Analysing the determinants of students' loyalty in the higher education context: The Catalan University system case

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The aim of this paper is twofold: (i) identify the determinants of students' loyalty, and ii) characterise the profile of the recently graduate students within the Catalan University system. The empirical evidence is collected through the Satisfaction Graduate Survey promoted by the Catalan University Quality Assurance Agency. The analysis presented corresponds to the 2013 edition. Concretely, the survey was launched in October of 2013, and 2,557 questionnaires were collected, from which 2,337 were fully completed. The sample is mainly composed by women (62,9%) between 21 and 24 years old born in Catalonia. The main reason for choosing their studies are the preference for the study (62,3%) and job opportunities (15,1%). Moreover, most of the graduates combined learning and work (57,8%) and only 20,7% joined a mobility program during their studies. In terms of loyalty, 68,8% of the students would chose the same degree again, and 77,7% of them would remain at the same university. In fact, 62,3% of the sample are satisfied or very satisfied with the studied degree. Related to the determinants of students' loyalty, our results show that higher is the loyalty of the student as higher is his/her satisfaction with the degree and the better the previous academic records of the student. However, results are inconclusive in terms of balancing study and work, engaging in mobility programs or getting involved in university associations. Female students are also shown to display higher levels of loyalty. As for the second research objective, students are grouped into three main groups: loyal and satisfied but not first choice of studies (cluster 1); unsatisfied (cluster 2); and loyal and satisfied (cluster 3).
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1. INTRODUCTION

Within an increasingly competitive society, higher education institutions (HEIs) are not exempt of the phenomenon. Most of them recognise that they need to market themselves in a climate of competition that for universities is frequently a global one (Hemsley-Brown & Oplatka, 2006). In fact, many universities have increased their marketing investments to distinguish themselves by strengthening the image of prestige or quality.

However, beyond the marketing campaigns, the reputation of HEIs seems to be considered one of the key factors to develop and maintain a loyalty relationship with costumers (Dick & Basu, 1994). Institutional reputation may be viewed as a factor that communicates to its target groups the quality of its products or services in comparison with those of its competitors. Consequently, HEIs need to cultivate a satisfactory relationship with customers to obtain a favourable reputation. Therefore, it is crucial to promote customers' positive word-of-mouth among the current students in order to attract the future ones. A pleasant customer experience will be a source of positive word-of-mouth.

Hemsley-Brown and Oplatka (2006) when refer to the emergence of marketing in HE affirm that numerous paper have focused on the choice factors of the student-consumer (i.e. Baldwin & James, 2000 or Binsardi & Ekwulugo, 2003) seeking to identify key factors in the choice of the HEI. However, most of these studies are located in major-English speaking nations, like Australia or UK, and mainly focused in students' perceptions at the subject level. Because student experiences at HEIs go beyond subjects and courses, we posit that there is a need to explore the whole experience of the student. In this context, our research focuses on the student's perception once he/she has been graduated. These opinions are the natural consequence of a multitude of experiences that take place during different years, since higher education is a service that lasts over a certain period of time. Aiming at expanding this research out of the English-speaking context, we study the region of Catalonia (Spain).

In this sense, the objective of this paper is twofold: i) identify the antecedents of students' loyalty, understanding the construct of loyalty as their willingness to repeat their choice in terms of the university to study and the academic program to enrol in, and (ii) characterise the profile of student graduates. The data come from a pioneering survey conducted by the Catalan University Quality Assurance Agency (AQU, Spain) in 2013. A total of 2,557 surveys were collected what represents a high number of responses, increasing the validity of the results presented.

The remainder of this paper is structured as follows. Section 2 discusses the theoretical arguments concerning students' satisfaction and loyalty. Section 3 describes the empirical design of this study. Section 4 presents the study's findings, and in section 5 we discuss their main implications. Finally, section 6 closes this paper with several major conclusions drawn from the research.

2. THEORETICAL BACKGROUND

Customer satisfaction can be defined as the product of some type of evaluation process by the customer (Oliver, 1981; Tse & Wilton, 1988). However, more recently the literature understands the customer satisfaction as a summary 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.

In the context of HEIs, students are considered primary customers (Sultan & Wong, 2013). Other authors also consider them as partners as they consciously choose and buy services (Kuh & Hu, 2001). Regardless the approach, what literature agrees is that student satisfaction is an attitude, since satisfaction revolves around concepts such as experience, expectations, perceived value and consequent evaluation of service (Ali & Amin, 2014).

Barnett (2011) states that student satisfaction is important because it is the only performance indicator of service quality for service providers of HEIs. The determinants to explain the facets of student satisfaction are multiple. Coursework quality, non-curriculum events and other university-related factors are pointed out by Kaldenberg et al. (1998) as some examples. More recently, Ali et al. (2016) demonstrate that five dimensions of higher education service quality influence student satisfaction which in turn influences institutional image, and together, they influence student loyalty. They labelled the five dimensions as academic aspects, non-academic aspects, program issues, reputation and access.

Other authors like Appleton-Knapp and Krentler (2006) divide factors influencing student satisfaction into institutional and personal factors. Institutional factors include quality of instruction, quality and promptness of the instructor's feedback as well as the clarity of his/her expectations, the teaching style of the instructor, the research emphasis of the institute and the size of classes (Porter & Umbach, 2001; Krentler & Grundnitski, 2004) Personal factors that are found to be predictors of student satisfaction include age, gender, employment, temperament, preferred learning styles and students' average grade point (Porter & Umbach, 2001; Brokaw et al., 2004).

To sum up, literature suggests that student satisfaction is not determined solely by the students' teaching and learning experiences but rather by their overall experiences as a primary customer.

According to Marimon et al. (2014) customer loyalty can be created by improving customer satisfaction. In fact, the same authors, in their work about the impact of recovery on loyalty in an online context, affirm the existence of a perceived value–satisfaction–loyalty chain. On the other hand, did not find a total significant relationship between recovery and loyalty.

Similar to customer loyalty, student loyalty is also composed of attitudinal and behavioural components (Hennig-Thurau et al., 2001). The attitudinal component can be described as tripartite, consisting of cognitive, affective and conative elements, whereas the behavioural component can be perceived as being related to decisions that students make regarding their mobility options (Helgesen & Nesset, 2011).

Helgesen and Nesset (2007) stated that the loyalty of a former student may be more important than that of a current student and can apply to any university, any particular course or any other component of the university because student loyalty is not a short-term effect. It is quite possible that loyal students become good advocates, recommending the institution to others.

On the basis of the above literature, and understanding loyalty as the student's willingness to make the same choice if he/she had to select again the academic degree/university, we raise the next two research questions:

RQ1: What are the main determinants of loyalty?

RQ2: What different profiles of graduate students can be identified in terms of loyalty?

To further investigate these research questions, we concentrate in the Catalan higher education context.

3. METHOD

3.1. Sample

Data come from a survey conducted by the Catalan University Quality Assurance Agency (AQU) in October 2013, which aimed at investigate the profile and the perceptions of all graduates of the Catalan higher education (HE) system in 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 on the quality delivered by Catalan universities. The questionnaire was designed by AQU and validated by a number of external experts who contributed in ensuring its internal validity.

The Catalan HE system consists of twelve universities, seven of which are public, four private and one of a mixed nature. AQU is the primary instrument for quality promotion and assurance in the HE system in Catalonia. It is a public body subject to private law under the corresponding government department with jurisdiction over the 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 (the European Association for Quality Assurance in Higher Education), and it is registered with the EQAR (the European Quality Assurance Register) and is ISO 9001 certified (AQU 2016).

3.2. Variables

Aiming at measuring customer loyalty in the HE setting, we considered two dependent variables. The first one refers to the likelihood of the student to make the same choice in terms of the bachelor's degree in which he/she enrolled in. The following question was posed to graduates: *If you were to start again, would you do 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 in the choice, and consequently, 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 the results. A negative response indicated dissatisfaction with the university, and thus, a negative word-of-mouth, meaning that in the case the graduate would have to give advice to future students, he/she would probably recommend choosing a different university if the academic program is similar. On the contrary, a positive answer suggested loyalty and 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 program?*. Respondents were asked to provide their evaluation in 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 (but also in Spain), all students willing to study at the university have to take what is called the "university entrance exams" (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' demands tend to exceed the academic offer; consequently, students are required to submit a prioritised list, just in case the capacity runs out. The higher the entrance mark the greatest the likelihood of being admitted in the first choice. Because of that, we posit that the experience of students might differ based on whether the academic program and the university in which they finally get enrolled in is the one in the top of their list.

Universities offer value-added services to students as a way to enrich their experience as students. In this respect, we included a fourth variable that captured whether the university and the academic program were supporting 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. Moreover 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 to take part and become involved. Some examples include the student representative committee, institutional working groups, assemblies, associations, students' union, etc. For a student, participating in such activities might create an emotional link with the university and a sense of belonging. We hypothesise that participating in such activities can influence his/her

perception of the university. A fifth variable (dummy) was thus introduced, capturing this effect.

Finally we controlled by the profile of the student. A dummy variable was introduced taking into account if the student was balancing work and studies. Typically students that are simultaneously working and studying find more difficult to follow up the pace of the course. With this variable we aim to test if 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. Because for some observations data were not fully available, the variables of interest have a different sample size.

Table 1. Variables under study.

Variable	Codification	Mean	Std. Dev.	N
University	1: Repeat the decision 0: No	0.7765	0.4167	2438
Degree program	1: Repeat the decision 0: No	0.6876	0.4636	2378
Satisfaction	5-point Likert scale (5: completely satisfied; 1: completely unsatisfied)	3.6596	1.0286	2468
Entrance mark	1: Above 7 0: Between 5 and 7	0.5620	0.4962	2459
Preference	1: 1st option 0: Others	0.8217	0.3828	2507
Mobility	1: Study abroad program 0: No	0.2069	0.4052	2513
Commitment	1: Extracurricular activities 0: No involvement	0.1326	0.3392	2557
Study/work	1: Yes 0: No	0.5778	0.4940	2506
Gender	1: Female 0: Male	0.6290	0.4832	2534

The correlations among the different variables are displayed in Table 2. As it is shown, the degree program variable highly correlates with the other independent variable. This preliminary findings seems to suggest that students that it is very uncommon to find a student that would not recommend to enrol in a specific degree program if he/she did not like the university. That is, loyalty in terms of academic program and university go hand in hand, being positively related.

Table 2. Correlation matrix.

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
[1] Degree program	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] Commitment	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 (0.4078)	-0.0231 (0.2449)	0.0203 (0.3102)	1.0000

Significance level is presented in brackets.

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 that could not study what and where they wanted are positively satisfied. We can interpret this finding as a signal that the lower expectations they had were surpassed by the current service delivery.

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

3.3. Method

Stage 1: Regression analysis

A logit regression model was fitted to the survey response data. 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 program. Furthermore, logit models are found to be particularly suited for analysing data from cross-sectional surveys of individual decision makers. In our sample, the unit of analysis are graduate students.

Stage 2: Cluster analysis

In a second stage analysis, we propose a cluster analysis, aiming at identify different profiles of students, and how each of these profiles behave in terms of loyalty. To do this so, we run a non-hierarchical cluster analysis (k-means) using the independent variables described in Section 3.2.

The cluster analysis is based on the Euclidean distance between vectors of the standardized values of the variables under analysis (Anderberg, 1973; Everitt, 1980). Through this procedure observations are classified according to the similarities of organizational 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 adopts 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 is 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. 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 maximizes the $CH(k)$ index is 3 (*pseudo-F value: 701.06*). Therefore, the final non-hierarchical cluster asks for a four-way division. Second, a discriminant analysis further validates the cluster analysis. The results from the discriminant analysis indicate that the approach proposed to examine Spanish universities is appropriate. Therefore, we can conclude that both approaches suggest that the number of clusters (3) is suitable.

4. RESULTS

4.1. Stage 1

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

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

On the contrary, in Model 2, although satisfaction remains significant and positive, the additional variables that explain students' willingness to enrol in the same university are different. In this case these variables are: entrance mark, study/work and gender. However, while entrance mark has a positive impact on loyalty, the fact of combining job and training and gender has a contrary effect.

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)
Commitment	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	

4.2. Stage 2

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

Table 4. Descriptive statistics for the cluster analysis.

	Cluster 1 Satisfied but not first choice		Cluster 2 Unsatisfied		Cluster 3 Satisfied	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
Degree program	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
Commitment	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	

Students in cluster 1 are mainly females (97%), are, in average, highly satisfied with the study program they enrolled in (4.3 in a scale from 1 to 5) and display high levels of loyalty (both in terms of the degree program and the university). More than half of the students from this group have participated in study abroad programs (56.4%), being the cluster with the higher level of internationalism. Another distinctive feature of this group is that only a small proportion of them (43.9%) are in the academic program and university they listed first in their preference form.

Somewhat similar is the profile of students grouped in cluster 3. Students in this group also display high levels of loyalty (first ranked), and of satisfaction (slightly below to that in group 1). Main differences are found in terms of preference. Almost all of the students in this group enrolled in their first option of the preference list, meaning that in all these cases perceptions have been higher than expectations, although their initial level of expectations was probably pretty high. In terms of mobility, very few of the students decided to take part of their students under a mobility agreement (7.8%). Another specific feature of this group is that the proportion of male and female 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 nor the same university. It is noteworthy to remark, that the vast majority of the students cluster here (84.1%) are enrolled in the academic program and university they selected.

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

5. DISCUSSION

Related to the first research question the results demonstrate and confirm previous literature that satisfaction is positively related with loyalty. In our case, there is a positive correlation with the two independent variables that we used to capture loyalty (degree program and university). However, the correlation with the rest of independent variables in the two models (entrance mark, preference, mobility, commitment, study/work and gender) reveals some interesting and somewhat surprising results.

In terms of the willingness to make the same choice if a student would be asked to select again the academic degree (Model 1) the variables that are statistically significant are preference, study/work and gender. The interpretation is as follows. First, students that can choose the academic program are more loyal, following the same pattern as observed in the correlation matrix. That is, the academic degree seems to fulfil their expectations, and thus, their evaluation is favourable. Second, balancing work and studies is found not to be negatively affecting loyalty, on the contrary, results suggests that student that are more loyal are those that combined job and education, meaning that despite the implementation of the European Higher Education Area involves a higher workload during the course –instead of concentrating

all the evaluation in the final exam–, universities have found the means to adapt their academic programs to different profiles of students. Finally, gender differences are also found. Particularly, results suggest that females are more likely to display loyalty.

On the other hand, when the willingness is referred to recommend the same university (Model 2), satisfaction is by far the antecedent that plays a major role. Besides of this positive effect of satisfaction, results indicate that those students with a higher entrance mark display more loyalty for the university. The rationale behind this result lies in the fact that students that are able to choose the university where to undertake the studies (because of the higher scores in the entrance mark) are pleased with their experience, meaning that students' experience is not defrauded. As initial expectations were high and perceptions are fulfilled, the final result is a positive sentiment towards the university.

In addition, comparing the two models it is interesting to highlight the effect of the variable "preference" which dilutes with respect Model 1. Marginal effects also mirror this effect. Usually, students tend to first select the study program, and then the university. This means that if their entrance mark does not allow them to enrol in their first choice option, their subsequent second and third choices would normally include the same study program but at a different university. That is, the professional vocation is more important than the place when it comes to fill in the prioritisation list. This observation helps explain why "preference" and "entrance mark" have a different behaviour in the two models tested. Finally, gender differences are also observed. However, contrary to Model 1, males are more likely to display loyalty towards the university.

Finally, the additional activities that universities offer to enrich the academic experience of students do not seem to ever shape loyalty. This lack of influence might suggest that although they are relevant services the content of the study program, the facilities and services of the university and the quality of the teaching staff is what really makes a difference, in terms of loyalty.

As for the second stage analysis, the cluster analysis reveals that students can be grouped in three main clusters. In the first group we find those students that were initially not willing to enrol in the specific university of academic program that they finally enrolled in. This finding is encouraging as it signals that some Catalan universities have managed to offer high quality services able to transform students' indifference into delight and fulfilment. Probably, participating in Erasmus programmes, and other extension programs might have helped increase students' perceptions, and thus, compensate the initial negative effect of not studying what was listed first in their choice list. The profile of these students is similar to that of the students in the third cluster except for the preference and the mobility. Accordingly, this suggests that students' perceptions in cluster 3 mainly mirror the experience at students' home university.

Finally, students in the second group could be identified as the less satisfied, since they would not recommend nor the degree nor the university. It is important to highlight that these students represent 30% of the total sample of students surveyed. This high rate entails significant implications for policy makers, high schools, universities and families, as it seems

that students are misinformed of what they are going to find when entering the university system.

To sum up and based on the above discussion, we conclude that there seem to be two different antecedents of loyalty when we combine satisfaction and students' profile. On the one hand, there would be the unsatisfied students that consequently would now make a different choice either in the degree program or the university. On the other hand, we have the satisfied students, which are eligible to choose their studies (outstanding academic records) or have participated in mobility programs.

6. CONCLUDING REMARKS

This study investigates the antecedents of loyalty within the higher education context. Graduated students, as primary consumers of the services offered by universities, can become a source of positive word of mouth for future students. Consequently, it is paramount to better understand which aspects they value more while at university and investigate whether experiencing satisfaction can lead to loyalty.

From the results, the first conclusion is that in accordance with the literature, satisfaction is an antecedent of loyalty, either when loyalty is captured by the willingness to recommend the degree coursed or by the university attended.

The second conclusion is the influence of the academic students' background on loyalty. On the one hand, results show how both the possibility to choose the studies and a high entrance mark influence loyalty, measured as the willingness to recommend the academic program and the university, respectively. These results suggest that students with sound academic transcripts, are more likely to spread a positive word of mouth. In addition, results demonstrate that if the student has a proactive attitude, such as joining a mobility program, loyalty also increases. However, since the best students use to apply for the best universities these conclusions should be contrasted taking into account the quality of the university. Unfortunately, we did not have access to this information. Future research should be conducted to shed some light on this aspect.

The third conclusion is related to why some students declare not to be satisfied with their studies. According to the results, it can be inferred that students that respond to this profile are those who combine work and study. Therefore, this fact suggests that the higher workload would hinder the regular course of the studies.

From a managerial perspective, this paper provides advice for university managers and academic-policy makers. In terms of the antecedent of loyalty, it has been seen that achieving student satisfaction is of paramount importance. This translates into saying that there is an urgent need to invest in quality delivery and investigate how the current service delivered by universities can be improved. However, this is not an easy task. The results from the second stage analysis prove that the profile of the student is rather heterogeneous. On the one hand, students with low expectations (those enrolled in a course/university different of that in the first choice) would be probably less strict, and some "good" experiences might probably easily

change their initial indifference and experience satisfaction, which would conduce to loyalty. On the other hand, students with high expectations (usually those in first option) seem to be the most challenging to content. In this last situation academics but also university managers need to question how to make these students experience "surprise" and "delight" with the service provided, otherwise, the gap between perceptions and initial expectations would be difficult to be reduced.

A personalised attention (understanding their 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 to point out the low effect 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 US) has been found that a strong engagement in university activities is positively related with student satisfaction, student loyalty, in his/her willingness to spread a positive worth-of-mouth and recommend the university/academic programme to new students.

The study is subject to certain limitations. The main limitation is the data by itself. Since it is a pioneer study the conclusions must be taken with caution. Recently AQU has launched a new survey (collection period: November 2015 - February 2016). The authors of the present paper will have access to these data. 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 -public/private- or skills of the students -duration to finish the studies-), and doing longitudinal analysis in order to boost the conclusions presented in this paper.

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