The perception of educational brand capital in the Spanish context: a proposal for measurement with internal stakeholders

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Abstract  
This research was carried out to develop and validate a measurement scale to determine internal stakeholders’ perceptions of university brand capital by internal stakeholders. To this end, the main contributions in the literature related to the study of brand capital and its application in the educational sector were analysed, identifying which variables determine brand capital in this sector. Once a suitable model was established, an empirical study was realised using a sample of 303 valid responses from lecturers at two Spanish universities (one public and one private). In order to validate the proposed construct, the partial least squares method (PLS) has been applied. The results obtained show the significance of all the variables, while laying the foundation for university managers to develop marketing strategies adapted to maximize the building of educational brand capital.

Key words  
Marketing, universities, internal stakeholders, measurement scale, Spain.

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1. Introduction

In recent years, a set of problems have arisen that threaten the educational sector. Among these are: (1) the increase in the educational offering, (2) the decrease and delay in registration, (3) the “cascade” effect in terms of average expenditure per family allocated to education, (4) defaults in the payments of fees and “self-scholarships” and (5) the increase in structural costs. However, the opportunities that arise must be seen in a positive light, in particular (1) institutional reorganization and redimensioning, (2) the administration of change processes and (3) the application of educational marketing strategies with both an internal and external nature (Manes, 2014).

In Spain, according to the 2019 report issued by the Ministry of Science, Innovation and Universities, there are currently around 50 public and 40 private universities. For this reason, universities must design marketing strategies in order to meet the demands of increasingly more demanding customers and to compete alongside one another in increasingly more heterogeneous markets (Durán & Parra, 2014). Moreover, Retamosa (2018) highlights the need to build educational brand capital in order to differentiate ourselves from aggressive competition, capture a larger market share of students and attract talent. Within said marketing strategy, we must opt for maximizing brand capital, a concept coined by Farquhar (1989) to explain the experiential sensations of each consumer with the brand, not just on an individual level, but also through universal behavior. In other words, the idea is to generate a feeling of love for the brand by consumers and use it to improve sales figures (Esteban, Ballester & Muñoz, 2014). For this reason, brand evaluation as applied to higher education has received a significant amount of academic attention in recent years (Mourad, Meshreki & Sarofim, 2020).

Furthermore, the internal stakeholders play a significant role, since the entire organization offering a service (whether educational or in any other sector) must take into account the work of its employees, which is important to build strong brand capital (Lovelock, Staines & Dorfman, 1997). Therefore, the universities must adapt to new management methods, where customer relations take precedence, as does the good performance of its human capital, seeking to adapt to the best strategy for them all (Deem & Brehony, 2005). The present research thus focuses its attention on the university faculty, which is directly involved on an internal level and which plays an important role in maximizing educational brand capital (Maura, 2002; Zabalza, 2009; Mas, 2011; Küster, 2012).

The contributions of (1) Farquhar (1989); (2) Aaker (1992); (3) Keller (1993); (4) Faircloth, Capella & Alford (2001); (5) Yoo & Donthu (2001); (6) Delgado & Munuera (2002); and (7) Buil, Martínez & De Chernatony (2010) were analyzed as they pertain to brand capital, which is considered to have a great repercussion on later research. As a result, having exhaustively reviewed the proposals of each of them, there are considered to be four basic variables, which are: (1) brand awareness, (2) brand image, (3) perceived quality and (4) brand loyalty.

Thus, applying said concept to the higher education sector, a set of research is conceived to exist that analyzes some of the brand capital variables, although separately (Casanoves & Küster, 2017). For this reason, the objectives of this work are based on (1) designing a measurement scale that considers all four variables of brand capital, but adapted to the university sector and (2) analyzing at an empirical level whether these four variables are determining factors for the internal stakeholders of Spanish universities. This work is thus considered to contribute to advances in the field of scientific marketing, given that there is no previous work that considers all the brand capital variables as applied to the Spanish university system. Likewise, the intent is to
The main contributions to brand capital were analyzed as they apply to the educational sector, using the literature as a starting point.

provide a clear vision to university managers, so they can see the benefits of applying the developed scale in their marketing departments and in the institution in general.

2. Conceptual framework

Following the contribution by Casanoves & Küster (2017), it was deemed appropriate to review the literature on the four variables that make up educational brand capital. These are detailed below.

2.1. Brand awareness

In the specific field of higher education, Brewer & Zhao (2010) indicated that the brand awareness of several universities in Sydney improved when there was extensive brand recognition, reputation, favorable opinions about the brand and the quality of teaching. Furey, Springer & Parsons (2014), in turn, explain that the brand of universities in the United Kingdom is greater when the educational brand is clearly positioned, shows experience, aspiration for study and a partnership with the environment. Foroudi, Dinnie, Kitchen, Melewar & Foroudi (2017) argue that the renown of a university brand will increase as brand elements such as identity, service attributes, public relations and the made-in effect are maximized.

As established in the preceding paragraphs, it is possible to propose the first research hypothesis: \( H_1 \). The perception of brand awareness affects the perception of educational brand capital.

2.2. Brand image

In the specific field of higher education, Gómez & Medina (2010) explain that Spanish universities must generate effective marketing policies and communication strategies to improve the brand image of the institution. Rauschnabel, Krey, Babine & Ivens (2016), in turn, show that when faced with an aggressive argument from the competition, universities must opt for generating a solid brand position, based in particular on its personality and image. In addition Yuan, Liu, Luo & Yen (2016) reveal that the link between identity and image is influenced by the congruence perceived by consumers and the legitimacy of the expansion of the brand in the university market.

All this leads to the second research hypothesis: \( H_2 \). The perception of brand image affects the perception of educational brand capital.

2.3. Perceived quality

In the specific field of higher education, Jillapalli & Jillapalli (2014) argue that the faculty must develop their own brand value in the minds of the students, with the fundamental characteristics being quality of teaching, competence and reputation. This goes to show that these characteristics influence the sentiments of devotion on the part of the students towards the instructor and the quality of the relationships with the instructor’s brand. Pinar, Trapp, Girard & Boyt (2014), in turn, show that perceived quality is the most important variable to consider when building powerful university brands, followed by brand reputation and the emotional environment. Within this, the library service is the biggest determining factor, followed by student residences, professional development and the facilities. Ali, Zhou, Hussain, Nair & Ragavan (2016) present five dimensions related to the perceived quality of the educational service, which have an influence on the institutional image and, at the same time, maximize student loyalty towards universities in Malaysia.

Based on the preceding paragraphs, it is possible to propose the third research hypothesis: \( H_3 \). The perception of perceived quality affects the perception of educational brand capital.
2.4. Brand loyalty

In the specific field of higher education, Nguyen & LeBlanc (2001) sustain that the degree of loyalty of university clients increases as the brand image of the institute of higher education improves. Bok (2009) studies those universities that have included a marketing strategy for the services they offer in their annual instructional plan, with brand loyalty being the most important variable when it comes to generating cross-selling among educational products. Brown & Mazzarol (2009) explain that Australian students are more loyal to their university when their needs are met. This thus becomes an important variable to be considered, particularly by less prestigious universities that seek to compete in an increasingly more deregulated market, based on a business market environment.

All this leads to the fourth research hypothesis: \( H4 \). The perception of brand loyalty affects the perception of educational brand capital.

As described in the previous paragraphs, Figure 1 shows our particular proposal of a theoretical model designed to defend the present research.

Figure 1

Theoretical model proposed for the present research

3. Methodology

In order to contrast the hypotheses and fulfill the proposed objectives, a quantitative study was carried out in Valencia (Spain). This city was chosen since it is perceived by the student market as a great educational center, due to the establishment of eight centers of higher education (both universities and affiliated centers) in recent years, which have projected the image and renown of the city across the nation.
Applying this concept to the higher education sector, studies are believed to exist that analyze some of the variables, albeit separately.

In order to quantify the target population, a non-probabilistic convenience sampling method was used, employing official data from the departments in the field of Economics at two of the eight institutions of higher education referred to above, one of which is public (University of Valencia) and the other private (ESIC Business & Marketing School). It was thus possible to confirm that a total of 3,932 university lecturers were accounted for, all employed by one of the two universities studied in the current investigation.

The complete design of the research was planned in two phases, namely: (1) a review of the literature, along with the drafting of the questionnaire and (2) the application of the final measurement instrument. Below is a description of each.

### 3.1. Drafting the questionnaire

The questionnaire designed to collect the information was based on an extensive review of the literature. A 5-point Likert scale was used (1=Strongly disagree and 5=Strongly agree) to measure the concepts of (1) brand awareness, (2) brand image, (3) perceived quality and (4) brand loyalty. All of these are based on the measurement scales proposed by Aaker (1992) and Keller (1993), which were selected for having a similar attitudinal focus to that of this work, and for having been validated and used in multiple studies throughout the literature (Casanoves, 2016). Following this line, the corresponding items were adapted to our field of study, higher education (see Table 1).

| Variable         | Author     | Items proposed in the literature                                                                 | Items proposed for the present research                                                                 |
|------------------|------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Brand Awareness  | Aaker (1992) | Have you heard about this brand? BA1 - In general, I have heard positive comments about my university. | BA1 - In general, I have heard positive comments about my university.                                     |
|                  | Aaker (1992) | Do you have any opinion about the brand? BA2 - In general, I have a good opinion about my university. | BA2 - In general, I have a good opinion about my university.                                              |
|                  | Aaker (1992) | Have you heard about these brands? BC3 - In general, I have high knowledge of my university.        | BA4 - If I decided to do some undergraduate studies, I would definitely consider my university.           |
|                  | Keller (1993) | Which brands would you most likely use in the following situations...? BA5 - If I decided to do some postgraduate studies, I would definitely consider my university. |
| Brand Image      | Aaker (1992) | Does the brand provide good value for the money that is paid? BI1 - In my opinion, my university provides good value for the money that is paid. | BI1 - In my opinion, my university provides good value for the money that is paid.                      |
|                  | Aaker (1992) | There is a reason to buy this brand instead of others. BI2 - I have many reasons to work at my university instead of others. | BI2 - I have many reasons to work at my university instead of others.                                    |
|                  | Keller (1993) | How reliable is this brand? BI3 - My university: transmits confidence to me.                        | BI3 - My university: transmits confidence to me.                                                        |
|                  | Keller (1993) | To what degree does this brand offer special benefits? BI4 - It offers me special benefits.         | BI4 - It offers me special benefits.                                                                     |
|                  | Aaker (1992) | Does the brand have a rich history? BI5 - It has a rich history.                                   | BI5 - It has a rich history.                                                                           |
|                  | Keller (1993) | How effective is this brand’s service? Does it completely meet your needs? BI6 - The service completely satisfies my needs. |
|                  | Keller (1993) | How efficient is the service of this brand in terms of speed, response capacity, etc.? BI7 - The service of my university is effective and efficient (in terms of speed, responsiveness, etc.). |
|                  | Keller (1993) | Compared to other brands, in the category in which it competes, are prices generally higher, lower or almost the same? BI8 - Compared to other universities, fees are generally lower. |
|                  | Keller (1993) | Is it easy to receive maintenance and service? BI9 - It is easy to receive maintenance and service at my university. |
|                  | Keller (1993) | To what degree do the people you admire and respect use this brand? BI10 - The people that I admire and respect want to work at my university. |
|                  | Keller (1993) | To what extent do you feel that you feel that you have grown with the brand? BI11 - I feel that I have grown professionally thanks to my university. |
|                  | Keller (1993) | How much do you feel that you feel that you have grown with the brand? BI12 - My opinion about the workers at my university is good. |
| Variable         | Author   | Items proposed in the literature                                                                 | Items proposed for the present research                                                                 |
|------------------|----------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Perceived Quality | Keller (1993) | What is your assessment of the quality of the products of this brand? PQ1 - In relation to quality-price, my assessment of my university is good. |                                                                                                           |
|                   |          | To what extent does this brand completely satisfy your product needs? PQ2 - In relation to hours of work-salary, my assessment of my university is good. |                                                                                                           |
|                   |          | What is your general opinion about this brand? PQ4 - My general opinion of my university is good. |                                                                                                           |
|                   |          | How innovative are the suppliers? PQ5 - The lecturers of my university are innovators.          |                                                                                                           |
|                   |          | To what extent are the suppliers interested in your opinions? PQ6 - The lecturers are interested in the opinions of the students. |                                                                                                           |
|                   |          | How much do you admire the brand? How much do you respect it? PQ8 - The lecturers admire and respect my university. |                                                                                                           |
|                   |          | How innovative are the suppliers? PQ9 - The service staff of my university are innovative.     |                                                                                                           |
|                   |          | To what extent are the suppliers interested in your opinions? PQ10 - The service staff are interested in the opinions of the students. |                                                                                                           |
|                   |          | How much do you admire the brand? How much do you respect it? PQ12 - The service staff admire and respect my university. |                                                                                                           |
|                   |          | How likely is it that you recommend this brand to others? PQ13 - I would recommend my university to other people. |                                                                                                           |
|                   |          | How much personal relevance does the brand have for you? PQ14 - My university as a brand has a lot of relevance for me. |                                                                                                           |
|                   |          | To what degree are you offered advantages that other brands do not provide? PQ15 - Working in my university: offers me some advantages that another university would not offer me. |                                                                                                           |
|                   |          | Does it produce emotion? PQ16 - It is exciting.                                                 |                                                                                                           |
|                   |          | Does it give you a sense of fun? PQ17 - It gives me a sense of fun.                             |                                                                                                           |
|                   |          | Does this brand give you a feeling of warmth? PQ18 - It gives me a feeling of warmth.           |                                                                                                           |
|                   |          | Does it provide you with a sense of security? PQ19 - It gives me a feeling of job security.    |                                                                                                           |
|                   |          | PQ20 - It gives me a feeling of job stability.                                                  |                                                                                                           |
|                   |          | Does it offer you a sense of self-respect? PQ21 - It gives me a feeling of self-respect.        |                                                                                                           |
|                   |          | Does it give you a sense of social approval? PQ22 - It gives me a sense of social approval.    |                                                                                                           |
| Brand Loyalty     | Keller (1993) | Do you consider yourself totally loyal to this brand? BL1 - I consider myself as a completely loyal worker to my university. |                                                                                                           |
|                   |          | Is this the brand you prefer to buy/use? BL2 - My university is the type of university in which I want to work. |                                                                                                           |
|                   |          | Is this brand more than a product to you? BL3 - I like what the brand my university transmits over any other university. |                                                                                                           |
|                   |          | Is this brand special to you? BL4 - My university is special to me.                            |                                                                                                           |
|                   |          | Do you really love this brand? BL5 - I completely identify with the values of my university.   |                                                                                                           |
|                   |          | Do you really identify with people who use this brand? BL6 - I completely identify with the values of my work colleagues. |                                                                                                           |
|                   |          | Do you feel like you almost belong to a club with the other users of this brand? BL7 - I have a great sense of belonging to my university. |                                                                                                           |
|                   |          | Do you feel a deep connection with the other people who use it? BL8 - I feel a deep connection with my study colleagues. |                                                                                                           |
|                   |          | Do you really like to talk about this brand with others? BL9 - I like to talk to other people about my university. |                                                                                                           |
|                   |          | Are you always interested in learning more about the brand? BL10 - I am interested in learning more about my university. |                                                                                                           |
|                   |          | Do you closely follow news about this brand, compared to other people? BL11 - I often follow the news of my university (at face-to-face and/or digital level). |                                                                                                           |
|                   |          | Are you proud of the fact that others know you use it? BL12 - I am proud that others know that I study at my university. |                                                                                                           |
3.2. Application of the measurement instrument

In this stage the measurement instrument was applied, taking advantage of on-site classes taught at both universities. Therefore, the questionnaire was sent by email and in paper format to 394 lecturers, obtaining a total of 303 valid responses.

Regarding the sampling profile, it can be seen that 55.4% were men, 29.4% were women and another 15.2% did not answer the question. Furthermore, nearly 60% of the lecturers who responded to the questionnaire came from the private university, while the other 40% came from the public university, with an average age of 47 and most holding the position of associate or full professor. In addition, most of the respondents have Spanish nationality (83.5%), and the rest come from countries such as Australia, The USA, England and Ireland. Along with this, it should be pointed out that nearly 53% of them had been working in their educational institution for more than ten years and 35% of the sample had a doctorate or an accredited doctorate. All of this indicates that most of the responses received are reliable, since they come from employees with vast experience and good knowledge of the operation of their educational institution.

Finally, the techniques that were employed to analyze the data are based on descriptive statistics and multivariate analysis, using SPSS v.19 for Windows for the data descriptive techniques and SmartPLS 2.0 for the multivariate techniques as working tools. The statistical processing of the data used in this study represents the application of different methods of analysis, according to the information that we wish to obtain, distinguishing between: (1) validation of the measurement instrument, and (2) analysis of the structural model.

4. Results

First the psychometric characteristics of the measurement instrument were analyzed. To perform this task, the information was divided into (1) an analysis of the quality of the items and (2) the validation of the scales, which is shown in Table 2.

### Table 2
Reliability and convergent validity

| Factor                  | Indicator | Load | Student’s t | CR  | CA  | AVE |
|-------------------------|-----------|------|-------------|-----|-----|-----|
| Brand awareness         | BA1       | 0.86 | 47.00       | 0.89| 0.85| 0.62|
|                         | BA2       | 0.50 | 6.96        |     |     |     |
|                         | BA3       | 0.75 | 14.03       |     |     |     |
|                         | BA4       | 0.87 | 48.23       |     |     |     |
|                         | BA5       | 0.89 | 46.05       |     |     |     |
| Brand image             | BI1       | 0.89 | 39.70       |     |     |     |
|                         | BI2       | 0.89 | 33.67       |     |     |     |
|                         | BI3       | 0.94 | 93.34       |     |     |     |
|                         | BI4       | 0.89 | 53.75       |     |     |     |
|                         | BI5       | 0.86 | 48.23       |     |     |     |
|                         | BI6       | 0.93 | 62.62       |     |     |     |
|                         | BI7       | 0.91 | 56.84       |     |     |     |
|                         | BI8       | 0.72 | 51.11       | 0.98| 0.98| 0.79|
|                         | BI9       | 0.90 | 43.00       |     |     |     |
|                         | BI10      | 0.88 | 46.99       |     |     |     |
|                         | BI11      | 0.91 | 67.70       |     |     |     |
|                         | BI12      | 0.92 | 67.70       |     |     |     |
Table 2 (continued)

Reliability and convergent validity

| Factor          | Indicator | Load | Student’s t | CR | CA | AVE |
|-----------------|-----------|------|-------------|----|----|-----|
| Perceived quality | PQ1       | 0.93 | 72.59       |    |    |     |
|                 | PQ2       | 0.87 | 45.15       |    |    |     |
|                 | PQ3       | 0.93 | 72.12       |    |    |     |
|                 | PQ4       | 0.96 | 104.09      |    |    |     |
|                 | PQ5       | 0.92 | 77.81       |    |    |     |
|                 | PQ6       | 0.93 | 86.65       |    |    |     |
|                 | PQ7       | 0.93 | 86.69       |    |    |     |
|                 | PQ8       | 0.95 | 121.11      |    |    |     |
|                 | PQ9       | 0.90 | 59.92       |    |    |     |
|                 | PQ10      | 0.91 | 64.60       |    |    |     |
|                 | PQ11      | 0.91 | 63.28       |    |    |     |
|                 | PQ12      | 0.93 | 69.03       |    |    |     |
|                 | PQ13      | 0.93 | 63.91       |    |    |     |
|                 | PQ14      | 0.94 | 87.50       |    |    |     |
|                 | PQ15      | 0.90 | 51.59       |    |    |     |
|                 | PQ16      | 0.91 | 74.43       |    |    |     |
|                 | PQ17      | 0.89 | 59.42       |    |    |     |
|                 | PQ18      | 0.93 | 103.39      |    |    |     |
|                 | PQ19      | 0.90 | 49.03       |    |    |     |
|                 | PQ20      | 0.81 | 25.79       |    |    |     |
|                 | PQ21      | 0.93 | 68.55       |    |    |     |
|                 | PQ22      | 0.91 | 50.65       |    |    |     |
| Brand loyalty   | BL1       | 0.93 | 64.59       |    |    |     |
|                 | BL2       | 0.97 | 88.59       |    |    |     |
|                 | BL3       | 0.96 | 68.06       |    |    |     |
|                 | BL4       | 0.97 | 97.00       |    |    |     |
|                 | BL5       | 0.96 | 59.55       |    |    |     |
|                 | BL6       | 0.95 | 52.91       |    |    |     |
|                 | BL7       | 0.96 | 88.88       |    |    |     |
|                 | BL8       | 0.92 | 52.84       |    |    |     |
|                 | BL9       | 0.97 | 102.10      |    |    |     |
|                 | BL10      | 0.94 | 76.78       |    |    |     |
|                 | BL11      | 0.93 | 60.31       |    |    |     |
|                 | BL12      | 0.97 | 99.98       |    |    |     |

Student’s t: level of significance; CA: Cronbach’s alpha; CR: composite reliability; AVE: average variance extracted

Firstly, it should be highlighted that the sampling error was calculated for a total of 3,932 lecturers, all of whom were employed in one of the two universities analyzed in Valencia at the time of the survey, obtaining an error of 10% for a confidence level of 90% (estimating the maximum error committed in estimating the proportions as p=q=10%).

As can be seen, both the composite reliability indexes and Cronbach’s α (CA) have a high level of internal consistency for the four dimensions analyzed, since all the reliability measurements exceed the recommended levels (Cronbach, 1951). The composite reliability index values, in turn, exceeded even the strictest threshold of 0.8, with values higher than 0.88 in all cases.
A 5-point Likert scale was used (1=Strongly disagree and 5=Strongly agree)

These results confirm that the dimensions used to measure the educational brand capital were reliable, thus verifying the internal consistency of these dimensions.

Moreover, it should be pointed out that no proposed item was eliminated, in spite of the fact that BA2 did not individually meet the convergence validity criteria in terms of being higher than 0.6 (Falk & Miller, 1992). It is true that the set of items related to brand awareness have a high degree of consistency with regard to the composite reliability index and Cronbach’s α (CA). In terms of the average variance extracted (AVE), it must be noted that the values obtained in the present work were greater than 0.5 (Fornell & Larcker, 1981; Chin, 1998), thus making it possible to state, according to both analysis methods, that all four variables analyzed exhibit convergent validity.

Furthermore, in terms of the discriminant validity, it can be stated that the four educational dimensions show greater correlations with their measurement indicators than with the indicators of other dimensions, which indicates the existence of discriminant validity (Gefen & Straub, 2005). In light of all this, and analyzing the results obtained in Table 3, it is demonstrated that the values of the main diagonal are higher than those that lie outside it, which further supports the existence of discriminant validity.

Table 3

| Discriminant validity | Perceived quality | Brand image | Brand loyalty | Brand awareness | Brand capital |
|-----------------------|-------------------|-------------|---------------|-----------------|--------------|
| Perceived quality     | 0.916             |             |               |                 |              |
| Brand image           | 0.748             | 0.889       |               |                 |              |
| Brand loyalty         | 0.905             | 0.697       | 0.952         |                 |              |
| Brand awareness       | 0.411             | 0.489       | 0.397         | 0.788           |              |
| Brand capital         | 0.255             | 0.237       | 0.187         | 0.391           | 1.000        |

Diagonal: square root of the AVE; bottom triangle: correlation among the factors

Secondly, the structural model analysis was carried out by means of PLS, as shown in Table 4, indicating the path coefficients, which demonstrate the relationships between the constructs and the significance of the relationships. A bootstrapping technique was used for the stability and significance analysis of the estimated parameters, which made it possible to generate the Student’s t statistics and the standard errors (Aldás, 2012), confirming the existence of stable relationships in all the proposed structural relationships, as the value of the Student’s t statistic is significant in every case.

Based on the coefficients obtained and the significance of each one, it is possible to test the hypotheses. The t values are thus given for the (outer) model, demonstrating that the set of all the loads are significant, which reinforces our conclusion that the measurement model is reliable and shows convergent validity (Aldás, 2012). The results thus show that the four variables proposed have a positive significant effect on the brand capital in higher education institutions.

Finally, a Stone-Geisser Q-square (Q2) of predictive relevance was performed for each endogenous variable, in order to assess the fit of the model in the PLS analysis, according to the proposals of Geisser (1974) and Stone (1974), in which they state that Q2 generally provides more information than R2 and AVE, because the latter have biases, since they are evaluated with the same data that are used to estimate their parameters. In this manner, positive...
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values indicate that the model has predictive relevance, while negative values suggest that the model lacks predictive value (Wold, 1985; Fornell & Cha, 1994; Aldás, 2012). In our case, it is observed that all values are positive, thus showing that the model has predictive power in terms of their estimation.

Table 4
Hypothesis testing

| Hypothesis                                      | Standardized β | t value |
|-------------------------------------------------|----------------|---------|
| H1: Perception of brand awareness → Perception of brand capital | 0.391** | 6.06 |
| H2: Perception of brand image → Perception of brand capital    | 0.237** | 5.47 |
| H3: Perception of perceived quality → Perception of brand capital | 0.255** | 4.01 |
| H4: Perception of brand loyalty → Perception of brand capital | 0.187** | 8.40 |

R2 (F1:BA) = 0.153; R2 (F2:BI) = 0.056; R2 (F3:PQ) = 0.065; R2 (F4:BL) = 0.035
Q2 (F1:BA) = 0.074; Q2 (F2:BI) = 0.036; Q2 (F3:PQ) = 0.046; Q2 (F4:BL) = 0.028

** p < 0.01
* p < 0.05

5. Conclusions

The work conducted validates an instrument to measure university brand capital based on the perception of internal stakeholders. The proposed scale offers a measurement that is broken down into four dimensions (brand awareness, brand image, perceived quality of the brand and brand loyalty), each consisting of several indicators, which allows researchers, specialists and directors to evaluate the main aspects related to brand capital.

There are relatively recent empirical works carried out with samples of agents involved in higher education that used one or more of the four indicators mentioned above (brand awareness, brand image, perceived quality and brand loyalty) to measure educational brand capital (Brown & Mazzarol, 2009; Rojas, Vasquez, Kara & Cerdá, 2009; Mourad, Ennew & Kortam, 2011; Williams, Williams & Omar, 2013; Pinar, Trapp, Girard & Boyt, 2014; Retamosa, 2018), perhaps as the result of the lack of valid and reliable scales appropriated for this purpose. On a national level, there are also several current works that use a sample of agents involved in Spanish universities to develop and validate measurement scales based on two of the aforementioned variables, namely brand image and brand loyalty (Cubillo, Sánchez & Cerviño, 2006; Cervera, Schlesinger, Mesta & Sánchez, 2012). This goes to show that research is making progress in this sense, due to the need to develop scales adapted to institutions of higher education in Spain to measure their brand capital.

Therefore, the main contribution made by this article is the development of a valid, reliable scale to measure the brand capital of universities in Spain, for which there is no reference index. In addition, as no subjective weights of the factors are used, the proposed scale can be applied to any activity sector, since if necessary, specific weights could be established for each of the four dimensions, or even for one of the items, thus making this a versatile tool that is easy to apply.

Having analyzed these results and conclusions derived from the empirical study, they should be qualified by a series of limitations that we believe to be associated with this research. On the one hand, the model was tested based on the opinions of the lecturers involved over a specific period of time and in two particular universities in Valencia (Spain). For this reason, expanding this study to other universities and comparing the results is recommended, thus validating the...
It would be interesting to include other cooperating groups within the higher educational setting on both an internal and external level. An instrument in other institutions on both a national and international level. Likewise, it would also be appropriate to carry out longitudinal studies that contemplate possible variations over time, including other activity sectors, in order to verify its adaptability.

Finally, it should be indicated that the conclusions and limitations of this research, along with the nature of the very phenomenon being studied, allow further work to be carried out through the proposal of new lines of research. It would thus be interesting to include other groups participating in the higher educational setting on an internal level (administrative and service staff) and external level (students), since these groups are believed to be very important in order to increase the quality of the brand capital measurement of an educational institution, regardless of whether it is public or private.

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