TO RECOMMEND OR TO REGRET THE CHOICE? FACTORS EXPLAINING STUDENT LOYALTY: EVIDENCE FROM THE CATALAN UNIVERSITY SYSTEM

¿RECOMENDAR O LAMENTAR LA ELECCIÓN? FACTORES QUE EXPLICAN LA LEALTAD DE LOS ESTUDIANTES: EVIDENCIA DEL SISTEMA UNIVERSITARIO CATALÁN

ABSTRACT

This study analyses the determinants of students' loyalty and seeks to characterise the profile of recent university graduates. The empirical application considers the region of Catalonia, in Spain. Data come from the Satisfaction Graduate Survey elaborated by the Catalan University Quality Assurance Agency. A total of 2,557 questionnaires were collected. Results reveal that satisfaction is a key determinant of loyalty. Other factors that explain students' loyalty are entrance marks and academic preferences (university and academic degree). Also, a further examination of the students' profiles reveals that three different groups can be identified: loyal and satisfied students who did not enrolled in their most preferred academic option (first choice), unsatisfied students, and a group of loyal and satisfied students. Implications for policy and practice are discussed.

KEYWORDS: Higher education; loyalty; satisfaction; graduates; enrolment

RESUMEN

Este estudio analiza los determinantes de la lealtad de los estudiantes y busca caracterizar el perfil de los recién graduados universitarios. La aplicación empírica considera la comunidad autónoma de Catalunya, en España. Los datos provienen de la Encuesta de Satisfacción de Graduados elaborada por la Agencia para la Calidad del Sistema Universitario de Catalunya. Se recogieron un total de 2.557 cuestionarios. Los resultados revelan que la satisfacción es un determinante clave de la lealtad. Otros factores que explican la lealtad de los estudiantes son las notas de ingreso y la preferencia académica (universidad donde cursar los estudios y título universitario). De un análisis más detallado de los perfiles de los estudiantes, se identifican tres grupos: estudiantes leales y satisfechos pero que no pudieron acceder a su primera opción de estudios, estudiantes insatisfechos, y un tercer grupo de estudiantes leales y satisfechos. El artículo concluye con la discusión de las implicaciones.

PALABRAS CLAVE: Educación superior; lealtad; satisfacción; acceso a la universidad

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INTRODUCTION

D riven by a more dynamic knowledge-based economy, higher education institutions (HEIs) are increasingly looking for talent (i.e. professors, researchers and students) and external sources of funding to sustain their different activities (Knight, 2013; Hemsley-Brown and Oplatka, 2006). As a result, most HEIs have increased their investments to distinguish themselves and strengthen their image of prestige or quality (Hazelkorn, 2015). However, despite these large investments in marketing campaigns, it is the reputation of the university what seems to be the determinant for loyalty and retention of talent (Marginson, 2014; Helgesen and Nesset, 2007).

Institutional reputation can be seen as the outcome of the business' efforts for communicating the quality of its products or services to its target groups. Acknowledging that students are one of the primary customers of HEIs (Sultan and Wong, 2013), in this study we exclusively focus on this market segment. Threating students as costumers has caused controversy from the very beginning (Tight, 2013; Natale and Doran, 2012), however, it seems that the fierce competition among HEIs has lead universities to consider themselves as service providers and students as customers (Vauterin et al., 2011). Notwithstanding, we ought not to forget that students are learners (Sultan and Wong, 2014). That is, although students pay for a specific service, the primary goal of education is to equip them to become effective professionals. However, the adoption of a student-centric approach may encourage the introduction of innovative practices. Therefore, similar to Dlačić et al. (2014) we consider students as primary customers of higher education services.

A pleasant customer experience has been proven to be a source of positive word-of-mouth (Han et al., 2008). Accordingly, it is crucial to encourage a positive word-of-mouth among recent graduates if the objective is to attract prospective students in the short and long term. Following Dick and Basu (1994) we posit that this goal can be achieved by maintaining a loyalty relationship with customers, in our case, students.

Literature in the field of marking in HEI is notable, yet, research in the field of institutional choice is long overdue and new empirical studies are necessary. For the most part, previous works have mainly drawn their attention to the factors that drive students to select the university in which they enrol but tend to underestimate the factors influencing the choice of the institution (Hemsley-Brown and Optlatka, 2015). Also, such studies are frequently based on convenience samples from one university or one subject discipline; therefore, the results reveal more about that single institution than they do regarding choice per se. Another important stream of research contains studies analysing students' perceptions at the subject level (e.g. Petruzzellis and Romanazzi, 2010; Beerli Palacio et al., 2002). Typically, these studies are primarily based in English-speaking nations, such us Australia and United Kingdom.

The novelty of our study stems from adopting a broader perspective of students' perceptions. Specifically, we argue that because student experiences at HEIs go beyond subjects and courses, there is a need to explore the whole experience of the student, and thus, investigate how this experience might influence others' choices when selecting the university. This argument is also aligned with that of Pascarella and Terenzini (2005) who conclude that the impact of college beyond the academic involvement is due to the interpersonal and extracurricular offering on the campus. Given this setting, our research focuses on students' perceptions after their graduation. Their opinions are the natural consequence of a multitude of experiences that have taken place during different years. Higher education is a clear example of

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a service that lasts over a certain period of time and it is not one unique experience, but an accumulation of experiences which shape students' final perceptions of their years of schooling (Marimon et al., 2020).

The objective of this paper is twofold. First, we aim at identifying the antecedents of students' loyalty. Until recently universities had paid little attention to student loyalty, and concentrated their efforts on attracting students rather than investigating the student experience. Paraphrasing Jacoby and Chestnut (1978, 42), *"loyalty is most probably a complex, multifaceted phenomenon"*; accordingly, it is common to find different interpretations of this construct in the literature. For the purpose of this study we define loyalty as the student's willingness to repeat the choice of university at which they studied and the academic programme in which they enrolled. The second objective is to characterise the profile of new graduates and discuss the potential implications of each of the profiles identified. With the aim of expanding this research outside English-speaking countries, we provide evidence of the region of Catalonia (Spain). Data come from a pioneering survey conducted by the Catalan University Quality Assurance Agency (AQU, Spain) in 2013 with 2,557 respondents.

The remainder of this paper is structured as follows. Following this introduction we present the theoretical background that supports our arguments. The next section describes the empirical design of this study. Next, results are displayed and discussed together with the main implications for policy and practice. The paper ends with the major conclusions and indications for future research.

THEORETICAL UNDERPINNINGS

Students are active recipients of the services offered at universities, but what is more, they consciously choose and pay for the service (Kuh and Hu, 2001). It is for this reason that the way in which they perceive the service will undoubtedly invite them to reflect upon whether they have made the correct choice when they decided where and what to study. This self-analysis will be then

communicated to friends and prospective students, thus having an impact not only on the reputation of the university and the academic programme chosen, but will also influence others' decisions.

Due to the competitiveness of the market (Kunanusorn and Puttawong, 2016; Soutar and Turner, 2002), achieving students' loyalty is becoming a strategic issue for HEIs (Nesset and Helgesen, 2009). Student loyalty consists of an attitudinal and a behavioural component (Hennig-Thurau et al., 2001, Watson et al., 2015). On the one hand, cognitive, affective and conative elements comprise the attitudinal component, while, on the other hand, the mobility options of students are more closely related to the behavioural component (Helgesen and Nesset, 2011).

Loyal students are more likely to recommend the university within their social circle and to prospective students. According to Helgesen and Nesset (2007) the loyalty of a former student may be more important than that of a current student, and because the effect of university is a long-term one, the construct of student loyalty can be applied to a university, a specific course, or any other component within the university setting. As Alves and Raposo (2007) highlight, HEIs should greatly take advantage of establishing lasting relationships with their students, as such a relationship can provide the institution with a competitive advantage, not only in terms of a positive word of mouth, but as a means to create potential collaborations with the institution, especially after graduation or contributing to work-placement of recent graduates.

Loyal customers are typically satisfied customers, but satisfaction does not universally translate into loyalty. Following this argument, Van Riel et al. (2004) recognise the existence of causal links between these constructs and with a third one, service quality; however, they point out that the direction and strength of the links depends on the type of service. Marimon et al. (2014) also suggest the existence of a third construct. In an online context, they consider value as an antecedent of satisfaction, and the latter as an antecedent of loyalty. In the higher education context, and for a sample of Australian universities, Brown and Mazzarol (2009) converge in the direction of this relationship and found that student loyalty to a

university is determined by the overall level of satisfaction with the institution, which, in turn, is influenced by the perception of value of the overall educational service experience. Other relevant factors include the image of the institution and the perceived quality of the *humanware* (described as the service quality associated with people and process) and the *hardware* (referring to the infrastructure and tangible service elements). Barnett (2011) goes a step further and claims that student satisfaction can be considered as one of the main determinants of loyalty, since how students perceive the service is one of the main indicators HEIs employ to determine the quality of the service offered.

Given the aforementioned arguments, it seems reasonable to argue that student satisfaction is one of the main determinants of loyalty. Nevertheless, as seen above, literature on the service industry reveals that besides satisfaction, there are other factors influencing loyalty that need to be considered. This is the case because a service encompasses a series of emotional and cognitive responses that pertain to a particular focus (such as expectations or actual experiences), which occur after consumption or after accumulative experiences. For instance, Ladhari et al. (2011), in the bank industry context, classify the determinants of loyalty into three key dimensions, namely, perceived quality, emotional satisfaction and image. Their study emphasises the need to consider emotions when modelling the determinants of loyalty and recommendation because the service under analysis is a utilitarian one. In the telecom service sector, Izogo (2016) defines attitudinal loyalty as the customers' likelihood to return or recommend to a service provider, and identifies two types of antecedents, service reliability and customer commitment. Another example can be found in the work of Han et al. (2008) and their application in varied service sectors (i.e. airlines, banks, beauty salons, hospitals, hotels, mobile telephone). Using data from 3,500 customers in China, they conclude that in addition to customer satisfaction, factors like commitment, service fairness, service quality, trust, and commerce friendship also positively impact customer loyalty. Based on these results, Henrique (2015) expands the model and considers the influence of personal values and demographic variables on customer loyalty. The

recent work of Tanford (2016) offers a comprehensive review of the literature on the antecedents of loyalty, including those factors that impact either directly or indirectly on customer loyalty. By means of an operational approach, the results of her empirical model reveal a strong relationship between direct antecedents of loyalty (i.e. satisfaction, emotional commitment, service quality, trust, and switching costs) and overall loyalty. As for the indirect antecedents of loyalty, those exhibiting a significant relationship with loyalty are experiential, monetary, and relational attributes.

In the specific context of HEIs, Agrawal and Tan (2016) suggest that other factors that are worthy of consideration as potential antecedents of student loyalty are service quality (e.g. skilful and caring academic staff), processes and campus facilities. In fact, according to Martínez-Argüelles and Batalla-Busquets (2016), the growing interest in the HEI literature in understanding which other factors explain loyalty has triggered the appearance of many possible factors. These authors give some examples. For instance, they argue that both Bers and Smith (1991) and Deil-Amem (2011) consider the importance of social integration, Baker et al. (1985) and Rivas et al. (2007) refer to pre-matriculation attitudes, and Tinto (1987) highlights the importance of goals and institutional commitment.

To sum up, we argue that there are several holistic factors that shape students' experiences while at university (Douglas et al., 2015). Note that higher education is a special service that revolves around the student's experience and how to connect this experience with the institution (Fuery et al., 2014; Khanna et al., 2014). This experiential service gives rise to a co-creation process in which students are co-producing their own educational experience (Robinson et al., Celuch, 2016; Fleischman et al., 2015). Therefore, it seems reasonable to hypothesise that not only satisfaction but also other factors such as students' demographic profile, the participation in extension activities, or prior expectations might play a role in explaining students' loyalty.

Based on this rationale, and understanding loyalty as the student's willingness to make the same choice if s/he had to select the academic degree/university again,

we formulate the two research questions guiding this research: (1) What explains students' loyalty to HEIs? (2) How different are the profiles of graduates? Moreover, to what extent does the graduates' profile influence their loyalty? To address these research questions we focus on the Catalan higher education system.

METHOD

SAMPLE

Data come from an official survey conducted by the Catalan University Quality Assurance Agency (AQU) in October 2013, which aimed to investigate the profile and the perceptions of all graduates of the Catalan higher education system for the academic year 2012/13. A total of 2,557 surveys were collected. The authors of this study signed an agreement with AQU in order to explore all data collected and offer new insights into the quality delivered by Catalan universities. The questionnaire was designed by AQU and validated by a number of external experts who contributed to ensuring its internal validity.

AQU is the primary instrument for quality promotion and assurance in the higher education system in Catalonia. It is a public body subject to private law under the corresponding government department with jurisdiction over universities. It is a separate legal entity with full legal capacity to act in terms of its own privileges and liabilities. Set up as a consortium of the Catalan Government and the universities in 1996, it was the first quality assurance agency in Spain. AQU is a full member of the ENQA (European Association for Quality Assurance in Higher Education), is registered with the EQAR (European Quality Assurance Register) and is ISO 9001 certified (AQU 2016).

The Catalan higher education system consists of twelve universities, seven of which are public, four private, and one of a mixed nature. According to the 2016 edition of the U-ranking (elaborated by the BBVA Foundation and the Valencian Institute of Economic Research), on average, Catalan universities outperform other regions in Spain. Specifically, their performance index is 20% higher than the national average, and reach leading positions in the different dimensions examined (teaching, research, innovation and technological development).

VARIABLES

With the aim of measuring customer loyalty in a higher education setting, we considered two dependent variables. The first one refers to the likelihood of a student making the same choice in terms of the bachelor's degree in which he/she enrolled. The following question was posed to graduates: *If you were to start again, would you choose the same degree?* A yes/no answer was suggested. An affirmative response signalled that the student would recommend his/her choice to future students. An alternative answer would indicate regret concerning the choice, and consequently, the absence of loyalty. The second dependent variable refers to the university. A second question was formulated: *If you were to start again, would you choose the same university?* The same reasoning as in the former question applies here for the interpretation of results. A negative response indicates dissatisfaction with the university, and thus, negative word-of-mouth, meaning that in the case in which a graduate would have to give advice to future students, s/he would probably recommend choosing a different university if there were a similar academic programme. On the contrary, a positive answer suggests loyalty, and thus, recommendation.

Concerning the factors that might shape customer loyalty, this study uses 7 independent variables. First, as previous studies have noted, satisfaction is a common antecedent of loyalty. We also wanted to test this effect in our study. Accordingly, we included as an independent variable one of the latest questions of the AQU survey: *Are you satisfied with your chosen degree programme?* Respondents were asked to provide their evaluation on a 5-point Likert scale, ranging from completely satisfied (5) to completely unsatisfied (1).

Academic records of the students may also play a role in determining what and where to study. In order to test this hypothesis, we included 2 variables that captured the academic performance of the student prior to accessing the university. On the one hand, we considered the entrance mark. In Catalonia (as in Spain), all students wishing to study at the university have to take the "university entrance exam" (known as PAU). This exam is intended to evaluate the academic maturity, knowledge and abilities acquired

during upper secondary school education. The mark for the general phase of the PAU, along with the average upper secondary school qualification mark, is used to calculate the entrance mark for university studies. This university entrance mark is valid indefinitely. The admission mark for each specific bachelor's degree is calculated using the marks for the subjects tested in the specific phase, duly weighted. It is worth mentioning that not all students can enrol in their preferred bachelor's degree. Students demand tends to exceed the academic offers; consequently, students are required to submit a prioritised list, just in case the capacity runs out. The higher the entrance mark, the greater the likelihood of being admitted to the first choice. Because of that, we posit that the experience of students might differ based on whether the academic programme and the university in which they finally enrol was the one at the top of their list.

Universities offer co-curricular services to students as a way to enrich their experience. In this respect, we included a fourth variable that captured whether the university and the academic programme supported cross-border mobility. Studying abroad yields not only academic benefits (e.g. learning another language, discovering learning in a new way), but also provides social and cultural benefits. Furthermore, it helps students increase their self-confidence and gain a competitive edge when it comes time to start a career.

Universities are also offering students a wide variety of extracurricular activities in which they may take part. Some examples include the student representative committee, institutional working groups, assemblies, associations, the students' union, etc. For a student, participating in such activities might create an emotional link with the university and a sense of belonging. We thus hypothesise that participating in such social life initiatives can positively influence his/her perception of the university (Ahmad, 2015). Hence, a fifth variable (dummy) was thus introduced in order to capture this effect, named involvement.

Table 1. Variables under study.

Variable	Codification	Mean	Std. Dev.
University	1: Repeat the decision 0: No	0.7765	0.4167
Degree programme	1: Repeat the decision 0: No	0.6876	0.4636
Satisfaction	5-point Likert scale (5: completely satisfied; 1: completely unsatisfied)	3.6596	1.0286
Entrance mark	1: Above 7 0: Between 5 and 7	0.5620	0.4962
Preference	1: 1st option 0: Others	0.8217	0.3828
Mobility	1: Study abroad programme 0: No	0.2069	0.4052
Involvement	1: Extracurricular activities 0: No involvement	0.1326	0.3392
Study/work	1: Yes 0: No	0.5778	0.4940
Gender	1: Female 0: Male	0.6290	0.4832

Finally, we controlled by the profile of the student. A dummy variable was introduced taking into account whether the student was balancing work and studies. Typically, students that are simultaneously working and studying find it more difficult to keep up with the pace of the course. With this variable, we aimed to test where there are significant differences because of this fact. Finally, we also controlled by gender.

Table 1 shows the descriptive statistics for the variables selected and how they have been operationalised.

The correlations among the different variables are displayed in Table 2. As it is shown, the degree programme variable highly correlates with the other independent variables. This preliminary finding indicates that it is very uncommon to find a student who would not recommend enrolling in a specific degree programme if s/he did not like the university. Said differently, loyalty in terms of academic programme and university seems to go hand in hand, as they are positively related.

Satisfaction is also positively related to both independent variables. However, it is interesting to highlight the negative correlation between this variable and preference. Surprisingly, this result seems to indicate that those students who could not study what and where they wanted are positively satisfied. We can interpret this finding as a signal that the low expectations they had were surpassed by the service delivery.

Lastly, and contrary to what we expected, neither mobility nor study/work seem to highly correlate with any of the independent variables, and when they do so (mobility and university) the correlation is in the opposite direction (negative). A negative relationship is also observed when correlating mobility-satisfaction and study/work-satisfaction.

Table 2. Correlation matrix.

Variable	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
[1] Degree programme	1.0000								
[2] University	0.1920 (0.0000)	1.0000							
[3] Satisfaction	0.4010 (0.0000)	0.5005 (0.0000)	1.0000						
[4] Entrance mark	0.0249 (0.2270)	0.0388 (0.0622)	-0.0143 (0.4846)	1.0000					
[5] Preference	0.0773 (0.0001)	-0.0062 (0.7652)	-0.0434 (0.0321)	0.1283 (0.0000)	1.0000				
[6] Mobility	-0.0310 (0.1276)	-0.0480 (0.0197)	-0.0461 (0.0226)	0.0631 (0.0018)	0.0219 (0.2750)	1.0000			
[7] Involvement	0.0205 (0.3114)	-0.0214 (0.2970)	-0.0121 (0.5480)	0.0044 (0.8263)	0.0125 (0.5320)	0.0822 (0.0000)	1.0000		
[8] Study/work	0.0140 (0.4903)	-0.0789 (0.0001)	-0.0452 (0.0256)	-0.0619 (0.0023)	-0.0203 (0.3123)	-0.0380 (0.0574)	0.0476 (0.0172)	1.0000	
[9] Gender	0.0827 (0.0000)	-0.0266 (0.1962)	0.0150 (0.4559)	0.0286 (0.1568)	-0.0313 (0.1171)	0.0165 (0.4878)	-0.0231 (0.2449)	0.0203 (0.3102)	1.0000

Significance level is presented in brackets.

Stage 1: Regression analysis

A logit regression model was fitted to the survey response data. Two logit models were run, one testing loyalty with the academic degree, and a second model testing loyalty with the university. The logit model is one of the limited dependent variable models for dealing with qualitative (0–1) nominal response variables. In our case, 1 indicates the "willingness" to make the same choice (academic degree or university), and "0" to regret the choice. We interpret this "willingness" as a measure of loyalty towards the university and academic programme. Furthermore, logit models are found to be particularly suited for analysing data from cross-sect ional surveys of individual decision makers. In our sample, the unit of analysis is the graduates.

Stage 2: Cluster analysis

In a second stage analysis, we proposed a cluster analysis, aimed at identifying different profiles of students, and how each of these profiles behaves in terms of loyalty. To do this, we ran a non-hierarchical cluster analysis (k-means) using the independent variables described above.

The cluster analysis is based on the Euclidean distance between vectors of the standardised values of the variables under analysis (Anderberg, 1973, Everitt, 1980). Through this procedure observations are classified according to similarities in organisational and environmental dimensions. The k-means cluster analysis requires the establishment of a fixed number of clusters. This represents the main pitfall of non-hierarchical cluster analysis, because in many research fields (including social sciences) cluster analyses are often exploratory.

This paper adopted two approaches to corroborate the number of clusters and the validity of the analysis. First, the study proposes the Calinski and Harabasz (1974) statistic. This index was obtained as $CH(K) = \frac{B(k) / (k-1)}{W(k) / (n-k')}$, where B$(k)$ and W(k) are the between and within-cluster sums of squares, with k clusters. n is the number of observations. Since the between-cluster difference should be high, and the within-cluster difference should be low, the largest $CH(k)$ value indicates the best clustering.

The number of clusters that maximises the $CH(k)$ index was 3 (*pseudo-F value: 701.06*). Therefore, the final non-hierarchical cluster asked for a three-way division. Second, a discriminant analysis further validated the cluster analysis. The results from the discriminant analysis indicated that the approach proposed to examine Spanish universities was appropriate. Therefore, we can conclude that both approaches suggested that the number of clusters (3) was suitable.

RESULTS

STAGE 1

Table 3 displays the results. Marginal effects have also been calculated. As observed in the correlation matrix, satisfaction positively contributes to student loyalty, both in terms of the academic programme and the university in which to undertake the studies. This finding is in accordance with previous studies on the service quality literature that consider satisfaction as a natural antecedent of loyalty. Results from Model 1 reveal that three additional variables also contribute to explaining students' willingness to enrol in the same bachelor's degree if they were to start again. These variables are: preference, study/work and gender.

On the contrary, in Model 2, although satisfaction remains significant and positive, the additional variables that statistically influence students' willingness to enrol in the same university are different, being entrance mark, study/work and gender. While entrance mark has a positive effect on loyalty, combining job and training and gender has a negative impact.

STAGE 2

Results from stage 2 suggest that students can be grouped into three main clusters. Table 4 summarises the mean values and standard deviations for the variables of interest.

Students in cluster 1 are mainly females (97%), are, on average, highly satisfied with the study programme in which they enrolled (4.3 on a scale from 1 to 5) and display high levels of loyalty (both in terms of the degree programme and the university). More than half of the

Table 3. Logistic regression estimates.

	Model 1: Degree		Model 2: University	
	Coefficient β	Marginal effect dy/dx	Coefficient β	Marginal effect dy/dx
Satisfaction	0.9633 *** (0.0568)	0.1442 *** (0.0085)	1.2548 *** (0.0644)	0.2486 *** (0.0130)
Entrance mark	0.0700 (0.1138)	0.0105 (0.0171)	0.2503 ** (0.1093)	0.0500 ** (0.0220)
Preference	0.7319 *** (0.1420)	0.1263 *** (0.0274)	0.0157 (0.1504)	0.0031 (0.0299)
Mobility	-0.1269 (0.1359)	-0.0195 (0.0213)	-0.1379 (0.1316)	-0.0278 (0.0270)
Involvement	0.2310 (0.1712)	0.0328 (0.0229)	-0.0647 (0.1524)	-0.0130 (0.0308)
Study/work	0.2218 * (0.1139)	0.0336 * (0.0174)	-0.2761 ** (0.1102)	-0.0542 ** (0.0214)
Gender	0.4506 *** (0.1420)	0.0703 *** (0.0179)	-0.2112 * (0.1123)	-0.0413 * (0.0216)
Constant	-3.0979 *** (0.2764)		-3.4401 *** (0.2981)	
Log likelihood	-1014.4153		-1074.3667	
Wald chi2	304.72 ***		401.13 ***	
Pseudo R2	0.1629		0.2218	
Observations	2280		2222	

Robust standard errors adjusted by heteroskedasticity are presented in brackets. *, **, *** indicate significance at the 10%, 5%, and 1%, respectively.

students from this group have participated in study abroad programmes (56.4%), and are therefore the cluster with the highest level of internationalisation. Another distinctive feature of this group is that only a small proportion of students (43.9%) are in the academic programme and university they listed first on their preference form.

Somewhat similar is the profile of students grouped in cluster 3. Students in this group also display high levels of loyalty (ranked first), and of satisfaction (slightly below that of group 1). The main differences are found in terms of preference. Almost all of the students in this group enrolled in their first option from the preference list, meaning that perceptions of the whole experience at the university were higher than expectations. This is a key finding because students' initial expectations were probably pretty high. In terms of mobility, very few students from this group decided to enrol in a mobility

Table 4. Descriptive statistics for the cluster analysis.

	Cluster 1		Cluster 2		Cluster 3	
	Satisfied but not first choice		*Unsatisfied*		*Satisfied*	
	Mean	**St. Dev.**	**Mean**	**St. Dev.**	**Mean**	**St. Dev.**
Degree programme	0.8552	0.3524	0.5638	0.4962	0.9048	0.2936
University	0.8092	0.3935	0.3906	0.4882	0.8624	0.3446
Satisfaction	4.2997	0.4588	2.4994	0.6966	4.2978	0.4575
Entrance mark	0.5695	0.4958	0.5665	0.4959	0.5683	0.4955
Preference	0.4387	0.4969	0.8407	0.3662	0.9401	0.2374
Mobility	0.5640	0.4966	0.2287	0.4203	0.0784	0.2689
Involvement	0.1281	0.3346	0.1485	0.3558	0.1242	0.3300
Study/work	0.5204	0.5003	0.6084	0.4884	0.5612	0.4965
Gender	0.9700	0.1707	0.6263	0.4841	0.5419	0.4985
N (size)	367		835		1,135	

agreement (7.8%). Another specific feature of this group is that the proportion of males and females is more balanced (54.2% female).

Finally, cluster 2 includes those students that, on average, are not satisfied with their choice, and would not be willing to choose the same studies or the same university. It is noteworthy to remark that the vast majority of the students clustered here (84.1%) are enrolled in the academic programme and university they selected.

Lastly, from data shown in Table 4, it is also possible to infer that there are no significant differences among groups in terms of three variables: entrance mark, involvement and study/work, although cluster 2 appears to have the highest concentration of students who are combing work and studies (60.8%) and are more involved in extracurricular activities (14.9%).

DISCUSSION

Related to the first research question the findings highlight the prominent role of satisfaction on students' loyalty. Yet, there are other significant factors that explain loyalty—i.e., entrance mark, preference, mobility, involvement, study/work and gender—which constitutes an interesting result emerging from our study.

In terms of the willingness to make the same choice, the key variables are preference, study/work and gender. We interpret this as evidence that the academic degree chosen by students fulfil their expectations, which explains their positive valuation. Also, balancing work and studies is found not to affect loyalty. On the contrary, the results suggest that loyal students combine job and education. In our view this means that, despite the implementation of the European Higher Education Area which involves a higher workload during the course (instead of concentrating all the evaluation on the final exam), universities have found

the means to adapt their academic offer to the different profiles of students.

On the other hand, when willingness is understood as a repetition in the choice of the university (Model 2), satisfaction is by far the antecedent that plays the major role. Besides this positive effect of satisfaction, results also indicate that those students with a higher entrance mark display more loyalty to the university. The rationale behind this lies in the fact that students who are able to choose the university in which they undertake their studies (because of higher scores in the entrance mark), are pleased with their experience; that is, the students are not deceived. As initial expectations were high and perceptions come to be fulfilled, the final result is a positive sentiment towards the university.

When comparing the two models the effect of the variable "preference" dilutes in the second model. Marginal effects also mirror this effect. Usually, students tend to select academic studies before the university. This means that if their entrance mark does not allow them to enrol in their first option (professional aspiration), their subsequent second and third choices would normally include the same study programme but in a different university. That is, the professional aspiration is more important than the place when it comes to filling in the prioritisation list. This observation helps explain why "preference" and "entrance mark" exhibit different behaviours in the two models tested. Gender differences are also observed. However, contrary to Model 1, males are more likely to display loyalty towards the university.

Finally, the co-curricular and extracurricular activities that universities offer to enrich the academic experience of students do not seem to shape loyalty. This lack of influence seems to suggest that although these are relevant activities/ services, the content of the study programme, the facilities and services of the university, and the quality of the teaching staff play a more decisive role.

As for the second stage analysis, the cluster analysis suggests three markedly different profiles of graduates. In the first group we find those students who were initially not willing to enrol in the specific university or academic programme in which they finally enrolled. This finding is encouraging as it signals that Catalan universities have managed to offer high-quality services which are able to transform students' indifference into delight and fulfilment.

It is probable that participating in Erasmus programmes and other extension programmes might have helped increase students' perceptions, and thus, compensates an initial disappointment for not studying what they listed first. Nevertheless, these arguments should be taken with a grain of salt. Despite students in this group have the higher rates of mobility this factor is not significant in the regression model.

The profile of students in cluster 1 is similar to that of students in the third cluster, except for preference and mobility factors. Consequently, we argue that students' perceptions in cluster 3 mainly mirror the experience at students' home universities.

Finally, students in the second group are characterised for being the least satisfied, since they would not repeat their choice, whether in terms of the programme or of the university. It is important to highlight that these students represent 30% of the total sample of students surveyed. This high percentage has major implications for policymakers, high schools, universities and families, as it seems that students are misinformed about what they will find upon entering the university system.

CONCLUDING REMARKS

This study has investigated the antecedents of loyalty within a higher education context. Graduates, as erstwhile primary consumers of the service offered by universities, are an important source of word-of-mouth for prospective students. Consequently, it is of paramount importance to better understand which aspects they value more while at university and to investigate whether experiencing satisfaction leads to loyalty, and thus, a positive recommendation.

Based on the empirical findings, three main conclusions can be drawn. First, in accordance with previous works, satisfaction has been found to be a relevant antecedent of loyalty, either when loyalty is captured by the willingness to recommend the degree course or the university attended. Second, the student's background has also a notable effect. Specifically, results indicate that a high entrance mark and the opportunity to choose the studies do have an impact on university and degree choice, respectively. These results

RESULTS REVEAL THAT SATISFACTION IS A KEY DETERMINANT OF LOYALTY. OTHER FACTORS THAT EXPLAIN STUDENTS' LOYALTY ARE ENTRANCE MARKS AND ACADEMIC PREFERENCES (UNIVERSITY AND ACADEMIC DEGREE)

suggest that students with sound academic transcripts are more likely to spread positive word-of-mouth than those with lower grades. Third, based on the results from the cluster analysis, unsatisfied students tend to be those that had the chance to select the university/academic degree. This group of students also contain the greatest percentage of students who combine work and study. Although this effect is moderate, this might suggest that the higher workload hinder students in keeping up with the pace of the course.

From a managerial perspective, this paper provides advice for university managers and academic policymakers. In terms of the antecedents of loyalty, it has been proven that achieving student satisfaction is decisive. This translates into saying that there is an urgent need to invest in quality delivery and to investigate how the current service delivered by universities can be improved. Yet, the results from the second stage analysis suggest that the profile of the student is rather heterogeneous, thus impeding the design of a homogenous policy that fits all tastes. On the one hand, students with low expectations (those enrolled in a course/university different from their first choice) would probably be less strict, and any simple "good" experience might easily change their initial indifference to experiencing satisfaction, which would be conducive to loyalty. On the other hand, students with high expectations (usually those enrolled in their first option) seem to be the most challenging to keep content. In this last situation academics and also university managers should ascertain how to make these students experience "surprise" and "delight" with the service provided, otherwise, the gap between perceptions and initial expectations will be difficult to narrow. Personalised attention (understanding

needs and showing empathy), hands-on in-class activities (active learning), and involving students in real research projects are just some methods that are considered to help in this endeavour. It is also worth pointing out the low impact of extracurricular activities. In this respect, we posit that universities should rethink how they are currently promoting such activities. In other university systems (such as in the US) it has been found that strong engagement in such activities is positively related to student satisfaction, and thus, to student loyalty.

This study is subject to certain limitations. Since this is a pioneering study, the conclusions must be taken with caution. Recently AQU has launched a new survey (collection period: November 2015 – February 2016). The authors will have access to these data in the near future. From this point onwards it will possible to work with new variables which could increase the explanatory power of the model (i.e. nature of the university as public/private, skills of the students and time to finish their studies).

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