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INSIGHT INTO STUDENTS' PERCEPTION OF TEACHING: CASE OF ECONOMIC HIGHER EDUCATION INSTITUTION

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Abstract. *The aim of this paper is to analyse students' perceptions of teaching from three different perspectives: students' interest, teacher and course assessment. We use ordinal logistic model to quantify the effects of grade, pass rate and class size on results of evaluation of undergraduate and graduate courses held during the summer and winter semesters in the academic year 2016/2017. The data were collected using a standardised online questionnaire. Research results indicate that on the observed economic HEI, both teacher and course assessment is positively and significantly affected by student's achieved grade, and by class size. Moreover, we find large and significant difference between students' interest in study programmes delivered in Croatian and those delivered in English. Students enrolled in English study programme value pass rate over grade, as opposed to students enrolled in Croatian study programme. We attribute this to the different motivation of students, that is, students enrolled in English programme are more prone to participation in student mobility programmes.*

Keywords: *student evaluation of teaching, ordinal logistic regression, economic higher education institution*

1. INTRODUCTION

In recent times higher education has became increasingly concerned with assurance of teaching quality. Determining the factors that contribute to the effectiveness of a higher education institution (HEI) can encourage it to adapt the curriculum to the requirements of students, employers and, consequently, to motivate the teachers to modify their teaching methods or their approach to students. This can affect student satisfaction with teachers and courses, as well as the course outcomes. Đonlagić and Fazlić (2015) argue that quality evaluation is fundamental for defining quality policy and institutional strategy. HEIs should, also, apply the stakeholder approach to strategic management i.e., to achieve institutional development objectives, they should

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understand demands of stakeholders and their relationships. Furthermore, Cerović et al. (2014) confirmed that, for teachers and other stakeholders, the share of teaching in the overall job requirements and activities (teaching, scientific research, professional engagement, participation in institution's bodies and support service activities) is the highest (42%). Since students are primary HEI stakeholders, it is important for teachers to understand that a high level of teaching service should be delivered to students (Đonlagić and Fazlić, 2015). Student evaluation of teaching (SET) provides information regarding student satisfaction with teaching and other HEI services. There are several types of evaluation in HEIs, but the SET is most frequently used. It is a common practice used at universities worldwide to evaluate competence of its teachers and has become a standard procedure that ensures accountability of higher education. Additionally, SET has evolved into the dominant indicator of teaching effectiveness (Spooren et al., 2013). Despite nearly 100 years of research of student teaching evaluations, this is still a controversial topic in academic circles. The aim of this paper is to analyse students' perceptions of teaching from three different perspectives: students' interest, teacher and course assessment. Furthermore, we single out three variables: students' grade, course pass rate and class size and quantify their effects on student's perceptions of teaching. To our best knowledge, this is the first study of this type in Croatia.

SET (also called student rating) is often criticized by its opponents, who consider its validity to be questionable and unreliable. They believe that ratings are highly correlated with achieved grades and affected by other factors, such as: student characteristics, physical environment, grading leniency and course teacher. They also argue that students are not competent to make reliable judgements (Nasser and Fresko, 2002). In addition, teachers' characteristics and their behaviour or effective teaching may affect student ratings (Wachtel, 1998; Stark and Freishtat, 2014). Adams (1997) recognized problems related to SET, in terms of validity, reliability, gender bias, and other issues that were confirmed by the follow up research (Boring, et al., 2016; Stark and Freishtat, 2014; Spooren et al., 2013). Major concerns are derived from students' and teachers' different perceptions of effective teaching. Harvey, in Penny (2003) refers to SET as the "happy form", i.e. teacher personality measure. Accordingly, Hornstein (2017) points out that using SET results for teachers' promotion, tenure or salary is improper and could even be illegal. Additionally, most studies requires students to do a joint assessment of all courses and teachers. Given that a particular study group can be very heterogeneous in terms of the course and teacher quality, students must actually average their experiences, which can cause a mistake. In this study, to avoid this mistake, students performed their evaluations at the level of each teacher-course level.

Despite the above arguments, most researchers consider student ratings to be a valid and a reliable way of teaching evaluation and, as such, to represent a legitimate indicator of teaching effectiveness (Đonlagić and Fazlić, 2015; Koon and Murray, 1995; Marsh, 1984; Centra, 1977). They argue that, since students are the primary consumers of teaching, they are the most relevant stakeholders to assess its quality. In addition, number of cross-sectional research studies, comparing ratings of former and current students, have found matches in the students' opinions about teacher effectiveness (Centra, 1974; Feldman 1989). Also, longitudinal studies,

analysing ratings of the same sample of students at the end of the course, and several years later, have shown similar results, especially for teachers with more teaching experience at the study outset (Marsh and Hocevar, 1991; Overall and Marsh 1980). Building on this, Kyriakides et al. (2014) argue that student ratings, in a number of subsequent years, are highly correlated (>0.80), as well as that the correlation between student ratings of the instructors and the courses they teach are relatively high (from 0.70 to 0.87). Furthermore, the validity of students' ratings supports the existence of a positive relationship between the SET results and student achievement. Potential bias in SET is minimized, if students are invited to assess only those aspects of teaching they are qualified to evaluate. There is a consensus about the unparalled validity of SET for assessing teaching effectiveness (Marsh 1987; Ramsden, 1991). Marsh (1987) adds that it is the only indicator that evaluates teaching performance whose validity has been established rigorously and thoroughly.

Although SET is widely used in Croatian universities as a tool for teacher–course rating, to the best of our knowledge, this is the first study, analysing factors that affect students' perceptions of teacher-course effectiveness in Croatian HEI. Primary data were collected by using systematic student evaluation procedures, that are proven to be valid and are uniform for all courses and teachers in the entire institution, during an academic year. Since SET results are confidential for each HEI in the Republic of Croatia, the identity of HEI that was the subject of our research cannot be revealed. Hereafter, we will refer to it as the Faculty, while the University will denote the university, to which this school is affiliated. In this study, students' attitudes towards teachers and courses on HEI are analysed, as to provide the insights into the wants and needs of students, since they are the key stakeholders of higher education.

This paper consists of six sections. Section 2 presents a literature review while section 3 describes the data and methodology and is followed by results and discussion in Section 4. Finally, the study is concluded with Section 5.

2. LITERATURE REVIEW

Research on student evaluations of teaching dates to the late 1920s and the series of papers of Remmers and Brandenburg (Remmers, 1928, 1930; Brandenburg and Remmers, 1927; Remmers and Brandenburg, 1927). Centra (1993) defines four periods of student evaluation:

1. 1927 to 1960 – period is characterised by the work of Remmers and his colleagues at Purdue University.
2. 1960s –period of voluntary student evaluation of teaching.
3. 1970s – period referred to as "the golden age of research on student evaluations". In this period numerous studies have proven the validity and utility of student evaluation.
4. 1980s to the present day – more research is conducted introducing new methodologies and approaches with the aim of additional clarification of student evaluation.

SET is one of the most popular topics in higher education (Berk, 2013). Generally, most research has focused on designing and developing evaluation instruments (Marsh, 1987) as well as on testing of their validity and reliability (Cohen, 1981; Feldman, 1977). Previous findings indicate that a lack

of agreement on the factors, contributing and affecting teacher effectiveness.

Some studies found that personal characteristics of teachers, such as: age, sex, charisma or personality affect their SET results. Šimić et al. (2010) investigated if teachers' personal characteristics and their behaviour affect student achievements. They found that those are associated, because some of the teachers' individual characteristics contribute to explaining some components of the teacher–student interaction. Filak and Sheldon (2003) found that teachers' age and the overall teaching experience were not related to students' satisfaction, while Feldman (1983) found this relationship to be negative, but weak. On the other hand, Sullivan and Skanes (1974) found a higher positive correlation between SET ratings for experienced full-time faculty members, while the correlation was lowest for inexperienced part-time instructors. Some papers report gender bias in SET results, in a way that female teachers are rated significantly lower than male teachers (Boring et al., 2016; MacNell et al., 2015). Some studies found that SET results are positively influenced by the teacher's charisma (Mittal et al., 2015) or personality (Clayson, and Sheffet, 2006; Marks 2000; Murray, 1975)

Other studies found a relationship between SET results and students' learning outcomes, grades, motivation and/or interest for the course and class size. In the 1970s, the primary function of SET was to improve the quality of teaching. Since then, it has also become the primary indicator used to decide about promotion and tenure (Hornstein, 2017). Despite the belief that students learn more from teachers with higher SET scores, Uttl, et al. (2017), Balch and Springer (2015), Clayson (2009), Weinberg et al. (2009) revealed that there is no significant positive correlation between student learning and the SET ratings. In addition, some researchers consider SET to be a measure of teacher popularity, rather than the measure of its competence and capability. Braga et al., (2014), Stark and Freishtat, 2014). Marsh (1987), Sullivan and Skanes (1974) found a positive relation between grades that students expect and teaching effectiveness ratings. Marinović (2014) analysed the relationship between students' perceptions of teaching quality, some motivational beliefs and students' achievement and satisfaction. The research results showed significant correlation between students' accomplishments and all factors of their perception of teaching quality, as well as correlation with almost all the items, related to motivational beliefs. Marsh and Roche (1997) found a positive association between the prior interest in the course and student rating. Uttl, White and Morin (2013) investigated students' preferences for quantitative, rather than non-quantitative courses. They found that students' mean interest in taking quantitative courses was six standard deviations below their interest in taking non-quantitative courses. Consequently, this has a strong impact on the likelihood of college teachers being labelled as satisfactory or unsatisfactory (Uttl, Smibert, 2017). Furthermore, authors argue that this may be why quantitative course teachers are far more unlikely to receive tenure or promotion. Although there are numerous studies, analysing the relationship between students' motivation and academic success, there are not many studies, investigating the factors that influence the student's interest for a particular course. Regarding association of class size and SET results, most research found negative relationship between the class size and students' overall evaluation of the teacher and the course (Bedard and Kuhn, 2008; McPherson, 2006).

Student teaching assessment is a concept that has relatively recently become widely used in Croatia. Its implementation has become entrenched in the academic community in the last decade, by making the SET results one of the criteria utilized in the assessment of promotion and tenure. In a very short time, this practice became ubiquitous in Croatian universities. This study intends to contribute to the existing literature on SET, by empirically evaluating the three dimensions of student perception (student's interest for the course, students' perception of teaching quality and course experience).

3. DATA AND METHODOLOGY

3.1. Description of the questionnaire

SET is conducted by using the standardized University questionnaire. Cronbach alpha coefficient for the University questionnaire suggests a relatively high internal consistency (Cronbach alpha = .971). The questionnaire is anonymous and conducted online, by using the institutional information system. It is uniform for all schools (faculties) at the University, while the Faculty has no insight into the results, as the questionnaires are being filled in. Students are informed of the possibility

Table 1: Questionnaire for student evaluation of teaching

Section 1: Students' interest for the course
How interested were you in the course content at the beginning of the semester?
How much time do you spend per week preparing for this course?
Section 2: Assessment of the course teacher
The teacher regularly holds classes.
I am clearly and thoroughly informed about the aims of teaching, class assignments and evaluation criteria.
The teacher points out the connection between the teaching content and other courses, as well as its practical application.
The teacher presented the course content in a clear and understandable manner appropriate to my level of study.
Examples were used in class in order to clarify new concepts.
I was encouraged to actively participate in lectures (participation in discussions, asking/answering questions), to be independent in my work and to develop critical thinking skills.
The teacher is motivated during lectures and displays enthusiasm for their work.
The teacher treats me with respect.
The teacher is regularly available for communication and provides useful feedback about my work.
The teacher encourages interaction and collaboration among students.
My work throughout the semester is assessed regularly in accordance with the curriculum (midterm exams, project, assignments, seminar papers).
I am generally satisfied with this teacher.
Section 3: Overall course assessment
Lectures and other forms of teaching were well-balanced (exercises, seminar paper presentations, practical work, etc.)
Study materials were available to students (teaching material, readers, course books, etc.)
The course requirements have been attributed ECTS credits.
I am generally satisfied with this course.

Source: Official documentation.

of evaluation, but their participation is not compulsory. Students evaluate each teacher on each course on undergraduate and graduate levels for winter and summer semesters. SET is conducted before the final exam, when students know 70% of a total grade.

Evaluation for winter semester in the academic year 2016/2017 was conducted in the period from December 8, 2016 to January 15, 2017 and for summer semester in the period from May 5, 2017 to June 4, 2017 through a standardized questionnaire. In the winter semester, 75 courses were included in the survey, while in the summer semester there were 62 courses included.

Questionnaire is divided in four sections: 1) Students' interest in the course 2) Assessment of the course teacher and 3) Overall course assessment and 4) Additional suggestions and remarks. In this research first three sections will be analysed. Each of these sections consists of several questions presented in a table below.

Section one examines student's interest in the course and consists of two questions. Possible answers for question 1 are: 1 (not very interested); 2 (somewhat interested); 3 (very interested) and for question 2 are: 1 (up to half an hour); 2 (1-3 hours); 3 (more than 3 hours). For section two and three Likert scale is used to examine students' assessment of teacher and course: 1 (Strongly Disagree); 2 (Disagree); 3 (Neither agree nor disagree); 4 (Agree); 5 (Strongly Agree).

3.2. Methodology

To test subjective and objective factors, influencing students' initial motivation for the course, overall course assessment and assessment of the course teacher, we employ ordered logistic regression. Our choice is justified by the fact that all dependent variables used are categorical. We use grades, passing rate, and the number of students enrolled in the course as independent variables. Although questionnaire is conducted before the final exam (and. thus, before students know their final grade), we believe that students' opinion about the course and the teacher has already been formed, at the time, when questionnaires are being filled in. Namely, questionnaires are filled in online and students can respond until the final week of lectures, that is, the day before final exam period starts, so the time discrepancy does not alter results significantly.

In general, ordinal logistic model can be written as follows:

$$ln(Y_j^*) = logit[\pi(x)] = ln\left(\frac{\pi_j(x)}{1-\pi_j(x)}\right) = \alpha_j - \beta_1 X_1 - \beta_2 X_2 - \ldots - \beta_p X_p \quad [1]$$

where is the probability of being at or below category j given a set of p predictors (are the logit coefficients and are independent variables). The term represents threshold values, which are like the intercept in a classic linear regression, with the difference that each logit has its own threshold value (for example, if dependent variables has three categories, we would end up with two threshold values). One of the main assumptions of ordinal logistic models is that each regressor has the same effects across the categories of (ordinal) dependent variable, that is, logit regression coefficients for each independent variable are the same across the ordinal categories. For example, the student interest variable has three categories and, according to stated assumption, estimated logits of being at or below one of the three categories of motivation for the independent variable students' grade are the same. To test whether the assumption empirically holds, we employ the Brant test (parallel lines test). Idea behind the Brand test is to regress separately binary logistic regression models for the dichotomized dependent variable and compare the outcomes

at or below a category versus beyond that category (Liu, 2016).

In our paper, and based on theory presented in the literature review and econometrically on the equation [1], we develop the following empirical econometric models:

$$student\_interest_j^* = \alpha_j - \beta_1 grade - \beta_2 pass\_rate - \beta_3 enrolled \quad [2]$$

$$course\_assessment_j^* = \alpha_j - \beta_1 grade - \beta_2 pass\_rate - \beta_3 enrolled \quad [3]$$

$$teacher\_assesment_j^* = \alpha_j - \beta_1 grade - \beta_2 pass\_rate - \beta_3 enrolled \quad [4]$$

Our original sample included data at the students' level, that is, we obtained anonymized SET results. We aggregate students' level data on teacher-course-class type level, that is, we took median responses for each of the three dependent variables across teacher-course-course type level (there are three class types: lecture, seminars and exercises). Use of median was necessary, since dependent variables are categorical variables, measured on Likert scale (except for the variable *student_interest*). Due to the use of median, the *course_assessment* variable has only four categories (instead of five), as shown in Table 1. Moreover, our sample includes results of two questionnaires: each of the two questionnaires was conducted at the end of the semester of academic year 2016/2017, when 70% of the final grade was already known to students.

In Table 2, we present descriptive statistics of variables considered/included in the analysis. Dispersion measured with coefficient of variation (CV), is comparable for all main variables of interest, except for the number of students enrolled, which is quite dispersed since questionnaire is conducted for all study years - both for compulsory and elective courses. Apart from the main variables of interest, we also used the following variables: dummy variable with the value 1, if the course if held in the summer semester and 0 otherwise (*summerwinter*); dummy variable with the value 1, if the course is part of study programme in Croatian language and 0 otherwise (*croeng*); academic rank of the teachers (*academic_rank*) and age of the teacher (*age*). We can observe that the number of courses in winter semester is slightly higher (52.4%), since graduate students enrolled in the second year have only graduate thesis to finish in the summer semester. In addition,

Table 2: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	CV	Min	Max
student_interest	333	2.018	0.499	0.25	1	3
course_assessment	333	4.615	0.693	0.15	2	5
teacher_assessment	333	4.672	0.707	0.15	1	5
pass rate	333	86.67	10.60	0.12	50	100
grade	333	3.109	0.490	0.16	2.222	4.725
enrolled	333	65.46	72.13	1.10	4	293
summerwinter	333	0.476	0.500	1.05	0	1
croeng	333	0.805	0.397	0.49	0	1
academic_rank	333	3.334	1.306	0.39	1	5
age	333	44.60	11.63	0.26	27	71

Source: Authors' calculations

out of all courses, 19.5% are a part of the study programme delivered in English. Variable *academic rank* is categorical, with five categories: assistants are coded with 1, postdocs with 2, assistant professor with 3, associate professors with 4 and full professors with 5.

The primary analysis of the data indicated differences between average response of students enrolled in study programme in English and those enrolled in study programme in Croatian. The differences are shown in Table 3. We used Mann-Whitney U-test to check whether the observed differences are significant. Both tests indicated that average response of students regarding the course (Course Assessment) is different, that is, the average response of students enrolled in study programme in English was significantly lower than that of students enrolled in study programme in Croatian (results shown in the Appendix). This led us to estimate model [2] on two subsamples (study programmes in Croatian and English respectively).

We also considered other available variables with potential effects on students' motivation for the course and assessment of course and course teacher, like teacher's age, teacher's academic rank. Although we observed differences with simple statistics, they proved to be statistically insignificant and were, thus, not reported. In the next section, we present the results of estimation of the econometric models.

5. RESULTS AND DISCUSSION

Results of the estimation of the ordinal logit model (equations 2-4, from hereinafter Models 1-3) on the full sample are shown in Table 4, while estimations of the same models on two subsamples are shown in Tables 5 and 6. In all cases, we reported estimated log likelihood values *(ll),* degrees of freedom *(df)* and the chi-squared test result **(chi2),** as well as value of (McFadden's) *pseudo R-squared*. Only conclusions of the Brant test for the model are shown (full results together with the results of the Brant test on the individual variable level are available upon request). We also present the cut points for the adjacent levels of the dependent variable.

Results of the estimation of the full model clearly show that a higher grade increases the probability that both the teacher and the course obtain better grades, which is in line with the findings of Marsh (1987), as well as Sullivan and Skanes (1974), while the coefficient for the variable number of enrolled students also has a positive

Table 3: Descriptive statistics of Croatian and English-speaking study programmes

Variable	Obs	Mean	Std.Dev.	Min	Max
Student Interest CRO	268	2.033	0. 457	1	3
Teacher Assessment CRO	268	4.746	0. 617	1	5
Course Assessment CRO	268	4.702	0. 645	2	5
Student Interest ENG	65	1.954	0. 642	1	3
Teacher Assessment ENG	65	4.363	0.938	2	5
Course Assessment ENG	65	4.257	0. 770	2	5

Source: Authors' calculations

sign. On the first glance, this is surprising, since it could be expected that the sign will be negative, because a high number of students tends to dampen active participation in class and limits the student-teacher interaction, which, surely, affects teacher and course assessment. Expectedly, the coefficient has a negative sign for the estimation of the model with *student_interest* as a dependent variable. Clearly, larger class groups have a negative impact on motivation of students, since they are more prone to skip class and, generally, will have a more passive stance towards teacher/course. This result is in line with the research of Bedard and Kuhn (2008) and McPherson (2008). It seems that the pass rate is not significant and doesn't affect either of the three dependent variables, although the estimations of the equation [2] on two subsamples will show otherwise.

Table 5 shows results of the estimation on the subsample of courses that are part of the study programme in Croatian. As for the case of the full model estimations, the Brant test indicates that parallel lines assumption holds for Models 2 and 3. When observing estimated coefficients, coefficient of the variable grade is twice as large in Model 3, when compared to the full sample estimation of the same model. This coefficient can be interpreted in terms of a unit increase in grade, resulting in a 2.196 unit

Table 4: Results of estimation of Models 1-3 on the full sample

	(1)	(2)	(3)
VARIABLES	student_interest	teacher_assessment	course_assessment
grade	-0.0258	0.582*	1.160***
	(0.296)	(0.311)	(0.311)
pass_rate	-0.00261	-0.0106	0.000944
	(0.0138)	(0.0135)	(0.0120)
enrolled	-0.00398**	0.00383*	0.00509**
	(0.00178)	(0.00218)	(0.00199)
/cut1	-2.637**	-4.026***	-0.0102
	(1.253)	(1.417)	(1.185)
/cut2	1.409	-2.911**	1.442
	(1.243)	(1.295)	(1.148)
/cut3		-1.251	3.056***
		(1.246)	(1.159)
/cut4		-0.139	
		(1.241)	
Observations	333	333	333
Pseudo R^2	0.0417	0.0417	0.0417
ll	-236.5	-241.0	-261.1
df_m	3	3	3
chi2	5.150	7.095	22.72
Brant test results	Reject H_0	Fail to reject H_0	Fail to reject H_0

*Note: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1*
Source: Authors' calculations

Table 5: Results of estimation of Models 1-3 for study programme in Croatian language

	(1)	(2)	(3)
VARIABLES	student_interest	teacher_assessment	course_assessment
grade	0.771**	0.582	2.196***
	(0.370)	(0.386)	(0.467)
pass_rate	-0.0639***	-0.0259	-0.0519***
	(0.0184)	(0.0199)	(0.0201)
enrolled	-0.00716***	0.00131	0.00163
	(0.00214)	(0.00233)	(0.00230)
/cut1	-6.266***	-5.315***	-2.035
	(1.629)	(1.880)	(1.872)
/cut2	-1.486	-3.167*	-0.648
	(1.552)	(1.759)	(1.844)
/cut3		-1.896	0.832
		(1.746)	(1.846)
Observations	268	268	268
Pseudo R^2	0.0811	0.0811	0.0811
ll	-160.4	-162.6	-171.4
df_m	3	3	3
chi2	18.71	3.809	30.25
Brant test results	Reject H_0	Fail to reject H_0	Reject H_0

*Note: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1*
Source: Authors' calculations

increase in the ordered log-odds of being in a higher category of the variable *course assessment*. If the log-odds are transformed to odds (), for a one unit increase in grade, the odds of highest answer of variable *course assessment* (i.e. "Strongly agree"), versus combined other answers (i.e. from "Strongly disagree" to "Agree") are nine times greater. This result would suggest that students most value their grade, that is, students' opinion of the course is probably determined by their achieved grade. Results show that the grade does not affect students' motivation and assessment of the teacher. On the other hand, the pass rate is always negative, which suggests that an increase in pass rate lowers all three dependent variables. We could say that "easy courses" are not appreciated by students. Finally, negative sign of the coefficient of the variable negatively affects motivation of students, which is logical, since bigger groups make teaching process more challenging and is in line with the results of the estimation on the full sample.

Finally, in Table 6 we show results of the estimation on the subsample of courses that are part of the study programme in English. In this case, the Brant test indicates that parallel lines assumption holds only for Model 1. Unlike in the other subsamples, in this one, for Model 1, there is a significant negative effect of the grade, as well as the positive effect of the pass rate on students' interest for the course. We explain these results by the fact that a large share of students, enrolled in study programme

Table 6: Results of estimation of Models 1-3 for study programme in English language

	(1)	(2)	(3)
VARIABLES	student_interest	teacher_assessment	course_assessment
grade	-0.948*	1.273**	0.813
	(0.542)	(0.632)	(0.514)
pass_rate	0.0566**	-0.0254	-0.00825
	(0.0237)	(0.0230)	(0.0214)
enrolled	-0.0258	0.0166	-0.0159
	(0.0164)	(0.0165)	(0.0155)
/cut1	-0.728	-0.322	-2.203
	(2.138)	(2.279)	(2.013)
/cut2	2.403	1.047	-0.598
	(2.157)	(2.267)	(1.918)
/cut3		2.036	1.663
		(2.277)	(1.931)
Observations	65	65	65
Pseudo R^2	0.0254	0.0254	0.0254
ll	-56.61	-65.16	-67.92
df_m	3	3	3
chi2	12.11	6.955	3.540
Brant test results	Fail to reject H_0	Reject H_0	Reject H_0

*Note: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1*
Source: Authors' calculations

in English, are either existing Erasmus students, or future Erasmus students who care less about the final grade, but are motivated to fulfil their requirements under Erasmus contracts, or to be able to apply for the Erasmus programme.

Overall, our results indicate that, generally, the grade positively affects students' teacher and course assessment, while it has ambiguous effects, when estimated across two subsamples. Obviously, study programme in English enrols students, who are predominately oriented toward studying abroad (around 30% of students are enrolled via student exchange programmes – incoming and outgoing), compared to the Croatian programme, where only around 4.5% of total number of enrolled students are participating in student exchange programmes (Office for International Cooperation of the Faculty, 2018). This affects the impact of grade and pass rate on students' interest, while this effect is reduced in the case of study programme in Croatian, because of the larger number of students, and where higher dispersion of students' interests is evident.

5. CONCLUSIONS

SET is a procedure, used by higher education institutions for performance assessment of course and academic staff. The present study evaluates the SET results collected through questionnaire developed by the University using ordinal regression model.

Our research results indicate that on the observed economic HEI, both, teacher and course assessment is positively and significantly affected by student's grade, as well as by the class size. Nevertheless, in the case of class size, the effect is small, showing that the class size minimally affects student perception of teaching. Furthermore, we find large and significant difference between study programmes in Croatian and English when it comes to students' interest. Students enrolled in English programme are not driven by grade, as much as by pass rate. Explanation for these results could be found in students' mobility, that is, their need to fulfil all obligations to be able to participate in students' exchange programmes. Since one of the goals of the University and the Faculty management is to increase international visibility, increasing students' mobility is an imperative, not only for English but for Croatian study programme as well.

The main limitation of this research is the availability of data for only one higher education institution. The SET results are confidential for each higher education institution in the Republic of Croatia. Further limitations derive from the fact that the University encompasses a number of faculties. Consequently, results of this research cannot be generalized. To further clarify students' expectations from a HEI, in future research we recommend conducting analysis encompassing the whole University, as well as individual faculties. Since SET is not obligatory for students, we suggest making it obligatory to increase the response rate. Students are main stakeholders of higher education and their opinion is crucial in policy and decision making. As long as SET is voluntary, a huge amount of important information will stay undisclosed. More comprehensive data would help improve higher education services and enhance decision-making processes.

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UVID U STUDENTSKU PERCEPCIJU PODUČAVANJA: SLUČAJ VISOKOG UČILIŠTA IZ PODRUČJA EKONOMIJE

Sažetak

Cilj ovog rada je analiza studentskih percepcija podučavanja iz triju različitih perspektiva: interesa studenata, nastavnika i procjene kolegija. Za kvantifikaciju efekata ocjena, prolaznosti i veličine nastavne skupine na evaluaciju preddiplomskih i diplomskih studija, održanih u 2016/17 godini, koristi se model ordinalne logističke regresije. Podaci su prikupljeni standardiziranim elektroničkim upitnikom, a rezultati ukazuju da je, na promatranom visokom učilištu, procjena nastavnika i kolegija pozitivno i značajno povezana s ostvarenim ocjenama te veličinom nastavne skupine. Štoviše, mogu se primijetiti velike i značajne razlike između interesa studenata u kolegijima, koji se izvode na hrvatskom i na engleskom jeziku. Studenti, koji slušaju engleski program, u većoj mjeri vrednuju prolaznost od ocjena, što je u suprotnosti sa studentima, koji slušaju hrvatski program. Navedeno pripisujemo različitoj motivaciji studenata, tj. većoj sklonosti mobilnosti studentima, upisanim na engleski nastavni program.

Ključne riječi: *studentske evaluacije, ordinalna logistička regresija, visoko učilište iz područja ekonomije*