AN APPROACH TO UNIVERSITY SOCIAL RESPONSIBILITY AS FORERUNNER OF STUDENTS’ SATISFACTION

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Abstract

The field of social responsibility in higher education encompasses many themes. In this paper we focus on an explanatory model of the USR (University Social Responsibility), as antecedent of the perception of student satisfaction, confirming its generalization to higher education. This study used a semi-structured, self-reported questionnaire, answered on an online platform, by students from the 1st and 2nd cycle of studies, covering different perceptions and visions of USR by the students of a Portuguese HEI (Higher Education Institution). Some sociodemographic control variables were also introduced. Data were analysed using structural equation modelling through PLS-SEM to test the proposed research model. We note that a positive overall perception of USR leads to student satisfaction. In this way, results suggest the desirability of paying more attention to USR education in environmental and social values, research, internal management and external projection in a university, allowing the possibility of increasing student satisfaction. In this respect, it may be concluded that the early attraction of students to the subject of the USR plays a significant role in their future professional initiatives. Competitiveness in HEIs is a fact, considered a new trend as a business area, SR (Social Responsibility) being an increasingly widespread phenomenon in the economic and political scenario [1]. However, the application of SR in universities has deficiencies similar to those found in the business world, since there is no clear and specific consensus about their meaning and their concrete applications reflected in actions or strategies that allow them to achieve a socially responsible, unanimously accepted behaviour [2]. In recent years, the concept has gained prominence in the academic environment and in the management of HEIs, especially in the strategic management of these organizations, as well as in the creation of specialization and postgraduate programmes associated with this subject [2]. Universities have become a focus of attention in recent years, worrying about having a sustainable and/or responsible campus, publishing institutional reports on USR and trying to relate academic education and research with social participation that supports a more humane, inclusive and sustainable development model ([3], [4]). The paper seeks to fill the gap of the inexistence of studies that relate students’ USR perception and students’ satisfaction in Portugal.

Keywords: University social responsibility, student satisfaction.

1 INTRODUCTION

The concept of SR (University Social Responsibility), is essentially promoted by large multinational and transnational corporations, but it has been made more pressing for universities, since higher education can and should play a key role in promoting the development of civic and responsible values [5].

SR expresses a situation in which companies adopt a broader business vision and take responsibility for their impact on society [6], including the economic, environmental and social dimensions [7]. In this context, a new line of research has emerged that considers and extends SR to other organizations, such as public administration institutions, including HEIs (e.g. [8], [9], [10], [11], [12], [13], [14]).

Universities are currently confronted with increasingly competitive and commercial environments in the context of globalization and, consequently, adopting strategies that address the quality of service and the satisfaction of students as a way to obtain a competitive environment ([15], [14]).

Competitiveness in HEIs is a fact, considered a new trend as a business area, and RS is an increasingly widespread phenomenon in the economic and political scenario [16]. However, the application of SR in HEIs has similar deficiencies to those found in the business world, since there is no clear and specific understanding of their meaning and concrete applications reflected in actions or strategies that allow a
unanimously accepted behaviour [2]. In recent years, the concept has gained prominence in the academic world and in the management of HEIs, especially in the strategic management of these organizations, as well as in the introduction of specialization and postgraduate courses [2].

At present, HEIs have to be attentive to attracting students, concentrating efforts on communication and market research ([17], [18]), on student satisfaction and loyalty ([19], [20]) and on the management of relations with students and other stakeholders ([21]).

More recent studies ([22], [23]) validate the existing proposals ([24]) concerning stakeholders (clients, employees, competitors, communities, among others), confirming that the student is the most significant stakeholder for HEIs.

As so, and in order to promote student satisfaction in HEIs, responsible universities should be aware of students’ satisfaction and gather their opinion to encourage reflection on their learning ([20], [25]). It should also provide students with the opportunity to express their level of satisfaction with their academic experience, which is a good practice ([25]). In short, keeping customers satisfied is what leads to their loyalty.

It should be noted that, as reported by Vázquez et al. [14], there are few studies in this area of research that focus on the antecedents of student satisfaction, except for the use of quality of service (e.g. [26], [27]).

Thus, the objective of this study is to analyse if social responsibility influences higher education students’ satisfaction during consumption of education services.

The article is structured as follows: 1) introduction, where the work to be developed is presented; 2) literature review, which addresses the topics of university social responsibility and student satisfaction; 3) methodology; 4) research results; 5) results discussion; and 6) conclusions, where the main conclusions, implications and future suggestions are presented.

2 LITERATURE REVIEW

2.1 University social responsibility

The changes embodied in the role of HEIs emphasize that, for their contribution to social welfare, HEIs have a growing SR ([27]). It is for this reason that HEIs play a critical role in creating responsible global citizens in the postmodern world ([28]), and their formative role, one of the pillars of their “perennial” mission, is increasing, creating an “intelligent power”, power of influence being one of the fundamental vectors of SR ([28]).

In this way, the concept of USR is growing, as it is a necessity for the correct functioning of universities, in the development of their actions and in the achievement of their objectives as an institution that responds to requests for social development ([29]).

Thus, universities must make efforts to comply with USR through an academic offer based on a social diagnosis, promoting the quality of teaching in each of its areas, developing research projects, fulfilling the partnership plan with society, in the fulfilment of a total inclusive policy, in the professional pedagogical improvement of its faculty, as well as the delivery to society of highly qualified and competitive professionals ([29], [30]). In this way, the HEI has a direct impact on the future of society through the training of professionals and leaders, but it is also a social actor who can promote the education of students according to the external social reality and make this knowledge accessible to all ([31], [20]). The HEI should, then, try to overcome the “social projection and university extension” approach as well-intended appendices to its central role in student training and knowledge production, to take up the real demand for USR ([32]), assuming the role of catalyst for dynamic (social) changes [12].

2.2 Student satisfaction

Unlike other services, higher education services are continuous and long-term, where students’ cognitive participation is essential and their needs are fulfilled by different service providers ([33]). Student motivation is vital to their involvement, and for them to succeed in the long and continuous education process ([34]). This is a cyclical process, in which quality services provided by institutions will motivate students to participate in the educational process, which, in turn, improves the quality of educational outcomes ([35], [39]).
In this context, it is noteworthy that student satisfaction plays a crucial role in the success of a HEI and can also act as an essential tool to improve perceived service quality ([36]).

Thus, the concept of satisfaction has also extended to higher education services. Students’ satisfaction with the quality of the services provided by the HEI has been studied by numerous researchers (e.g. [37], [38], [39]). As for the concept of satisfaction, Spreng and Singh [40] defined it as an emotional reaction to a product or service experience. It should be noted that the literature on customer satisfaction is based on several definitions that refer to concepts such as experience or quality of service, expectations, perceived value and consequent service evaluation (e.g. [41]).

Elliott and Healy [42] argued that student satisfaction is a short-term attitude as a result of their experience with the educational services received. According to Sapri, Kaká, and Finch [43] student satisfaction plays an important role in determining the accuracy and authenticity of the services provided.

In line with this, we have formulated the following hypotheses:

- \( H_1: \) USR Student Perception influences Student satisfaction
- \( H_2: \) The general perception (overall) of USR influences student satisfaction
- \( H_3: \) USR Student Perception influences the overall perception of USR

3 METHODOLOGY

The study used a semi-structured, self-reported questionnaire answered in an online platform (LimeSurvey), translated and adapted from Vázquez et al. [14], Vallaeys [8] and Vallaeys et al. [44].

The questionnaire was applied to the students attending the 3rd year of the 1st cycle and the students of the 2nd cycle of studies, between the 6th and 10th of April, 2017, of the University of Trás-os-Montes and Alto Douro (UTAD).

The questionnaire consists of: a) sociodemographic items; b) students’ perceptions about USR in a total of 46 items subdivided into the dimensions of teaching, R&D, internal management and extension to community; c) a global USR index consisting of 3 questions regarding students’ overall perception of USR (environment, economic and social); and d) 6 items associated with student satisfaction.

From a population of 3,563 students, 1,419 surveys were completed, corresponding to a rate of 39.8%, of which 13.2% were found to be incomplete and not considered. Of the 949 final surveys, 46 were considered invalid and the final sample had 903 surveys, corresponding to a response rate of 25.3%.

The final sample consisted of 68.4% of students in the 3rd year of the 1st cycle of studies or Integrated Masters, being the remaining 31.6% of students in the 1st or 2nd year of the 2nd cycle of studies. Of the students in the sample, 39.5% are male and 60.5% are female. As far as the age group is concerned, 20.0% of the students in the sample are between 19 and 20 years old, 19.9% are 21 years old, 16.7% are 22 years old, 13.0% are 23 years old, 19.9% are between 24 and 29 years old and 10.4% are 30 years old or more.

To estimate the proposed model we used PLS-SEM ([45], [46]). Among the reasons of using PLS-SEM are its fewer demands on the underlying data distribution and sample size compared to covariance-based structural equation modeling (CB-SEM) which has constraints regarding the distributional properties (multivariate normality), measurement level, sample size, model complexity, identification, and factor indeterminacy ([47], [48]). The software used was SmartPLS 3 ([49]).

4 RESULTS

At this point, we created the model previously established in the theoretical framework illustrating the structural model that defines the causal or association relationships between latent variables.

The psychometric properties of USR and Satisfaction, were tested using confirmatory factor analysis (CFA). The PLS-SEM model evaluation rely on bootstrapping, a form of resampling procedure. The bootstrapping settings used were cases equal to the number of our sample (903), with 5,000 replications and individual level changes.
4.1 Outer Model (measurement model)

For the outer model evaluation of the latent variables, we followed the recommendations stated in Hair, Sarstedt, Ringle and Mena [47], Hair, Sarstedt, Ringle and Pieper [50] and Gefen, Rigdon, & Straub [51], evaluating internal consistency reliability ([52]), factorial validity (Hulland, 1999), convergent validity ([52]) and discriminant validity, using the Fornell-Larcker criterion ([53]).

Factorial validity was examined by measuring the outer loadings on all items in the model. The absolute standardized outer loadings ranged from 0.882 to 0.963 (see Table 1). Convergent validity was assessed by measuring AVE ([53]). All constructs showed AVE values greater than the 0.5 threshold ranging from 0.833 in USR Student Perceptions to 0.905 in USR overall, so convergent validity was verified ([52]). Likewise, Composite Reliability values ranged from 0.952 in USR Student Perceptions construct to 0.905 in USR overall (>0.70) and Cronbach’s α, assuring internal consistency reliability.

<table>
<thead>
<tr>
<th>LV</th>
<th>Items</th>
<th>Loadings</th>
<th>t stat</th>
<th>AVE</th>
<th>CR</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student satisfaction</td>
<td>Sat1</td>
<td>0.898</td>
<td>103.206</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sat2</td>
<td>0.929</td>
<td>135.281</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sat3</td>
<td>0.910</td>
<td>108.442</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sat4</td>
<td>0.926</td>
<td>128.750</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sat5</td>
<td>0.935</td>
<td>161.719</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sat6</td>
<td>0.924</td>
<td>129.277</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USR Overall</td>
<td>USR1</td>
<td>0.936</td>
<td>119.798</td>
<td>0.847</td>
<td>0.971</td>
<td>0.964</td>
</tr>
<tr>
<td></td>
<td>USR2</td>
<td>0.963</td>
<td>219.223</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>USR3</td>
<td>0.956</td>
<td>217.086</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USR Student Perceptions</td>
<td>USR_R&amp;D</td>
<td>0.913</td>
<td>101.303</td>
<td>0.905</td>
<td>0.966</td>
<td>0.947</td>
</tr>
<tr>
<td></td>
<td>USR_Teach</td>
<td>0.882</td>
<td>75.043</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>USR_Ext</td>
<td>0.931</td>
<td>125.974</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>USR_Mgm</td>
<td>0.926</td>
<td>89.195</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For the discriminant validity of our constructs we verify if each latent variable AVE is higher than its squared correlation with any other construct, in this case if the square root of AVE is higher than its correlation with any other construct. The values of the square root of AVE for each construct are greater than the highest correlation between that construct and the other constructs ([53]) (see Table 2).

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student Satisfaction</td>
<td>0.920</td>
<td></td>
</tr>
<tr>
<td>2. USR overall</td>
<td>0.803</td>
<td>0.951</td>
</tr>
<tr>
<td>3. USR Student Perception</td>
<td>0.631</td>
<td>0.667</td>
</tr>
</tbody>
</table>

Note: bold diagonal figures are the square roots of AVE

4.2 Inner Model (structural model)

The evaluation of PLS model is based on prediction oriented measures that are non-parametric ([54]). The PLS structural model is mainly evaluated by $R^2$ of the endogenous latent variable ([54]), effect size $f^2$ ([55]) and the Stone-Geisser $Q^2$ test for predictive relevance ([56], [57]).

The predictive power of the model was analysed using $R^2$ with its values ranging from 0.445 in the USR overall latent variable to 0.661 in the Satisfaction variable (Table 3), all of which are greater than the acceptable threshold of 0.1 ([58]).

The effect size ($F$) complements $R^2$ and considers the relative impact of a particular exogenous latent variable on an endogenous latent variable by means of changes in the $R^2$ ([59]) and values of 0.02, 0.15
and 0.35 are suggested for small, medium and large effect sizes of the predictive variables ([59]). In our study, we found large effect sizes of USR overall ($f^2 = 0.774$) on Satisfaction and of USR Student Perception ($f^2 = 0.802$) on USR overall. The effect sizes of the latent variables at the structural level are depicted in Table 4.

Table 4. Effect sizes of the USR Student Perceptions, USR overall latent variables on Satisfaction

<table>
<thead>
<tr>
<th>Paths</th>
<th>R²</th>
<th>$f^2$</th>
<th>$f^2$ effect size rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>USR Student Perception → Student satisfaction</td>
<td>0.661</td>
<td>0.048</td>
<td>Small</td>
</tr>
<tr>
<td>USR overall → Student satisfaction</td>
<td>0.661</td>
<td>0.774</td>
<td>Large</td>
</tr>
<tr>
<td>USR Student Perception → USR overall</td>
<td>0.445</td>
<td>0.802</td>
<td>Large</td>
</tr>
</tbody>
</table>

We assessed the predictive relevance of the USR overall and Student Satisfaction endogenous latent variables using Stone-Geisser’s $Q^2$ statistic ([57], [56]). By following the blindfolding re-sampling approach (omission distance = 5), the predictive power of the model was examined by means of Stone-Geisser’s $Q^2$, cross-validated index ([60], [61]). The $Q^2$ value of student Satisfaction ($Q^2=0.489$) and USR overall ($Q^2=0.360$) were greater than zero, suggesting the predictive relevance of the model ([54]).

5 RESULTS DISCUSSION

Hypotheses were tested examining the significance of the path coefficient estimates on the three paths in the inner model. In order to produce more reasonable standard error estimates, we used a bootstrap technique ([60]) in order to generate standard errors and obtain t-statistics.

The path coefficient from USR Student Perception to Student Satisfaction has a direct effect of 0.172 ($t=5.519$, $p<0.001$) so H1 is supported, and a mediated effect by USR overall of 0.459 ($t=18.071$, $p<0.001$). The path coefficient from USR Student Perception to USR overall is 0.667 ($t=25.169$, $p<0.001$), so H3 is supported. Table 4 summarizes the results of the hypothesis tests.

Table 4. Assessment of path analysis

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Standardized coefficients</th>
<th>t-statistics</th>
<th>Supported hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: USR Student Perception → Student satisfaction</td>
<td>0.172</td>
<td>5.519</td>
<td>True</td>
</tr>
<tr>
<td>H2: USR overall → Student satisfaction</td>
<td>0.688</td>
<td>23.066</td>
<td>True</td>
</tr>
<tr>
<td>H3: USR Student Perception → USR overall</td>
<td>0.667</td>
<td>25.069</td>
<td>True</td>
</tr>
</tbody>
</table>

According to the results obtained we can see that the global perception of USR influences student satisfaction.

With regard to Hypothesis 1 statement about global perception of USR’s impact on student satisfaction, the respondents feel they made the right decision in choosing to pursue their education in their particular HEI. The students are so satisfied with their academic experiences that they would recommend this university to others.

In what concerns to hypothesis 2 we may found that the USR overall, that is measured by the three pillar of social responsibility and evaluate the students perceptions about the potential university contributions of environmental, economic resolution and social problems, is an antecedent of student satisfaction. It is important to note that UTAD engage their students in its mission in what concerns it pretention to become an Eco-university. It is to note that this effect has a large size rating.

Indeed, students recognize that UTAD promotes the relationship with society, by emphasizing the social projection and university extension. As so, we have validated the 3rd hypothesis that impact students perceptions within the four impacts (teaching, R&D, extension and internal management) and the USR overall (environment, economic and social). It is to note that this effect has a large size rating.
6 CONCLUSIONS AND RECOMMENDATIONS

HEIs have become a focus of attention in recent years, with concern about having a sustainable and/or responsible campus, publishing institutional reports on USR and trying to relate academic training and research with social participation that supports a more humane, inclusive and sustainable development model.

Assuming this concern we may conclude that the fact that the University highlights explicitly in its vision aiming to be a more cohesive, collaborative, connected and competitive university, embedded in a culture of social responsibility, which traced as its motto ‘Towards an Eco-university’, which underlines the university’s strategic concern about the environment and sustainability.

In this sense several activities are promoted such as the social support fund, through remunerated activities within the UTAD students’ community (e.g., visits to secondary schools to publicize courses, treatment of animals), environmental concern (e.g., implementation of environmental management system by ISO14001), promotion of students volunteering, among others.

Therefore, as an implication of our study, and others, we recommend that the HEI rethink its mission and strategy having as one of the pillars the USR, involving all its stakeholders, especially students and collaborators (faculty and non-teaching staff).

As so, this research should be replicated in other regions of Portugal and elsewhere, taking into account cultural differences, stages of economic and social development and issues such as religion and ethnicity. It is also fundamental to conduct longitudinal analyses to establish stronger causal interpretations from global USR perception and student satisfaction, along with university strategy actions to attract and retain students.

REFERENCES


