (2009) state that people who know little about brand names consume many brand-name products, and this behavior implies there is an underlying propensity to buy BN even though little is known about them.

Bristow et al. (2002) affirm that consumers pay little cognitive attention to brands, which creates a tendency to use BN (hereinafter, TBN) as the only choice criterion. Some consumers use it as a shortcut or simplification when making decisions, since it saves them the effort of considering other criteria (McNeal and Zerren, 1981). When the consumer travels abroad, recognized or recognizable BN mean that other product attributes are bypassed in purchasing decisions. However, when BN become the sole attribute considered, the consumer may become BN-dependent, thus making the decision process dysfunctional, since there would be an implicit rejection of functional attributes based on needs and the product to buy.

Bristow et al. (2002) developed the Brand Dependence Scale “to measure the extent to which a consumer will use brand name as a cue in the purchase decision” (p. 344). These authors state the scale really expresses a tendency rather than an attitude, and reflects behavior when purchasing products. Zarantonello (2008) analyzes this and concludes that the work by Bristow et al. (2002) does not offer evidence of content validity and that checking main validities needs to go beyond just principal component analysis. This obstacle must be overcome if one wishes to use a robust measure of the concept. In science, measuring correctly is fundamental because a lack of proper measurements invalidates results.

For firms, a BN is a first-order strategic element, while for consumers it is an important criterion when making decisions. Yet there is no measure accepted by the literature for consumers’ tendency to use BN when purchasing a product (the measurements used are usually variations of the proposal by Bristow et al. (2002)). Therefore, our aim is to study the scales proposed in the literature and redefine a measure meeting reliability and validity conditions using cross-cultural data and perspective.

2. Brand name background

2.1. What is BN?

Bennett (1988) states BN is one of the most important brand components. The BN may contain words, numbers and symbols making it descriptive, suggestive, or distinguishing, and may build associations with the product and manufacturer. This
definition is used by several authors, as can be seen in Villas-Aventin, Subirà-Lobera, and Guàrdia-Olmos (2011).

BN is a link between what the firm wants the consumers to understand and the associations these have built in their memories (Anderson, 1993). Thus, BN is linked to perceptions, expectations, and feelings about a product reflected in the associations formed by the consumers in their brains. One example is the research by Mishra and Datta (2011) relating BN to several constructs (customer-based brand equity, brand association, brand personality, brand communication, brand image, perceived brand quality, and brand loyalty). They find that BN has a positive impact on all of these, particularly on brand equity, brand association, and brand loyalty; thus, it is a key element.

From the consumers’ viewpoint, BN symbolizes the product and speeds up the decision-making process (Herbig and Milewicz, 1993). This symbolism can also generate value associations in the consumer, although these will depend on individual value perceptions and expectations.

From a marketing perspective, why is BN so important? Akir and Othman (2010) maintain that BN provides clues about a product’s quality and that it may substitute this criterion when the consumer makes purchasing decisions. Furthermore, it lessens the importance of other relevant attributes. Dodds et al. (1991), for example, find that the price attribute has a more important effect on the purchasing decision alone than when used together with the BN. Bristow et al. (2002) consider that when there is brand disparity, the BN becomes the central attribute for assessing products.

2.2. The tendency to use the brand name

TBN is a propensity that can be explained using two psychological approaches. In the first one, the tendency to use the brand name as unique or principal criterion to make a decision is, in fact, the result of a cognitive-attentional bias effect (Kahneman et al., 2006) derived from cognitive deficits. The consumer is unable to retain all the significant criteria for making the best decision and opts for the BN as a criterion offering a global evaluation of the brand’s functional image, quality, and social reputation, and its acceptance by the reference group consumer wishes to belong to. The second approach refers low self-regulation. In this case, TBN may be understood as a consequence of disorders in controlling impulses leading to a failure of self-regulation resources (Faber and Vohs, 2004). When this occurs, the BN is a recurrent and unique criterion when choosing a product. This is quite simply a mild brand addiction (Solomon, 1992), since it does not generate the negative aspects of more severe dependences (addiction to buying, drugs, affective dependence/addiction, etc.).

Still, in functional terms, Hui (2010) states that BN is becoming the basic criterion in decision-making since it is perceived as an overall sign of a product’s quality and image. It is thought that it will fulfill consumers’ expectations and so it becomes the criterion replacing all others in a purchasing decision (Ergin and Akbay, 2010).
Based on the aforementioned, we define TBN as consumer propensity to assess, choose, and buy (or not) a product based on its BN rather than other criteria.

Bristow et al. (2002) defined this tendency as ‘brand dependence’ when referring to the “tendency to use the brand name in the purchase decision” (p.344). This propensity attach a trend in decision-making process as well as a behaviour toward product purchase. Nevertheless, the Bristow’s et al. (2002) proposal introduces an unsuitable identification when using the term ‘dependence’. While it has been stated that frequent brand interaction makes consumers dependent on them (Bengtsson, 2003), this dependence has more to do with a chronic, recurring behavioral disorder related to consuming products or satisfying affective needs. In the case of brands, this dependence can be understood as a need to use the BN as a criterion to decide which product to buy. Consequently, we will use TBN and not ‘dependence’ term.

2.3. TBN ‘false friends’ constructs

It is possible to find in literature other constructs (‘brand love’, ‘brand consciousness’, ‘brand relevance’, and ‘brand awareness’) related to propensity to use the BN in decision-making, but they actually express a very different phenomena. Thus, ‘brand love’ (Carroll and Ahuvia, 2006) may be understood as a “passionate emotional attachment” that a consumer could feel for a particular brand. This phenomenon includes sticking with the brand and assessing it positively. Brand love describes the consumer by the identity generated by an emotional link between him/her and the brand and not a propensity to use the brand in decision-making process. Brand consciousness refers to the mental orientation to choose well-known and heavily advertised brand name products and suggests that consumers are willing to buy recognized BN products to meet the expectations of others and/or gain acceptance by their reference group (Otnes and McGrath, 2001). However, according to Liao and Wang (2009), brand consumption is not necessarily related with brand consciousness because people can choose a BN product without knowing the brand well. Moreover, there is no agreement in the literature on the link between the brand consciousness and the tendency to use the BN in purchasing decisions. ‘Brand relevance’ is a widely used concept but that has been neither defined nor explained well (Hammerschmidt and Donnevert, 2007), so significantly different definitions exist between themselves. Aaker (2004) considers a brand relevant when it determines a product category, a desire by a segment of consumers for the category or subcategory is perceivable, and it forms part of the evoked set of brands. However, others understand brand relevance as the degree the brand plays a key role in the process of choosing a product in a particular product category (Fischer et al., 2010). Finally, ‘brand awareness’ can be defined as the “likelihood that a brand name will come to mind and the ease to which it does to” (Keller, 1993). All of these concepts have specific measures and all of them are very different from TBN. Table 1 shows aforementioned concepts.
### Table 1. Concepts related with brands and BN

<table>
<thead>
<tr>
<th>Construct</th>
<th>Definition</th>
<th>Some measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Dependence</td>
<td>“The extent to which a consumer will use brand name as a cue in the purchase decision” (Bristow et al., 2002, p. 344).</td>
<td>BDS (Bristow et al., 2002). BDS (Zarantonello, 2008).</td>
</tr>
<tr>
<td>Brand Love</td>
<td>“Emotional attachment that a satisfied consumer has for a particular trade name” (Carroll and Ahuvia, 2006, p. 81).</td>
<td>BLS (Carroll and Ahuvia, 2006). BLS (Thomson et al., 2005).</td>
</tr>
<tr>
<td>Brand Consciousness</td>
<td>“Consumers’ orientations toward buying the more expensive, well-known national brands” (Sproles and Kendall, 1986). “As an individual trait characterized by the degree to which a consumer is oriented toward buying well-known branded products” (Lee et al., 2008).</td>
<td>CSI (Sproles and Sproles, 1990). BSC (Shim and Gehrt, 1996).</td>
</tr>
<tr>
<td>Brand Relevance</td>
<td>“Brand relevance is defined as the degree to which the brand plays a key role in consumers’ choice process for a product in a given product category” (Hammerschmidt and Donnevert, 2007).</td>
<td>BRS (Chernev et al., 2011). BRS (Hammerschmidt and Donnevert, 2007).</td>
</tr>
<tr>
<td>Brand Awareness</td>
<td>“Likelihood that a brand name will come to mind and the ease to which it does so” (Keller, 1993, p. 3).</td>
<td>BAS (Keller, 1993, 2003). BASCS (Priluck and Till, 2010).</td>
</tr>
</tbody>
</table>

(*) This is not an original scale but a redefinition of the Bristow’s et al. scale.


We already stated that the term ‘dependence’ by Bristow et al. (2002), referring to the “tendency to use”, might confuse the content domain of the phenomenon it measures. All the scale items refer directly to the BN and the tendency to use it in decision-making. It is a Likert scale where each item varies from 1=totally disagree to 6=totally agree. When applying the scale, specifying the category of the product under research is necessary beforehand. Although not explained why, it seems that BN importance as a criterion will be more or less depending on the category in question. It is common practice to have an even number of options when seeking to force the consumer to decide in agree-disagree situations or to avoid the tendency towards indifference when one does not really know what to answer (Tang et al., 1999). The reliability reported for the original scale is 0.902 (brands of pants) and 0.925 (personal computers). Bristow et al. (2002) analyze convergent and discriminant validities using principal components analysis and deem they are sufficient; their article contains no further information.
Later, Zarantonello (2008) considers that the scale is not one-dimensional, but that two dimensions exist. The first is comprised of items 2, 3, and 6, referring to the brand in the singular, i.e., the consumer only has to consider the general brand name, while the second is made up of items 1, 4, 5, and 7, referring to brands competing against each other. As Zarantello says, “alternative and competing brand names are indicated as well” (p. 202). Moreover, Zarantonello (2008) analyzes the scale by Bristow et al. (2002), concluding it does not offer evidence of content validity, and that checking the main validities needs to go beyond just principal component analysis. However, the Brand Dependence Scale has been used to measure various concepts, like brand preference (Duarte and Raposo, 2010) or consumer-based brand equity (Jung and Sung, 2008; Ghazizadeh et al., 2010), among others.

Both scale proposals from Bristow et al. (2002) and Zartantonello (2008) are shown in Figure 1.

Figure 1. TBN (Brand Dependence) scales proposed in literature

4. Method

The Bristow et al. (2002) scale is used but, following the recommendations of Tang et al. (1999) and Van Herk et al. (2004), we extended it to a 7-point Likert scale. Scales with seven response points are widely used in empirical literature and, along with 0-10 range, have high discriminating power and invariance (Martínez and Ruiz-Marín, 2011).

4.1. Countries and product category

Following Van de Viejer and Leung (1997), trans-country research must be done when the researcher wants to establish equivalent measures of a construct rather than merely assuming this equivalence between countries. The study was conducted in Russia and Spain. Russia has the highest growth perspective in Eastern
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and Central Europe (World Bank, 2012), and many companies are showing great interest in the Russian market that is today invisible. Furthermore, many ‘new consumers’ (Myers and Kent, 2003) are adopting Western consumer habits, where brands are highly important. Their awakening as consumers (Lerman and Maxwell, 2006) means they use brands as a path towards social recognition and self-esteem (Ting-Toomey and Kurogi, 1998). Kivenzor (2007) states that most consumers in large Russian cities are obsessed with prestigious brands and products bearing recognized BN.

Spain was also chosen because many consumers there have gone from high consumption levels (based on a consumerist lifestyle) to having problems getting by day-to-day (Gil Roales-Nieto and Segura, 2010). This has spelled big changes in many purchasing habits, and recognized BN-products are losing ground to other non-recognized ones. The long economic crisis, which has meant different situations in the two countries, offers a better starting point for comparing the scale.

As reference product, we chose dress shoes (not sports shoes) since they are used by consumers of all ages and conditions while, at the same time, the many brands available range from the very inexpensive to near–luxury.

4.2. Questionnaires

Item translation from English to Spanish and Russian was made by bilingual university professors. Then they were checked by a translating agency using reverse translation. Specifically, a reiterative translation process was employed (English > Spanish; English > Russian; Russian > Spanish; Spanish > Russian) until the tests in both languages were considered equivalent to the original English and mutually equivalent (Toyne and Walters, 1993). This process can identify and correct one-way translation problems (Guthery and Lowe, 1992). Finally, the questionnaires were pretested to check for item comprehension and completion time required.

4.3. Sampling, fieldwork, and control

The fieldwork was performed using a web questionnaire publicized in various electronic media (forums, chats, blogs, and social networks like Facebook). The largest possible number of responses was sought, controlling gender, age, relative income, and habitat quotas. These controls permitted making, through a design similar to adaptive sampling (Thompson, 2006), additional efforts to obtain responses representative of the preceding variables. Additionally, people from two universities (teachers, students, alumni, etc.) were contacted; one university was Spanish and the other, Russian. The questionnaires discarded were those (a) completed by persons under 18; (b) those completed in less time than the minimum estimated; and (c) those with systematic, extreme, or inconsistent responses.
Both samples were made up of young people whose average age was 33.5 (Spain) and 31.3 years (Russia). In absolute terms, the 2.2-year difference is not relevant.

4.4. Method to test the content validity

Besides the survey, an email questionnaire was sent to consumer behavior experts to test content validity. The sample comprised four university marketing lecturers specializing in consumer behavior and another four experts in consumer and consumption psychology. The Waltz and Bausell (1983) method was used, whose aim was to see whether the items contained domain contents of the phenomenon under study. The Yaghmaie (2003) approach was also used since we consider relevance, clarity, simplicity, and non-ambiguity to be criteria of real interest for the case in question.

5. Results and discussion of the findings

5.1. Reliability and validities of the global data

Table 2 shows the results obtained in the global sample for the Bristow et al. (2002) scale and that proposed by Zarantonello (2008). Neither returns satisfactory results since the Normed Chi-Squared is much higher than the literature recommends ($\chi^2/df<3$) and the RMSEA index is well above 0.08 (Hair et al., 1998). We therefore regrouped the items and tried different configurations.

Table 2. Fits for the TBN scales in Spain and Russia

<table>
<thead>
<tr>
<th>Scales</th>
<th>$\chi^2$</th>
<th>$\chi^2$/df</th>
<th>CFI</th>
<th>IFI</th>
<th>NNFI</th>
<th>SRMR</th>
<th>RMSEA</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bristow et al.</td>
<td>171.944</td>
<td>12.281*</td>
<td>0.974</td>
<td>0.974</td>
<td>0.961</td>
<td>0.017</td>
<td>0.127</td>
<td>0.962</td>
<td>0.786</td>
</tr>
<tr>
<td>proposal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zarantonello</td>
<td>171.944</td>
<td>13.226*</td>
<td>0.974</td>
<td>0.974</td>
<td>0.958</td>
<td>0.018</td>
<td>0.133</td>
<td>0.953(D1)</td>
<td>0.872(D1)</td>
</tr>
<tr>
<td>proposal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our proposal</td>
<td>29.019</td>
<td>3.627</td>
<td>0.996</td>
<td>0.996</td>
<td>0.993</td>
<td>0.008</td>
<td>0.061</td>
<td>0.965(D1)</td>
<td>0.902(D1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.978(D2)</td>
<td>0.830(D2)</td>
</tr>
</tbody>
</table>

*p<0.01; D1=Dimension 1; D2=Dimension 2.

The best fit is found when two dimensions are considered. The first includes items 1, 2, and 3 and refers to the role of the brand name as a criterion when choosing, which we will call ‘BN-Prodecision’. The second dimension (including items 4, 5, and 6) refers, in contrast, to the brand name dependence when choosing between two or more brands, which we will call ‘BN-Comparison’. The seventh item on
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the Bristow et al. (2002) scale was removed because of its very low factor loading. Annex A shows the items from the TBN scale. The refined TBN scale model can be seen in Figure 2.

Figure 2. Best fit for TBN scale

Using this configuration, we obtain a good model fit: all indicators are 0.90 or higher, and RMSEA are reasonably suitable and lower than 0.08. The Normed Chi-Squared is over 3, but the new scale structure means that the value can go from 12.281 to 3.627. Although slightly above 3, we consider that it allows an important reduction and, at the same time, the remaining indicators show a suitable level.

Reliability. We obtain Cronbach’s $\alpha=0.965$ for ‘BN-Prodecision’ and $\alpha=0.942$ for ‘BN-Comparison’, with a rho reliability coefficient of 0.981, well above the minimums the literature reports (Nunnally and Bernstein, 1994). Table 3 shows the descriptive results. The inter-element correlations appear in the annex. The scale has a very close additive nature since Tukey’s test=1.411.

Table 3. Descriptive results of the items and reliabilities (n=696)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Items</th>
<th>Mean</th>
<th>SD</th>
<th>$r_{\text{item-total}}$</th>
<th>$r^2_{\text{multiple}}$</th>
<th>Cronbach Alpha</th>
<th>ANOVA</th>
<th>Descriptives</th>
</tr>
</thead>
<tbody>
<tr>
<td>BN-Prodecision</td>
<td>1</td>
<td>4.02</td>
<td>1.90</td>
<td>0.910</td>
<td>0.828</td>
<td>0.965</td>
<td>F=9.936***</td>
<td>Mean=11.970</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4.04</td>
<td>1.88</td>
<td>0.936</td>
<td>0.879</td>
<td></td>
<td>RNA=0.711</td>
<td>SD=5.508</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3.91</td>
<td>1.91</td>
<td>0.930</td>
<td>0.872</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BN-Comparison</td>
<td>4</td>
<td>3.64</td>
<td>1.86</td>
<td>0.905</td>
<td>0.822</td>
<td>0.942</td>
<td>F=140.854***</td>
<td>Mean=10.790</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>3.90</td>
<td>1.91</td>
<td>0.857</td>
<td>0.740</td>
<td></td>
<td>RNA=5.266**</td>
<td>SD=5.288</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>3.24</td>
<td>1.81</td>
<td>0.876</td>
<td>0.876</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F=F inter-items; RNA=F residual no additivity; **p<0.05; ***p<0.01.

Validities. For Carmines and Zeller (1991), content validity “is based on the extent to which a measurement reflects the specific intended domain of content” (p. 20), and is the first validity analyzed. It is based on an estimation of the degree a
measure suitably covers the construct it seeks to measure. Since we define TBN as the “consumer propensity to assess, choose, and purchase (or not) a product on the basis of its brand name instead of other criteria”, the terms appearing in the items should refer to ‘propensity/tendency towards a’, ‘brand name’, ‘choice/assessment/purchase’, as well as to the absence of other criteria. To measure this quantitatively, we used the widely studied and applied Content Validity Index by Waltz and Bausell (1983). Their indicator considers that content validity should be analyzed according to four criteria: relevance, relation to the concept, simplicity, and non-ambiguity, and can be used to analyze both the items and scale as a whole. Table 4 shows the CVI results for each item, which are all above 0.80 > cutoff level of 0.75 (Yaghmaie, 2003). The scale as a whole offers a CVI=0.91, which can be considered high content validity (Lynn, 1986).

Table 4. Concept/construct validity results

<table>
<thead>
<tr>
<th>Items</th>
<th>Keywords included</th>
<th>(% of agreement between eight judges)</th>
<th>CVI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Own</td>
<td>Others’</td>
<td>Relevance</td>
</tr>
<tr>
<td>1</td>
<td>Yes</td>
<td>No</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
<td>No</td>
<td>87.5</td>
</tr>
<tr>
<td>3</td>
<td>Yes</td>
<td>No</td>
<td>87.5</td>
</tr>
<tr>
<td>4</td>
<td>Yes</td>
<td>No</td>
<td>87.5</td>
</tr>
<tr>
<td>5</td>
<td>Yes</td>
<td>No</td>
<td>87.5</td>
</tr>
<tr>
<td>6</td>
<td>Yes</td>
<td>No</td>
<td>87.5</td>
</tr>
</tbody>
</table>

Convergent validity is confirmed through confirmatory factor loadings that these must be significant and higher than 0.70 (Hair et al., 1998). The results show that the lowest factor loading is 0.925 for dimension 1 and 0.901 for dimension 2. Discriminant validity is likewise checked with two criteria: comparison of the average variances extracted (AVE) with the squared correlation and the confidence intervals method (McEvily and Zaheer, 1999). In the first case, the AVE range from 0.830 to 0.902 while the squared correlations range from 0.747 to 0.569. Since the lowest AVE is higher than the highest squared correlation, the first criterion is fulfilled. For the second, it is confirmed that no confidence intervals of the correlation coefficients contains a 1, so the variables are mutually different. These results suggest that the validity and reliability conditions are fulfilled.
5.2. Results of scale invariance

Next is to test the scale invariance between the samples by multigroup analysis with EQS 6.1 following the procedure by Steenkamp and Baumgartner (1998). The configural variance is verified, as the number of factors is the same in the Russian and Spanish samples. Likewise, the model’s goodness of fit (GOF) is good for both samples (Table 5). On including the factor loadings equality constraint for both, the model’s GOF does not worsen, thus confirming the metric invariance.

Table 5. Measurement invariance test of redefined TBN scale (Spain and Russia)

<table>
<thead>
<tr>
<th></th>
<th>X²</th>
<th>Df</th>
<th>Δ X²</th>
<th>Δdf</th>
<th>P</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>CFI</th>
<th>NNFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solution for independent groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain (n=321)</td>
<td>23.68</td>
<td>8</td>
<td>0.003</td>
<td>0.078</td>
<td>0.017</td>
<td>0.993</td>
<td>0.987</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia (n=375)</td>
<td>12.88</td>
<td>8</td>
<td>0.116</td>
<td>0.040</td>
<td>0.004</td>
<td>0.999</td>
<td>0.998</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement Invariance: Equals ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forms</td>
<td>36.57</td>
<td>16</td>
<td>0.002</td>
<td>0.061</td>
<td>0.012</td>
<td>0.997</td>
<td>0.994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor loadings</td>
<td>45.57</td>
<td>22</td>
<td>9.001</td>
<td>6</td>
<td>0.002</td>
<td>0.056</td>
<td>0.103</td>
<td>0.996</td>
<td>0.995</td>
</tr>
</tbody>
</table>

5.3. Scale Behavior

The correlation between the two dimensions is 0.785 (p<0.000) with a confidence interval of (0.762–0.805) and a SE of 0.011 with 1,000 bootstrap samples at a 95% confidence level. Easy Fit 5.5 software was used to see if our empirical data fit any statistical function, and we found that Johnson’s SB Distribution of four parameters (γ=0.700; δ=0.965; λ=1071, 0; ξ=-51.875) showed very good fit. The Kolmogorov-Smirnov (KS=0.041; p=0.195) and Anderson-Darling (AD=1.404; p=0.1) goodness-of-fit tests were applied. Both show the null hypothesis of no differences between the theoretical and empirical statistical distribution cannot be rejected. Both dimensions follow the same Johnson SB statistical behavior.

This distribution permits describing non-strictly “normal” phenomena [N(x,s)] and naturally asymmetric ones (Flynn, 2006) where the score obtained for one scale (with maximum and minimum values) is transformed to a range of 0-1 using \( y = (x - \xi) / \lambda \), with \( \xi \) being the minimum and \( \lambda \) its range. This can be converted into a standard normal \( z \) by:
Francisco José Sarabia-Sánchez and Liudmila Ostrovskaya

applied to our case it gives:

$$z = \gamma + \delta \ln\left(\frac{x - \xi}{\xi + \lambda - x}\right)$$

6. Discussion and implications

Consumers differ in the types of relationships they develop with BN (Fournier, 1998), and BN is a fundamental element for consumers. It is accepted that it leads to competitive advantages and is a necessary tool in very diverse product policy aspects (Aaker and Keller, 1990; Kivenzor, 2007). However, there are very few efforts to measure consumers’ tendency to use BN when choosing a product.

The proposals by Bristow et al. (2002) and Zarantonello (2008) do not offer satisfactory fits, and their empirical research comprises the results obtained both if the TBN is considered an antecedent (e.g., the preference towards brands) and if it acts as the dependent variable. Our paper shows that the new two-dimensional structure with the same items proposed by Bristow et al. (2002) fits a Johnson SB distribution, leading to a normal standard distribution and fulfilling reliability and validity requirements.

The Johnson SB statistical distribution is very flexible and used to model frequency distributions in a wide range of fields (see Kotz and Van Dorp, 2004, p. 274). Its interest lies in that it transforms the scores of variables moving within a range (the range is 7–42 for the TBN scale) and gives them an approximate normal standard, thus enabling the calculation of the probabilities of occurrence for making inferences and predictions. What is the reason for this fit? We would argue that although there are individuals with a very low or very high TBN when making purchasing decisions, these will always be within the 7–42 interval, since objectively infinite and null trends make no sense.

For marketing academics, our work offers a re-structured measure of consumer TBN and refines our understanding of this phenomenon. In so doing, this study keeps with the authors’ belief in the importance of methodological pluralism for acquiring the most complete understanding of this phenomenon (Carroll and Ahuvia, 2006). The TBN scale we propose is short and easy to administer, consisting of only 6 items, and will be useful not only in academic research but also in marketing practice.

As marketers engage in projects to improve BN notoriety and maintain competitive advantage over cheaper products with no brand names, they need to understand consumer tendency to use BN when choosing a product, and they can use the TBN scale for assessment, planning, and tracking purposes. In addition, from a practical perspective, brand and product managers should be interested in assessing...
the consumer tendency degree to use BN in their purchasing decisions for product categories within a manager’s sphere of responsibility. Thereby, according to Bristow et al. (2002), promotional campaigns designed to generate high top-of-mind awareness levels do not seem especially wise if, in the case of a low TBN, that increased consumers awareness does not translate into a higher purchase probability for the advertised brand.

Therefore, this paper aims to provide knowledge that can result in competitive advantage, increasingly demanded by companies. So, in a globalized and technological environment that has equaled the products and their attributes, brands added the symbolism of its BN, which must be consistent with the scheme of values of its consumers. In the same line, several authors suggest that companies should pay more attention to naming decisions on brand extension strategies (Busacca et al., 2009). Thus, the importance of the BN for consumers as the main or unique criterion of choice is a matter of interest to businesses, as it allows to adapt a better position in the market, if it were wrong it could endanger the future of product and even the organization. In addition, many consumers in countries like Russia are increasing their consumption of products with BN, due to the brands and BN are very important for their social lives (Kivenzor, 2007). Thus, for European companies that are committed to their BN and seek alternative markets for traditional and mature (thinking, for example, in emerging economies) is of great interest to better understand Russian consumers that place more importance to the acquisition of products with BN. In this context, the redefining scale of TBN which is proposed in this study is also correct from a scientific point of view, very usable in business studies requiring simple, short and easy to administer scales, so it can be a useful tool in achieving that objective.

7. Limitations and future research

Our study has some limitations. First, quota sampling with age and gender is not strictly random, and while the samples obtained by adaptive sampling are admitted in statistics, it would be good if future studies could improve in this aspect. Second, the study was performed using a specific product –footwear–, which, while universal, should be complemented with other product categories. Finally, our study focused on two countries, Spain and Russia. It could be extended to other countries with different cultures to make it as universal as possible.

References


A redefined measure of the tendency to use brand name in purchasing decisions


Annexes

A. TBN scale items

1. When it comes to buying ___, I rely on brand names to help me choose among alternative products.
2. I would be more likely to purchase ___ that had a well-known brand name.
3. Brand name would play a significant role in my decision of which ___ to purchase.
4. When faced with deciding among two or more brands of ___, I depend on the brand name of each product to help me make a choice.
5. If faced with choosing between two ___ with similar features, I would select the better-known brand name.
6. The brand name of ___ is important to me when deciding which product to purchase.
7. Regardless of what features a competing brand of ___ may offer, I would buy the brand of ___ that I most trust (*)�.

(*) This item is deleted in the new TBN Scale

B. Correlation matrix

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<th>Dimension 1</th>
<th></th>
<th>Dimension 2</th>
<th></th>
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<td>Item 4</td>
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</table>
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