

SUCCESS PROFILE OF INCOMING FIRST YEAR UNDERGRADUATE STUDENTS OF TOURISM

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1. INTRODUCTION

High rates of structural unemployment make training essential in developed countries such as Spain (third highest tourism destination in the world and second highest in terms of tourism receipts in 2016). As training for qualified employment, university education should ensure that graduates attain a certain quality and a maximum skill level. For this it is necessary that, first, there is an ongoing adaptation of tourism studies to professional requirements in the sector and, second, that the profile of students that come out with a university degree in tourism is what is required for them to achieve high performance and results.

The **research problem** in this study is a proposal for the identification of factors that might contribute to improving the allocation of demand from incoming first year students at a university School of Tourism. The objective of this study is to analyze and quantify the importance or influence that certain observable personal and institutional factors have on academic performance in the Tourism undergraduate degree during the first quarter at the University of Seville Faculty of Tourism and Finance. The following have been used as variables: admission grade and gender as personal determinants of academic performance; and, order of preference for the degree course according to the student's own choice, and the cut-off grade for gaining admission to the degree course as institutional determinants.

2. LITERATURE REVIEW

In the world of education and students' perceptions of university degrees, the publication of the Coleman et al. Report (1966) is taken as the starting point in research into factors that determine academic efficiency.

Aitken (1982) revealed a significant correlation between the scores obtained in admission examinations and first year academic results. García & Segundo (2001)

observed that the required admission grade has a very significant positive relationship with academic performance post entry into university.

Di Gresia (2007) considered gender, amongst other factors, and found that women achieved better performance. Oladokun, Adebajo, & Charles-Owaba (2008) correctly predicted the academic performance of over 70 percent of students. Among the variables used were university admission grade, age of student on entry into university, gender, parental background, type and location of secondary school attended.

Although the admission grade can be observed to stand out as a predictor variable in the literature on academic performance, other variables, such as the option for being admitted onto a degree course, can better describe academic performance. In this respect, a large number of researchers consider that the fit between the degree to which a student is assigned and his/her vocational desire predicts university academic performance. Thus, authors such as Salanova et al. (2005) observe better academic performance by such students. Similar results are also concluded in Rodríguez et al. (2004) and in Apodaha & Gallareta (1999). Not being on the desired degree course also has an effect on students dropping out (Tinto, 1995; Birch & Miller, 2007).

Lastly, only a limited number of studies on academic performance in the tourism degree course can be observed, which gives the present study added value. With respect to the motivational profile, Lunar Leandro & Marcano López (2007) limited themselves to stating that 45.20% of the population considered that they liked the degree. Kwek, Bui, Rynne, & So (2013) analyzed the impact of student self-esteem and resilience as significant predictors of academic performance. Frende et al. (2017) found a relationship between students' perception of the degree and academic performance.

In other respects, the reviewed literature coincides in accepting that there should be a parameter that captures the academic performance achieved by university students. Quantitative factors that affect academic performance can be observed in numerous studies. According to Häkkinen (2004), as much as 25% of an individual's future success can be explained by observable factors. The grades that students obtain will be used as an indicator of "academic performance" in this study.

3. METHODOLOGY

The grades obtained for the various disciplines taught during the first quarter of the first year of the Tourism undergraduate degree course will be modeled on the above described variables. For this the Ordinary Least Squares (OLS) method will be used to estimate the mean of the target variable conditional on the values of the regressors. This method requires some initial hypotheses as to the relationship between explanatory, predictors and regressors and the target variable. At the same time, Quantile Regression will be used to estimate values other than the mean that are located along the target variable's entire path, when this is conditional on the various levels or values of the explanatory variables. Different points are easily estimated by changing weightings. The advantage of quantile regression over least squares is that the latter only estimate the center of the target variable, whereas the former also estimates small and high target variable values and analyzes the weights of the explanatory variables on these. In addition,

ordinary least square regression's requirement for support for the formulated hypotheses, such as normality, for example, is relaxed somewhat in the case of quantile regression.

The sample comprised 572 new first year students (male and female) corresponding to the intake for the 2014-15 academic year (a sample size of 295, which will be referred to as cohort 1) and students starting university the following academic year, 2015-16 (a sample size of 277, referred to as cohort 2). The analyzed variables are as follows:

Grade: University admission grade obtained.

Gender.

ECO_1: Grade obtained in the subject of "Economy 101".

ETMA: Grade obtained in the subject of "Tourism in Today's World".

EyOT: Grade obtained in the subject of "Tourism Businesses and Organizations".

FdC: Grade obtained in the subject of "Basic Accounting".

IaF: Grade obtained in the subject of "Introduction to Finances".

Year, which takes a value of 1 if the student started university in 2014-15 (if s/he is in the first cohort) and 2 if the student started university in 2015-16 (if s/he is in the second cohort).

Order, which indicates the position of Tourism in the student's order of preference for a degree course when s/he applied to study at university.

4. RESULTS

First, it stands out that over 75% of incoming students named the degree as their first or second choice, which, in principle, indicates more motivated people. Next, the frequency distribution of the gender variable reveals that over two thirds of students are women, which tends to be the norm on Tourism degree courses. Almost total parity of the mean admission grade can be observed in the two cohorts -7.3 plus (on a base of 14).

Normality comparisons reject the normality hypothesis in all cases. This is one of the hypotheses required in the OLS estimation.

The proposed model for estimation is as follows:

$Subject_{ij} = \alpha + \beta_1 \cdot Grade_i + \beta_2 \cdot Gender_i + \beta_3 \cdot Order_i + u_i$, where $j = 1, 2, \dots, 5$ represents each of the five subjects whose grades are target variables in the model, and where $i = 1, \dots, 295$ represents each of the individuals in the first cohort of the sample and $i = 1, \dots, 277$ individuals in the second cohort. As there are five target variables, five regression models are therefore estimated in each of the two cohorts. OLS will be used to estimate the conditioned means, whereas quantile regression will be used to estimate strategic quantiles (0.05, 0.25, 0.50, 0.75 and 0.95) located along the entire range of the target variables.

It can be observed that neither GENDER nor ORDER are significant variables for either cohort when estimations are performed with OLS, although the variable GRADE is. Estimations performed with quantile regression show that the relationship with the GRADE effect continues to be greater in the higher ECO_1 percentiles.

With respect to the variable ETMA, the variables GRADE and ORDER are significant in the first cohort, but ORDER is not significant in the second cohort. With respect to

the quantile regressions, only the slope of GRADE in percentile 95 is significant in the first cohort. However, in the second cohort the slope of GRADE is significant in all five modeled percentiles. The admission grade has a greater effect on the lowest scores when the cut-off grade is higher. All the slopes of ORDER are negative in both cohorts, but not significant.

It should be noted that the slope of GRADE is significant for both cohorts in EyOT. The variable ORDER is significant in the second cohort. All remaining slopes of the variable GRADE are significant except for the slope in percentile 5, and have a greater influence on the highest grades in this subject. Gender is not a relevant factor in these grades. The slopes in percentiles 25, 50, 75 and 95 of the variable GRADE are also significant in the second cohort. The slope of percentile 75 of the variable ORDER is also significant and has a negative sign.

None of the explanatory variables is significant for the variable FdC in the first cohort. However, the variable GRADE is once again significant in the second cohort. As was the case of the slope of the mean of the grades dependent on the variable GRADE estimated by OLS, the slopes in the percentiles of the grades are not significant here, either. The slopes of percentiles 25 and 75 of these grades dependent on the variable GRADE are significant.

The slopes of the mean grades conditional on the variable GRADE are significant for IaF in cohorts 1 and 2, although influence is greater on grades in cohort 2. The variable ORDER is also significant in this cohort.

5. CONCLUSIONS

Quantile regression is a good instrument in regression analysis for modeling values other than the mean of the target variable. It is a complement to classic OLS estimation and has been used as such in this study.

The obtained results confirm that gender is not a significant variable. Admission grade and the degree's position in the order of preference are predictors of the grades obtained and, therefore, of the student's satisfaction with his/her chosen university degree course.

With respect to the admission grade, raising the cut-off grade should have a more positive effect on scores in the lower ranges of the various subjects.

Regarding the methodology, the model used is more complete than the usual ordinary least squares model, as it estimates the relationship between the explanatory variables and different points in the target variables rather than the mean alone.

In conclusion, the results appear to support arguments that consider that university institutions should adopt measures to improve academic performance. In addition, the limited public resources available could be allocated in a more optimal and efficient way in the area of tourism in universities.