

Efectos de la imagen universitaria sobre la identificación y la lealtad: ¿existen diferencias significativas entre estudiantes y egresados?

Effects of image on university identification and loyalty: are there differences between students and graduates?

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Resumen

Esta investigación tiene por objetivo analizar la existencia de diferencias significativas entre estudiantes y graduados con respecto al efecto positivo de la imagen universitaria en la identificación y la lealtad. Los datos se obtuvieron de una encuesta on-line y fueron analizados utilizando la técnica de ecuaciones estructurales (PLS-SEM). Los resultados muestran que existen diferencias significativas en el efecto positivo de la imagen en la identificación y la lealtad, siendo el efecto más intenso en los graduados que en los estudiantes.

Palabras clave: imagen; identificación; lealtad; análisis multigrupo.

Abstract

The aim of this research is to analyse the existence of significant differences between students and graduates regarding the positive effect of image on identification and loyalty. The data were obtained from an online survey. The data was processed using the structural equations technique (PLS-SEM). The findings show that there are significant differences in the positive effect of image on identification and loyalty, with the effect being more intense in graduates than in students.

key words: image; identification; loyalty; multigroup analysis.

1. Introduction

In the last years factors such as globalization, progress made in new information and communication technologies, the convergence to the Higher Education Area promoted by the Bologna process and the impact of the last major economic and financial crisis have all led to a more competitive environment that higher education institutions (HEIs) must deal with. All these factors have contributed to the fact that universities not only have to carry out their teaching and research work, but they must also adapt their marketing strategies to

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their different stakeholders, so that they can compete and ensure their survival (Blanco-Gonzalez, Díez-Martín, Cachón-Rodríguez, & Prado-Román, 2020; Pucciarelli & Kaplan, 2016).

Different studies have highlighted that image is an intangible key to the survival of organizations in highly competitive environments, through its influence on identification and loyalty ((Heffernan, Wilkins, & Butt, 2018). Thus, organizations that have a good image achieve a stronger commitment and relationship with their stakeholders (Cachón-Rodríguez, Prado-Román, & Blanco-González, 2019).

However, previous studies have not taken into account whether there are differences between the group of students and graduates in these relationships. HE, as well as business organizations, must attend to numerous stakeholders, and it is necessary to respond to whether image produces these same positive results in them in a different way. In this way, HEIs could be forced to adapt their strategies to their different stakeholders in order to obtain a stronger relationship with them, in such a way that will enable them to obtain a sustainable competitive advantage over time (Payne, Cruz-Suarez, & Prado-Román, 2018).

Therefore, this research aims to respond to whether significant differences are observed between students and graduates in the influence of image actions on two intangible variables of strategic nature, such as identification and loyalty in a public institution of higher education (University Rey Juan Carlos). In addition to students, the inclusion of graduates is essential for different reasons. An increase in private institutions leads public institutions to adopt relational marketing strategies with graduates to ensure their survival in the medium and long term. (Cervera et al. 2012). On the other hand, due to being members with previous experiences regarding the institution, graduates' evaluations and opinions regarding the institution can be key to recommending it to future students (Schlesinger, Cervera, & Calderón, 2014).

Moreover, although it is widely accepted that image has a positive impact on variables of attraction and retention of students and graduates, such as identification and loyalty, it is still necessary to verify to what extent this effect can be different between both groups. That is, the aim is also to quantify the different positive effects of image on the identification and loyalty of students and graduates, which makes this their first choice and makes them get involved in it.

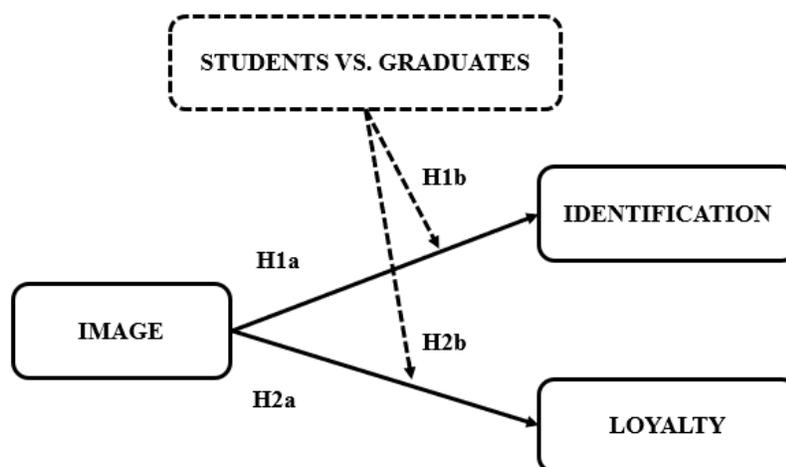
Thus, this paper represents a unique theoretical contribution, as it is one of the first studies to explore the existence of significant differences between students and graduates in the positive effect of image on identification and loyalty, so that HEIs can adapt their strategies and achieve greater survival. In addition, this contribution will be more significant when evaluating the results empirically through Henseler's MGA and permutation method.

The structure of this paper is as follows. Firstly, we will develop the theoretical framework and hypotheses. Secondly, we will develop the methodology with the results obtained. And, thirdly, we will draw the conclusions, implications for management and future lines of research.

1.1. Theoretical framework

Figure 1 shows the model to be tested in this investigation. This model shows that image has a direct and positive effect on identification and loyalty, and that these effects are moderated by the stakeholder category (student vs. graduates).

Figure 1
Proposed model and hypotheses



Source: Own elaboration

Image, identification and stakeholders

In the field of higher education, the university image is defined as the perceptions that its audiences have according to their ideas, interests (Hemsley-Brown, Melewar, Nguyen, & Wilson, 2016; Terkla & Pagano, 1993). Most literature considers the university image as a multidimensional construct formed by two elements: one that is cognitive or functional and the other one, which is emotional or affective (Díaz & Beerli, 2003; Polat, 2011). The functional or cognitive component is linked to tangible characteristics that can be measured easily (Ivy, 2001), and they are related to physical properties, such as the variety of studies, the price range or the design of the facilities. The emotional component is associated with psychological dimensions that are expressed by feelings and attitudes towards the institution. These feelings are derived from individual experiences with the institution and from the processing of information relating to the attributes that constitute functional image indicators (Cachón-Rodríguez, Prado-Román, & Zúñiga-Vicente, 2019). The emotional or affective aspects include aspects related to whether the institution is pleasant, stimulating, or lively, etc. (Díaz and Beerli 2003). Therefore, university stakeholders form their image according to the cognitive and affective aspects of the tangible and intangible elements of the institution.

Identification with the organization has been studied in marketing as a maximum bonding element between the consumer and the organization which is supported by the theory of social identification (Tajfel & Turner, 1986). This theory holds that an individual is characterized by interacting with two types of elements. On the one hand, an individual has features derived from social order due to belonging to groups and, on the other hand, an individual has idiosyncratic attributes that are characteristic of the individual. Every university, as an organization that it is, constitutes a form of social identification that occurs when a student's beliefs about a HEI become a self-definition (Mael & Ashforth, 1992). These beliefs are not only the awareness of an individual's membership to a HEI, but also involve a certain criterion of overlapping or coincidence between identities as a subjective element of conformity. This overlapping of identities contributes to generating significant ties and bonds between the stakeholder and the HEI, helping it to achieve its objectives (Palmer, Koenig-Lewis, & Asaad, 2016).

Different investigations have observed that the identification of a stakeholder with the university is closely related to different organizational factors, such as brand personality, external prestige and reputation (Cachón-Rodríguez, Gómez-Martínez, Martín-Navalón, & Prado-Román, 2019; Cristancho, Cancino, Palacios, &

Manjarrez, 2019). At university level, prestige is assimilated to the positive image of the institution, resulting from a set of past and present successful activities (Balaji, Roy, & Sadeque, 2016), which generate a high level of identification in students (Heffernan et al., 2018), in graduates Therefore, we can establish:

Hypothesis 1a: Image of students and graduates is positively related to the identification towards the university

However, as far as we know, previous research has not analysed whether the influence of image on identification generates different responses depending on the type of stakeholder. The stakeholder theory is based on the fact that an organization must take into account all groups, since, without their support, the organization could cease to exist, and not only customers or shareholders' support (Caballero, García, & Quintás, 2009; Freeman & Reed, 1983). In this regard, a HEI, like any other organization, must be managed strategically and must respond to very heterogeneous interest groups. These groups, instead of being called customers or workers, are called teachers, students, graduates or administration and service staff, etc.

Landrum, Turrisi, & Harless (1999) suggest that the university image can be considered the result of all the beliefs and perceptions that an individual has towards it. Thus, each individual forms an image about the university, which can be different for each person who evaluates the institution (Patlán & Martínez, 2017). Guédez & Osta (2012) point out that the university image is linked to the image perceived by its external agents (graduates, government institutions, organizations and society in general) and internal agents (students, teachers or administration and service staff), who due to their previous contact with the institution, interests and perceptions make a greater rational, cognitive and affective assessment of the institution's attributes. This heterogeneity can cause the relationship between image and identification to be evaluated differently. Different investigations have pointed out that the affective component of image reinforces and complements the cognitive component in the evaluation of an institution (Cervera, Waleska, Iniesta, & Sánchez, 2011). The fact that students are members that have been linked to the institution for a short time, may suggest that they have not generated strong bonds or ties with the institution and that they are even more variable or weak in the face of certain perceptions or communications that the institution wants to convey. As graduates are external agents that have been linked to the institution longer, the formation of their perceptions (images) can contain a greater amount of elements, both cognitive and affective, in the process of social comparison of their identity with that of the university, which enables them to maintain and express more fully and authentically their sense of who they are, their traits and values; that is, greater identification with it. Therefore, we can establish:

Hypothesis 1b: There are significant differences between the positive effect of image on the identification of students and graduates. The positive effect of image on university identification is more intense in graduates than in students.

Image, loyalty and stakeholders

In the current literature, the concept of loyalty in organizations has been studied from an attitudinal approach, which is composed of cognitive and affective aspects, as well as a behavioural component, closely related to repeated stakeholder behaviour (Kandampully, Zhang, & Bilgihan, 2015; Oliver, 1999). In the university field, loyalty also contains an attitudinal and behavioural component, which is not only limited to attracting new students or to the registration period, but can also affect the positive evaluation to recommend future courses, such as Master and Doctorate programmes, courses, seminars, etc. (Helgesen & Nettet, 2007; Marzo, Pedraja, & Rivera, 2005).

Several investigations have shown that the university image is considered an antecedent that is positively related to loyalty to the institution. Thus, a positive image will produce a favourable evaluation of its ability to attract new students (Nguyen, 2016), to generate positive recommendation attitudes from its students, graduates

(Cachón-Rodríguez, Prado-Román, et al., 2019), or to even attract other stakeholders who donate or finance research projects (Ali et al. 2016).

Hypothesis 2a: Image of students and graduates is positively related to the identification towards the university

However, as discussed previously, based on the stakeholder theory approach, this situation is not only restricted to evaluate a certain type of stakeholder, but it should also be evaluated if image produces different effects on the loyalty of two of its main stakeholders (students and graduates). Graduates are users who have been linked to the institution for a longer period of time, so they have achieved a greater number of contacts and previous experiences, and have obtained greater cognitive and affective perceptions about it (Guédez & Osta, 2012). Several previous investigations have related a greater number of positive evaluations of prestige elements (image) of an organization to the promotion of a more intense attraction towards the organization, greater resistance towards negative attitudes, greater recommendations and donations towards the organization (Ali, Zhou, Hussain, Nair, & Ragavan, 2016; Elbedweihi, Jayawardhena, Elsharnouby, & Elsharnouby, 2016). Thus, a greater number of graduates' perceptions (image) will generate a greater effect on positive attitudes regarding the expression of social relevance of training and education, as well as their recommendation to third parties, that is, greater loyalty. Therefore, we can establish:

Hypothesis 2b: There are significant differences between the positive effect of image on loyalty in students and graduates. The positive effect of image on university loyalty is more intense in graduates than in students.

2. Research methodology

2.1. Study context

Hypothesis testing was carried out within public universities, specifically in the University Rey Juan Carlos (URJC). The choice of a public university was motivated by the fact that Spanish public universities are losing competitiveness compared to private universities and strategic resources such as image can make a difference through identification and loyalty (Heffernan et al., 2018). In terms of the number of universities, public universities have the same number as 20 years ago, 50 out of 84, while in the same period, the number of private universities has doubled in the last 20 years, currently having a total of 34 universities (Pérez et al. 2017).

The URJC is the second public university of the Community of Madrid by number of students, with a total of 40,699 Spanish students during the 2018-2019 academic year and 4,762 foreign students. It is among the 250 best universities in Europe according to the Europe Teaching Ranking of 2019, developed by the prestigious organization, Times Higher Education. This classification recognizes and values the quality of education and teaching provided in European universities, based on the opinion of more than 125,000 students from 18 countries. It has managed to position itself among the best universities, worldwide, in different areas in the Global Ranking of Academic Subjects (such as, for example, Ecology, Communication, Biological Sciences, Chemical Engineering, Computer Science and Engineering) of 2019, which is made by Jiao Tong University of Shanghai, and is known as the 'Shanghai Ranking'. In addition, according to the QS Graduate Employability 2019 Ranking, it is among the top 11 universities in Spain and among the 300 in the world in the employment rate of its graduates. In the study on University Volunteering of the Mutua Madrileña Foundation of 2017, URJC ranks second among Spanish universities, with a total of 163 initiatives

2.2. Data collection

The data was obtained from an online survey. This process was developed in two stages. In the first stage, a 'focus group' was established in which different members of the Department of Business Economics participated and whose purpose was to prepare a pre-test that was sent online to 350 students, in order to check that the

questions were clear, and that the time was adjusted to the estimated time. Finally, in the second stage, the final questionnaire was designed, which provided a more appropriate structure and duration. In addition, in order to obtain greater participation, a link containing the same message on social networks was included.

All the constructs were measured through items adapted to previous studies, set in a higher education context (see table 1).

Table 1
Items used and mean

Construct/Items	Mean		
	Students	Graduates	
<i>Image. Based on Cervera et al. (2012)</i>			
<i>Cognitive image (IMACOG)</i>			
	6.067	5.122	
IMACOG1	In general, my university has a good image	4.922	3.474
IMACOG2	My university has good facilities	7.266	6.835
IMACOG3	My university has a good training offer	7.412	7.179
IMACOG4	My university is prestigious	4.670	3.000
<i>Affective image</i>			
	6.606	5.518	
IMAF1	My university is pleasant	7.296	6.656
IMAF2	My university is motivating	6.170	4.885
IMAF3	My university is dynamic	6.352	5.302
<i>Identification. Based on Mael and Ashforth (1992)</i>			
	7.521	5.422	
IDENTF1	I feel that I am part of my university	7.019	4.868
IDENTF2	I consider the success of my university as my own	7.229	5.030
IDENTF3	I feel proud of the positive opinions about my university		
<i>Loyalty. Based on Cervera et al. (2012)</i>			
	6.680	3.893	
LOYAL1	I would recommend my university to family and friends	7.324	3.889
LOYAL2	If I had to continue my training, my university would be my first choice	7.555	3.700
LOYAL3	If someone asked me for advice, I would recommend my university		

2.3. Statistical analysis of the data

The PLS-SEM method and SmartPLS3 software V.3.2.7 were used to process the data and test the hypotheses. PLS-SEM is a multivariable analysis method whose main purpose is to predict dependent variables by estimating path models (Hair, Sarstedt, Ringle, & Gudergan, 2018) and it also enables to justify moderating effects by using multigroup analysis (Rasoolimanesh, Roldán, Jaafar, & Ramayah, 2017) Multigroup analysis is performed by comparing the MGA (Henseler, 2012) and permutation method, since they constitute non-parametric methods that have the advantage of not imposing data distribution. The permutation method has the advantage of not imposing directional hypothesis, in addition to being considered the most reliable and recommended method (Hair et al., 2018). These arguments justify that they are valid techniques for processing our research data.

3. Results

3.1. Results of descriptive analyses

The descriptive statistics results for each of the questions in the questionnaire are shown in Table 1. The results show higher average values for students than for graduates in all the indicators. Regarding image and its dimensions, it is confirmed that the average values of affective image are higher than those of cognitive image, with the IMACOG3 indicator having the lowest values (for example, a value of 4,670 in students and 3,000 in graduates, in the question of whether your university has a good training offer). Regarding identification, the values are adequate for students, with values between 7,521 and 7,019, while graduates' values are between 5,030 and 4,868 in the lowest value (for example, IDENTF2, I consider the success of my university as my own). Regarding loyalty, it reaches higher average values in students than in graduates, none of the indicators manages to reach 4, with the LOYAL3 indicator having the lowest value (for example, a value of 3,700 in the question, I would encourage my family and friends to study in this institution).

3.2. Evaluation of results using PLS-SEM

Assessing the measurement model of type A indicators (identification and loyalty) involves analysing the individual reliability of its items by analysing their loadings, the construct reliability through: Cronbach's Alpha (CA), composite reliability (CR), Dijkstra-Henseler statistic (rho_A). Assessing the measurement model also requires analysing convergent and discriminant validity (Hair et al., 2018).

Values higher than 0.7 are recommended for individual indicator loadings and CA (Hair et al., 2018). CR values above 0.6 or 0.7 (Bagozzi & Yi, 1988; Henseler & Chin, 2010) are adequate. The rho_A statistic requires values higher than 0.6 (Dijkstra & Henseler, 2015). The AVE requires values higher than 0.5 (Chin 2010). Table 2 shows that all the indicators conform to these values.

Table 2
Measurement model reliability and validity

Construct	Items	weights/loadings	CA	CR	rho_A	AVE	VIF
Cognitive image	IMACOG1	0.697					3.125
	IMACOG2	0.249					1.642
	IMACOG3	0.290					1.619
	IMACOG4	0.645					3.233
Affective image	IMAF1	0.277					2.483
	IMAF2	0.435					3.257
	IMAF3	0.365					3.267
Identification	IDENTF1	0.916					
	IDENTF2	0.934	0.915	0.947	0.911	0.877	
	IDENTF3	0.921					
Loyalty	LOYAL1	0.931					
	LOYAL2	0.965	0.954	0.976	0.965	0.933	
	LOYAL3	0.969					
Image	IMACOG	0.604					2.592
	IMAF	0.454					2.592

For type B indicators (image), the assessment of the measurement model involves analysing the significance of the indicator weights and collinearity assessment through the invariance inflation factor (VIF). The assessment of the significance of the indicator weights requires $p < 0.05$ values and the value of the VIF must be less than 5 (Hair et al. 2018). As shown in Table 2, the results obtained fit the indicated values.

To analyse the discriminant validity of the reflective constructs, the heterotrait-monotrait ratio (HTMT) has been established as a criterion superior to the Fornell-Larcker criterion, since it requires high sample sizes and very heterogeneous loadings (Henseler, Hubona, & Ray, 2016). Kline (2015) recommends values lower than 0.85. As Table 3 shows, the data are valid as their values conform to what was previously mentioned.

Table 3
Discriminant validity

Construct	Identification	Loyalty
Identification		
Loyalty	0.826	

Before proceeding to test the hypotheses and compare the groups, it is necessary to assess the measurement instrument invariance (MICOM), which consists of three steps. Step1: to analyse the configuration invariance. Step 2: to analyse the composite invariance. Step 3: to analyse the equality of measurements (3a) of variances (3b). As shown in Table 4, all the original correlations (C) are above 5%, so we accept the null hypothesis. Therefore, there is composite invariance. Simple partial invariance is a sufficient requirement to be able to compare the differences between groups by using the permutation and MGA procedure (Hair et al., 2018).

Table 4
MICOM procedure

	Step 2		Partial Invar	Step 3a		Step 3b		Full Invar
	C=1	5% C _u		Differences	Confidence Interval	Differences	Confidence Interval	
Identification	1.000	0.998	Yes	1.117	[-0.178,0.199]	-1.582	[-0.355,0.476]	No
Image	0.999	0.926	Yes	0.509	[-0.180,0.198]	-0.455	[-0.258,0.310]	No
Loyalty	1.000	0.999	Yes	1.545	[-0.169,0.187]	-1.953	[-0.348,0.473]	No

Once the assessment of the measurement instrument and the measurement invariance have been carried out, we will proceed to evaluate the structural model and multigroup analysis.

The analysis of the structural model requires studying the possible existence of multicollinearity through the VIF, the significance of the path coefficients and the coefficient of determination R². Table 5 shows that there are no multicollinearity problems, as the values obtained are below 3 (Hair et al., 2018). In addition, it shows that image influences identification and loyalty positively and significantly, as the path coefficient obtains a p-value lower than 0.05 (Hair et al., 2018). To evaluate the structural model, after analysing the statistical significance, the coefficient of determination R² must be evaluated (Hair et al., 2018). This coefficient represents a measure of predictive power and indicates the amount of variance of a construct that is explained by the predictive variables of the endogenous construct in the model. Table 5 shows that the results of the R² coefficient for identification and loyalty are between 0.50 and 0.75. These values in the field of marketing imply moderate values (Hair et al., 2018). Therefore, these results allow to **validate the structural model**.

Table 5
Contrast of the structural model, hypothesis testing

Relationship	VIF	Path coefficient	T value (bootstrap)	p-Value
H1a Image -> Identification	2.274	0.644***	27.688	0.000***
H2a Image -> Loyalty	2.237	0.697***	35.045	0.000***

R2 (identification) = 0.595; R2 (loyalty) = 0.723
n=5.000 subsamples; *p<0.05; **p<0.01; ***p<0.001

Table 6 shows the results of the multigroup analysis through two non-parametric methods: the permutation (Dibbern & Chin, 2010) and Henseler’s MGA (Reinartz, Haenlein, & Henseler, 2009) method. These two methods which are used to evaluate the path coefficients between groups are considered the most reliable (Hair et al. 2018; Sarstedt et al. 2019). According to the permutation method, there are significant differences if the p value of differences between path coefficients is less than 0.05. In Henseler’s MGA method (based on bootstrap), these occur when the p value is above 0.95 or below 0.05 (Hair et al., 2018).

Table 6
Multigroup results, hypothesis testing

Hypothesis Relationships	Path coefficient students	Path coefficient graduates	Path		p-Value Differences (One-Tailed)		Acceptance
			coefficient original	Confidence interval 95%	p-value of permutation	p-value MGA	
			difference				
H1b Image -> Identf	0.402***	0.597***	-0.196	[-0.151, 0.158]	0.015*	0.000***	Yes/Yes
H2b Image -> Loyal	0.449***	0.740***	-0.290	[-0.140, 0.142]	0.000***	0.000***	Yes/Yes

*p<0.05; **p<0.01; ***p<0.001

Table 6 and figure 2 show the hypothesis testing results using a resample (bootstrap) of 5,000 subsamples and using 5,000 permutations (Sarstedt et al. 2019). The results show that image has a positive and significant effect on identification and loyalty in both students and graduates. The results of the multigroup analysis through the permutation and Henseler’s MGA method reveal the existence of significant differences between students and graduates in the positive effect of image on identification and on loyalty, as the p value obtained is less than 0.05 in the permutation method and the p value is less than 0.001 in Henseler’s MGA method. In addition, the positive effect of image on identification and loyalty is greater in graduates than in students. Therefore, the results confirm hypotheses 1 and 2, which reveals that there are significant differences between students and graduates in the effect of image on identification and loyalty, being more intense in graduates. Both methods, permutation and Henseler’s MGA, confirm the results on the existence of differences between students and graduates. This double confirmation method provides greater robustness to the results.

master's degrees, volunteer programmes, rankings, press news, etc., in which students and graduates make up a fundamental part.

On the other hand, the results show that the positive effects of image on identification and loyalty in a HEI are not similar between students and graduates. There are significant differences between them, with the effect being more intense on graduates than on students. This may be due to the fact that students only consider a university period as a mere process to acquire a degree. A higher effect of image on identification and loyalty in graduates may be due to the fact that because graduates have had previous experiences and contact, they have greater perceptions regarding variety and exchange options, such as the choice of a Centre to do a Master's Degree. That is why university managers must be aware of the need to strengthen this relationship with graduates during their university period and establish different mechanisms to maintain the relationship when they do not belong directly to it. A measure to solve this situation could be to increase participation and communication in social networks, in which students and graduates make up an active part of their content development and dissemination.

In addition, programmes such as "Alumni" developed by the URJC, where graduates serve as mentors of other students, strengthening transparency of processes, establishing roadmap meetings shared with other departments, carrying out a coordinated and coherent communication plan with the different areas to communicate their actions and promoting activities regarding the local community, etc. are some of the initiatives that can be developed to promote a more positive image.

4.1. Future lines of research

This work has been developed in the field of higher education, which is subject to simple limitations. Higher education institutions have specific peculiarities, so the results may not be applicable to other sectors. Thus, future research could see the results in the future, since the URJC is taking some measures in this regard. In addition, the proposed model could be contrasted with other types of organizations or sectors. In addition, although the heterogeneity of the sample has been segmented according to the role played by each group (student and graduate), there may be other additional criteria that show other groups or an additional heterogeneity within each group. Thus, we propose in future research to expand the sample to other contexts or countries, to expand the analysed groups (teachers, administration and service staff, managers, etc.) and identify other criteria or heterogeneity variables within each group (gender, type of studies, employment status, income level, etc.), in order to achieve greater robustness and generalization of the results. Texto subcapítulo

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