



ELIT

Economic Laboratory Transition  
Research Podgorica

## Montenegrin Journal of Economics

### Citation:

Delibasic, M., Ivanis, M., Pupavac, D., Shilina, M. (2022), "Modeling Citizens Satisfaction With Higher Education: A Case Study of Rijeka", *Montenegrin Journal of Economics*, Vol. 18, No. 4, pp. 141-154.

### Modeling Citizens Satisfaction With Higher Education: A Case Study of Rijeka

MILICA DELIBASIC<sup>1</sup>, MARIJA IVANIS<sup>2</sup>, DRAGO PUPAVAC<sup>3</sup> and MARINA SHILINA<sup>4</sup>

<sup>1</sup> Assistant Professor, University Mediterranean, Faculty of Business Studies, Podgorica, Montenegro; University of Montenegro, Maritime Faculty of Kotor, Montenegro; e-mail: 23.mildel@gmail.com. ORCID: 0000-0003-1036-3836

<sup>2</sup> Associate professor, University of Rijeka, Faculty of Tourism and Hospitality Management, Opatija, Croatia, e-mail: mivanis@fthm.hr

<sup>3</sup> Associate Professor, Polytechnic of Rijeka, Rijeka, Croatia, e-mail: drago.pupavac@veleri.hr, ORCID: 0000-0002-2201-0598

<sup>4</sup> Professor, Plekhanov Russian University of Economics, Moscow, Russia, e-mail: Shilina.MG@rea.ru

#### ARTICLE INFO

Received December 22, 2021  
Revised from January 22, 2022  
Accepted February 22, 2022  
Available online October 15, 2022

#### JEL classification:

G11, G12, G14, G15, G17.

**DOI:** 10.14254/1800-5845/2022.18-4.12

#### Keywords:

Higher education,  
Satisfaction,  
Citizens of Rijeka

#### ABSTRACT

*The research subject of this paper is the satisfaction of the citizens of Rijeka with higher education as a public service. The paper aims to a) determine the elements of the construct of citizen satisfaction with higher education as a public service and identify opportunities to enhance citizen satisfaction, that is, raise it to a considerably higher level, and b) to contribute to the creation of higher-education policies in modern circumstances to ensure that all members of society are satisfied with this public service. Research starts from the main hypothesis that most of Rijeka's citizens are satisfied with higher education as a public service. Auxiliary hypotheses are also formulated. The main and auxiliary hypotheses are tested using descriptive statistics, cluster analysis, the t-test and variance analysis (ANOVA). The main conclusion of this paper is that the satisfaction of Rijeka's citizens with the quality of services provided by higher education is above average, in particular with the availability of occupations provided by the various types of faculties. On the other hand, the citizens of Rijeka are dissatisfied with the ties between businesses (employers) and the academic community, and with the low degree to which jobs are ensured for top students. Statistically significant differences, with regard to the level of satisfaction with higher education as a public service, are evident among citizens with different educational backgrounds.*

## INTRODUCTION

*"The soul of an economy knowledge is a constant striving for innovation; the source of its power is education. In today's world, the competitive power of the states essentially represents a competition of the knowledge level"*

Li Tein

A *paradigmatic knowledge* is indisputable today for several reasons, but primarily because of its dominant importance for the future of humanity and sustainable development. In addition, another reason is the number of theoretical concepts containing knowledge: a) the concept of knowledge as the only unlimited *resource* and the key factor for sustainable development, b) the concept of knowledge as a *product*, because production of knowledge is the most important determinant of modern economics, c) the concept of *codified knowledge*, which becomes the most important component of the economic relations, d) the concept of *economy knowledge* and *society knowledge* as the most important consequences of an information society development, and e) the concept of the *new economy* (hereafter n.e.) as questionable theoretical and methodological construction, found in the jargon and articles of many authors (Draskovic et al., 2013).

Representing the knowledge, skills and attitudes that enable people to gain income and other beneficial effects, human capital became a vital factor for the development of economies and societies as early as the twentieth century (Wielechowski et al., 2021). Investment in human capital can result in high rates of economic growth which are preconditions to strengthening the position of any country in the global competition (Chlebisz and Mierzejewski, 2020). The quality of human capital is foremost shaped by the educational system. Accordingly, in modern economics, education is not seen as expenditure (alongside welfare, the pension system, state apparatus, defence and security) but rather as an investment that determines the rate and quality of economic growth. In the twenty-first century, the importance of human capital has increased even more, in the context of the growing role of knowledge and innovation in the economy, and ever greater uncertainty. Hence, in recent decades, intellectual capital, that is, the ability to generate and create innovation, has become a key element of human capital. It has emerged as a decisive factor in modernizing the economy, adapting new technological structures and responding to the challenges of global competition (Ibid.).

During the transition the SEE countries underwent a systemic transformation in two major directions: the introduction of new professions in the labor market and areas of universities, as well as the emergence highly expressed of a commercial component. Data show that huge transformations took place in all South East European (SEE) countries in the period 1990-2020: the enrollment of students doubled and, as a result, the number of university graduates did so too. Over the past 30 years, there have been significant positive changes in the education system, as studies show that big number of school graduates go to universities. As a result of the expansion of higher education (with regard to enrolment policies, the number of graduate students, new faculties and universities, new study programmes, new types of diplomas, etc.), appear mounting pressure on employment policies and large-scale unemployment of highly-educated personnel.

Several major mistakes were made during the so-called Bologna process of higher education reform. First was the failure to create the required and equal conditions for carrying out such a challenging education reform. Second was the failure to define the importance and competitive level of individual higher-education institutions – no differentiation was made between leading, traditional state universities and new ones in terms of awarding to each the status it deserved. As a result, the contribution of the individual universities to the development of competitive human capital was not properly assessed. Not only were the universities' research capabilities and contributions ignored but the need for establishing new research centres (for examples, institutions, etc.) was also overlooked. A series of other institutional and organizational mistakes were made regarding the operationalization of legislation and various regulations relating to studies, appointment to scientific grades, etc. The commercialization of (paid for) higher education spread at an incomprehensible, paradoxical and fatal pace, resulting in immeasurable consequences on

the side of supply (the forced and ill-suited hyper-production of teaching staff) and on the side of demand (enrolled students and graduate students) as well as in mounting pressure on employment.

The rapid development of sophisticated information technologies that have enabled distance learning has given an even greater impetus to the quick spread of higher education (Volchik et al., 2021). Foreign scientists distinguish two most important groups of accessibility factors of higher education: financial and territorial (Clancy and Goastellec, 2007). “*Accessibility of higher education*” is understood (Abankina and Filatova, 2018) as a quantitative characteristic and is evaluated from three points of view: social (socio-economic characteristics of subjects, the number of admission places, the financial component), spatial (location of housing, the distance to the nearest settlement with the university, educational and transport infrastructure) and motivational (factors that encourage movement for the sake of choosing according to preferences, or, conversely, removing such a need).

With its ten universities, 17 polytechnics, 20 colleges and some 165 thousand students, Croatia is part of the European Education Area. The Croatian and European systems of higher education are adapting to new educational, social and professional changes *in continuo*. The future development of higher education is focused on teaching processes, aimed at facilitating the acquisition of fundamental knowledge and the development of skills to resolve emerging issues, and at preparing students to address challenges pertaining to the future and to development. Higher education has always been a precondition to economic growth (Marquez-Ramos and Mourelle, 2019; Poor et al., 2018), and within the knowledge society, the role of higher education is even more pronounced (Drucker, 1969). Coined by D. Bell (1976), the term “knowledge society” refers to a society with a post-industrial economy, in which the work force is concentrated in the sector of services, ideas and communication, and which is dependent upon people and institutions for knowledge generation.

Education is not only a factor of economic growth (McMahon and Oketch, 2013; Nussbaum, 2011). It also produces numerous attendant non-market effects and enables people to enjoy life (Galbraith, 1997, Becker and Mulligan, 1997, Malamud, 2009, Oreopoulos and Salvanes, 2011, Harari, 2017; Saulius et al., 2020). Education and professional training are fundamental determinants of an individual’s economic performance (Kurczewska et al., 2020). Many studies have confirmed the high correlation between educational level and happiness (Tan et al., 2021; Araki, 2021). Hence, higher education systems are faced with a fundamental and constant demand for quality improvement. There are various reasons for the increased interest in education, which primarily results from the ever-greater importance of education in the lives of people and society. In this, small universities play a special role, as they must be embedded in a community and become the core of individual and local growth and development. Accordingly, the research subject of this paper is the satisfaction of citizens with higher education in the Croatian town of Rijeka.

To accomplish the paper’s objective and purpose, and to prove the main and auxiliary hypotheses, various scientific methods have been used, including the survey method and the methods of descriptive and inferential statistics.

## 1. THEORETICAL FRAMEWORK

### 1.1 Literature review

Over the past few decades, higher education around the world has transformed from elite to mass, because to achieve social justice and increase competitiveness in the global economy (Yang and McCall, 2014; Draskovic & Bilan, 2019). Basic problem of ensuring equal access to higher education is to balance the system, which leads to an increase in the quality of education and opportunities equalization for population groups with different incomes (Brennan et al., 2004; Singh, 2011; Unterhalter et al., 2010; Meyer et al., 2013; Knight, 2019).

Satisfaction is a concept that has been frequently studied in economics (Levin et al., 1980) and in education. Where higher education is concerned, most studies have focused on measuring the satisfaction of students and/or professors (Colton & White, 1985; Suldo et al., 2006; Botek, 2016; Bateman & McMahan, 2014, Mihanovic et al., 2016; Arpilleda, 2017). Studies dealing with citizen satisfaction with

higher education are poorly represented in the literature (Jones, 2016; Calderon & Crabtree, 2019). Most studies on citizen satisfaction focus on primary and secondary education (Lewis & Pattinasarany, 2009; Saad, 2019).

D. Bigs and W. Barnhart (1972) argued that citizen satisfaction with higher education is strongly linked to the citizens' perception of life on campus. D. Bigs et al. (1977) studied the educational values of citizens and their satisfaction with the state university. Studies focusing on citizen satisfaction with tertiary education need to be recognised as a vital factor in evaluating universities because citizens make up the local community, a very important stakeholder in any university. It is the task of the university to identify stakeholders (students, employees, sponsors, businesses, society, etc.) and to satisfy their diverse interests. Thus, by identifying stakeholders and objectives, the basic assumptions are set for evaluating the quality of higher education.

## 1.2 Research Concept

The University of Rijeka is the second oldest university in Croatia, and its constituents are found in various locations in the town of Rijeka and the surrounding area. Consisting of 18 active constituents (faculties, academies and departments), the University of Rijeka provides 172 study programmes in diverse scientific fields, in which interdisciplinary studies are well represented. Accordingly, in this scientific discourse, the construct of satisfaction with higher education as a public service in Rijeka is measured with eight elements:

- Availability of occupations and various types of faculties (A\_Occup),
- Quality of higher education (Q\_HE),
- Transport of students to the faculty (Transport),
- Use of the Trsat University Campus for various student events, tribunals, conferences, symposiums (U\_UC),
- Scholarships for outstanding/top students (Scholarships),
- Ties between businesses (employers) and the academic community (T\_BAC),
- Ensuring jobs for top students (J\_TS), and
- Annual faculty tuition fees (A\_TF).

Closed-ended items, with options from which participants could choose a response, were used in the questionnaire. A Likert scale, one of the scales most often used to measure attitudes, was applied, as ordinal data were involved. The respondents were asked to report their level of agreement on a 6-point Likert scale, having the following values:

- 0 – I do not know,
- 1 – Not at all satisfied,
- 2 – Not satisfied,
- 3 – Slightly satisfied,
- 4 – Satisfied, and
- 5 – Completely satisfied

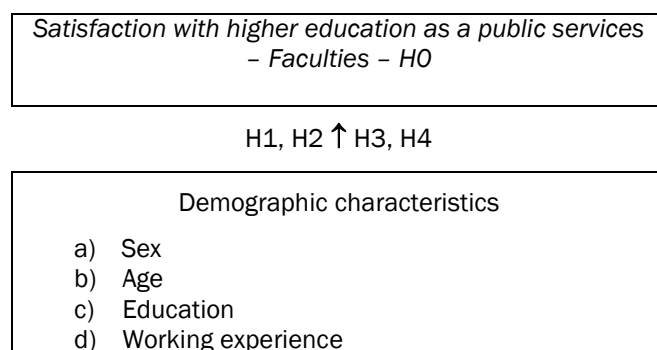
The reliability of the measuring instrument was analysed using Cronbach's alpha, which was 0.88, a value suggesting good internal consistency and stability of factors and high reliability (Table 1).

**Table 1.** Reliability of the measuring instrument

| Summary for scale: Mean=18,1985 Std.Dv.=8,68437 Valid N:403 (MI_SO) Cronbach alpha: ,888503 Standardized alpha: ,890898 Average inter-item corr.: ,512927 |                   |                   |                    |                    |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
|                                                                                                                                                           | Mean if - deleted | Var. if - deleted | Stdv. if - deleted | Itm-Totl - Correl. | Alpha if - deleted |
| A_Occup                                                                                                                                                   | 15,21588          | 61,25612          | 7,826629           | 0,603814           | 0,879954           |
| Q_HE                                                                                                                                                      | 15,32010          | 59,39382          | 7,706738           | 0,679016           | 0,873117           |
| Transport                                                                                                                                                 | 15,75434          | 58,08606          | 7,621421           | 0,622584           | 0,878791           |
| U_UC                                                                                                                                                      | 15,79156          | 55,98633          | 7,482401           | 0,667480           | 0,874705           |
| Scholarships                                                                                                                                              | 16,17370          | 54,99712          | 7,416005           | 0,738266           | 0,866531           |
| T_BAC                                                                                                                                                     | 16,33499          | 60,19299          | 7,758414           | 0,680290           | 0,873477           |
| J_TS                                                                                                                                                      | 16,59801          | 59,93270          | 7,741621           | 0,702203           | 0,871682           |
| A_TF                                                                                                                                                      | 16,20099          | 58,28466          | 7,634439           | 0,630668           | 0,877761           |

Source: Own

In line with the above-mentioned, a conceptual research model was developed (cf. figure 1).

**Figure 1.** Conceptual research model of satisfaction with higher education

Source: Own

The main and auxiliary hypotheses of the paper were formulated based on the set conceptual research model:

- H<sub>0</sub>: Most of Rijeka's citizens show above-average satisfaction with the availability of occupations and various types of faculties as well as with the quality of higher education, but are the least satisfied with the ties between businesses (employers) and academic units as well as with ensuring jobs for top students.
- H<sub>1</sub>: Women, unlike men, show a higher level of satisfaction with higher education (faculties) as a public service.
- H<sub>2</sub>: Respondents belonging to younger age groups show a higher level of satisfaction with higher education (faculties) as a public service.
- H<sub>3</sub>: There are statistically significant differences between respondents by educational level, with regard to their level of satisfaction with higher education (faculties) as a public service.
- H<sub>4</sub>: There are statistically significant differences between respondents by length of work experience, with regard to their level of satisfaction with higher education (faculties) as a public service.

## 2. SAMPLE

The study was conducted from May to August 2021. The largest number of respondents in the target sample are highly educated, followed by those with secondary school qualifications, all of whom reside in

Rijeka, thus making the sample representative and reliable. The survey was distributed publicly through the Facebook social network and through public Facebook groups (*Volim grad koji teče* and *Nova riječka enciklopedija – Fluminensia*). During the three months that the survey was accessible, 403 valid questionnaires were gathered. The questionnaire was completed by inhabitants aged 18 to 61 and over. Women (70.47%), people with college degrees (45.16%), people in the 41-50 age group (35.24%), and people with more than 20 years of work experience (47.89%) prevail in the sample. Table 2 presents a more detailed description of respondent characteristics.

**Table 2.** Demographic characteristics of respondents

|                                                                                                                                                   | N   | %     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|
| Sex                                                                                                                                               |     |       |
| Male                                                                                                                                              | 119 | 29,53 |
| Female                                                                                                                                            | 284 | 70,47 |
| EDUCATION                                                                                                                                         |     |       |
| Elementary school - ES                                                                                                                            | -   | -     |
| Secondary school - SS                                                                                                                             | 99  | 24,56 |
| Higher expertise (3 years Professional schools or Polytechnic according Bologna Declaration or 2 years according to old system of education) - HS | 45  | 11,17 |
| Faculty (3 years - university baccalaureus) - F_UB                                                                                                | 33  | 8,19  |
| Faculty (4-6 years according to old system of education) - F_OS                                                                                   | 121 | 30,02 |
| Faculty (5 years according Bologna Declaration masters degrees) - F_MD                                                                            | 61  | 15,14 |
| Master of science - MSc                                                                                                                           | 12  | 2,98  |
| Doctorate - PhD                                                                                                                                   | 32  | 7,94  |
| Age                                                                                                                                               |     |       |
| 18-20                                                                                                                                             | 2   | 0,50  |
| 21-30                                                                                                                                             | 37  | 9,18  |
| 31-40                                                                                                                                             | 90  | 22,33 |
| 41-50                                                                                                                                             | 142 | 35,24 |
| 51-60                                                                                                                                             | 91  | 22,58 |
| 61 +                                                                                                                                              | 41  | 10,17 |
| WORKING EXPERIENCE                                                                                                                                |     |       |
| Less than 3 years                                                                                                                                 | 18  | 4,66  |
| From 3-5 years                                                                                                                                    | 12  | 2,97  |
| From 5-10 years                                                                                                                                   | 46  | 11,41 |
| From 10-20 years                                                                                                                                  | 131 | 32,51 |
| More than 20 years                                                                                                                                | 193 | 47,89 |
| No working experience                                                                                                                             | 3   | 0,74  |

Source: Own

### 3. RESEARCH RESULTS AND DISCUSSIONS

*H<sub>0</sub>: Most of Rijeka's citizens show above-average satisfaction with the availability of occupations and various types of faculties as well as with the quality of higher education, but are the least satisfied with the ties between businesses (employers) and academic units as well as with ensuring jobs for top students.*

Based on the collected data, a brief descriptive analysis was made (Table 3) of the satisfaction of Rijeka's citizens with "Higher education – faculties" as a public service.

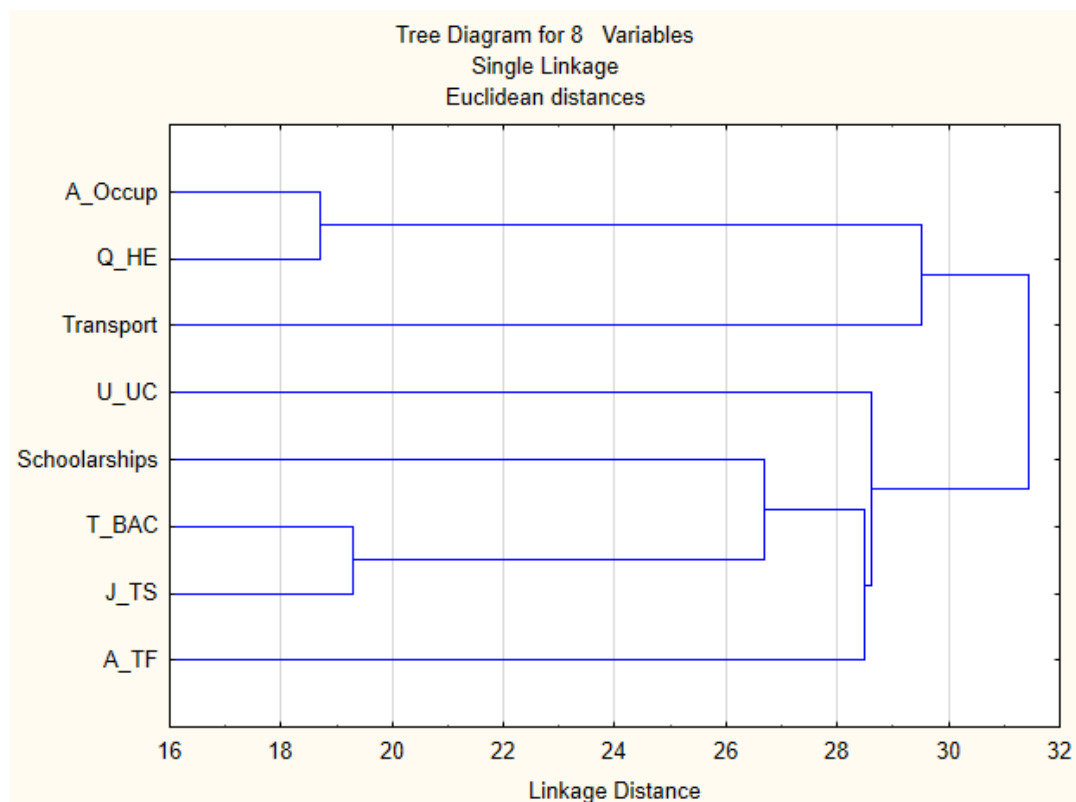
**Table 3.** Descriptive statistics of the satisfaction with “Higher education – faculties” as a public service

|                           | A_Occup                      | Q_HE                         | Transport                    | U_UC                         | Scholarships          | T_BAC                 | J_TS                  | A_TF                |
|---------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------------|-----------------------|-----------------------|---------------------|
| MEAN<br>case 1-403        | 2,982                        | 2,878                        | 2,444                        | 2,406                        | 2,024                 | 1,863                 | 1,600                 | 1,997               |
| ME-<br>DIAN<br>case 1-403 | 3 –<br>Slightly<br>satisfied | 3 –<br>Slightly<br>satisfied | 3 –<br>Slightly<br>satisfied | 3 –<br>Slightly<br>satisfied | 2- Not sat-<br>isfied | 2- Not sat-<br>isfied | 2- Not sat-<br>isfied | 2- Not<br>satisfied |
| SD<br>case 1-403          | 1,301                        | 1,342                        | 1,554                        | 1,655                        | 1,612                 | 1,273                 | 1,262                 | 1,521               |
| VALID_<br>N case<br>1-403 | 403                          | 403                          | 403                          | 403                          | 403                   | 403                   | 403                   | 403                 |
| SUM<br>case 1-403         | 1202                         | 1160                         | 985                          | 970                          | 816                   | 751                   | 645                   | 805                 |
| MIN<br>case 1-403         | 0                            | 0                            | 0                            | 0                            | 0                     | 0                     | 0                     | 0                   |
| MAX<br>case 1-403         | 5                            | 5                            | 5                            | 5                            | 5                     | 5                     | 5                     | 5                   |
| _25th<br>% case<br>1-403  | 3                            | 2                            | 1                            | 1                            | 0                     | 1                     | 1                     | 1                   |
| _75th<br>% case<br>1-403  | 4                            | 4                            | 4                            | 4                            | 3                     | 3                     | 3                     | 3                   |

Source. Own

The average score of citizen satisfaction in Rijeka with “Higher education – faculties” as a public service is  $M=2.27$  ( $SD=1.44$ ). This finding points to the relatively low average level of citizen satisfaction in Rijeka with “Higher education – faculties” as a public service. Nevertheless, data in Table 3, together with an in-depth analysis, demonstrate that the first four statements have above-average scores, while the next four statements have average scores for citizen satisfaction. It is also evident that the first four statement have higher medians (3) whereas the medians of the other four statement are very low (2).

Using cluster analysis, the individual elements of citizen satisfaction with higher education as a public service were further grouped (Figure 1).



**Figure 1.** Dendrogram

Source: own

Figure 1 shows that the data are grouped into two clusters. The first cluster consists of the elements of the construct of citizen satisfaction with higher education as a public service that received the highest average scores. These elements are:

- Availability of occupations and various types of faculties (A\_Occup),
- Quality of higher education (Q\_HE), and
- Transport of students to the faculty (Transport).

In the first cluster, all elements of the construct of citizen satisfaction with higher education as a public service have above-average values. The shortest distance between elements in this cluster is the distance between “Availability of occupations and various types of faculties” and “Quality of higher education”. This means that citizens of Rijeka are the most satisfied with these elements of the construct of satisfaction with higher education. The second cluster comprises 5 elements of the construct of satisfaction with higher education, of which as many as 4 have below-average values. The shortest distance between elements in this cluster is the distance between “Ties between businesses (employers) and the academic community” and “Ensuring jobs for top students”. This means that the citizens of Rijeka are the least satisfied with these elements of the construct of satisfaction with higher education. This finding suggests that citizens do not see the University as being sufficiently involved with, or focused on, the economy and community development. Citizens are particularly dissatisfied with the failure to provide employment opportunities for top students. The obtained results indicate the acceptance of  $H_0$ .

*H<sub>1</sub>: Women, unlike men, show a higher level of satisfaction with higher education (faculties) as a public service.*

A t-test was conducted to prove the hypothesis that there is a statistically significant difference between men and women with regard to satisfaction with higher education (faculties) as a public service. Table 4 shows the results of the t-test.

Table 4. Results of t-test

|              | Mean - Female | Mean - Male | t-value   | df  | p        |
|--------------|---------------|-------------|-----------|-----|----------|
| A_Occup      | 3,052817      | 2,815126    | 1,676279  | 401 | 0,094463 |
| Q_HE         | 2,957746      | 2,689076    | 1,837434  | 401 | 0,066886 |
| Transport    | 2,411972      | 2,521008    | -0,641841 | 401 | 0,521343 |
| U_UC         | 2,443662      | 2,319328    | 0,687470  | 401 | 0,492184 |
| Scholarships | 2,091549      | 1,865546    | 1,284232  | 401 | 0,199802 |
| T_BAC        | 1,919014      | 1,731092    | 1,353204  | 401 | 0,176753 |
| J_TS         | 1,623239      | 1,546218    | 0,558225  | 401 | 0,577002 |
| A_TF         | 1,985915      | 2,025210    | -0,236179 | 401 | 0,813414 |

Source: own

Based on the obtained results (Table 4), it is evident that while the level of satisfaction of female respondents with almost all elements of the construct of citizen satisfaction with higher education as a public service is higher than the level of satisfaction of male respondents, there are no statistically significant differences in any of the elements of the construct. Accordingly, hypothesis H<sub>1</sub> was rejected, with 95% confidence.

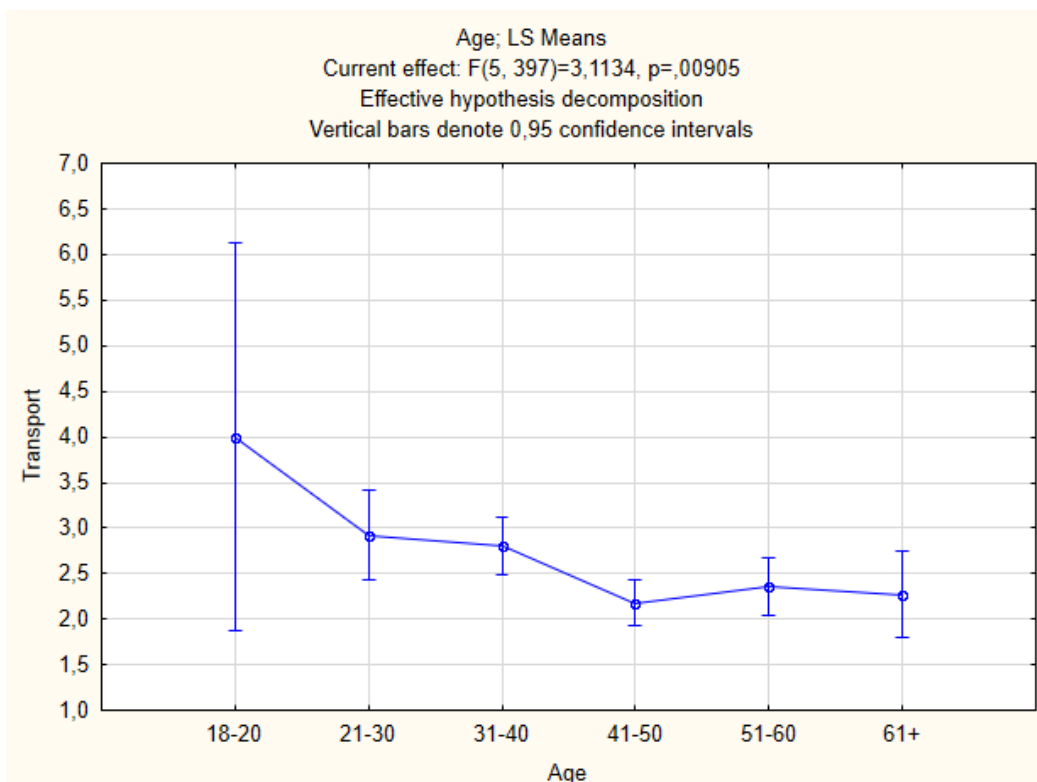
*H<sub>2</sub>: Respondents belonging to younger age groups show a higher level of satisfaction with higher education (faculties) as a public service.*

Hypothesis H<sub>2</sub> was tested using the variance analysis method. As the conducted variance analysis did not confirm any statistically significant differences in the level of satisfaction with higher education as a public service between respondents belonging to different age groups, hypothesis H<sub>2</sub> was rejected, with 95% confidence. A statistically significant difference was observed in only one element of the construct of satisfaction with higher education as a public service – “Transport of students to the faculty” (Figure 2).

Based on Figure 2, it can be concluded that the respondents belonging to younger age groups show a higher level of satisfaction with “Transport of students to the faculty”, as an element of the construct of satisfaction with higher education as a public service.

*H<sub>3</sub>: There are statistically significant differences between respondents by educational level, with regard to their level of satisfaction with higher education (faculties) as a public service.*

Hypothesis H<sub>3</sub> was tested using the variance analysis method. The conducted variance analysis confirmed there are statistically significant differences in the level of satisfaction with higher education as a public service between respondents with regard to their educational level (Table 5).



**Figure 2.** Results of analysis of variance for difference by element of satisfaction construct, Transport of students to faculty in relation to age

Source: own

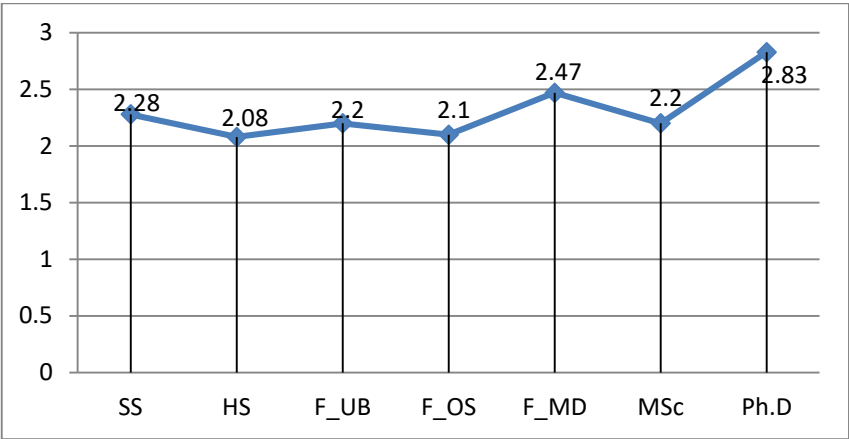
As statistically significant differences were observed in 5 out of 8 elements of the construct of satisfaction with higher education as a public service, the hypothesis was accepted, with 95% confidence. Respondents holding PhD degrees showed the highest level of satisfaction with all of the elements of the construct of satisfaction with higher education as a public service. The average score of their overall satisfaction, measured for all elements, is  $M=2.83$ . Respondents holding associate degrees have the lowest overall average score of  $M=2.08$ .

**Table 5.** Results of the ANOVA test for the difference in the level of satisfaction with public service higher education in relation to the level of education

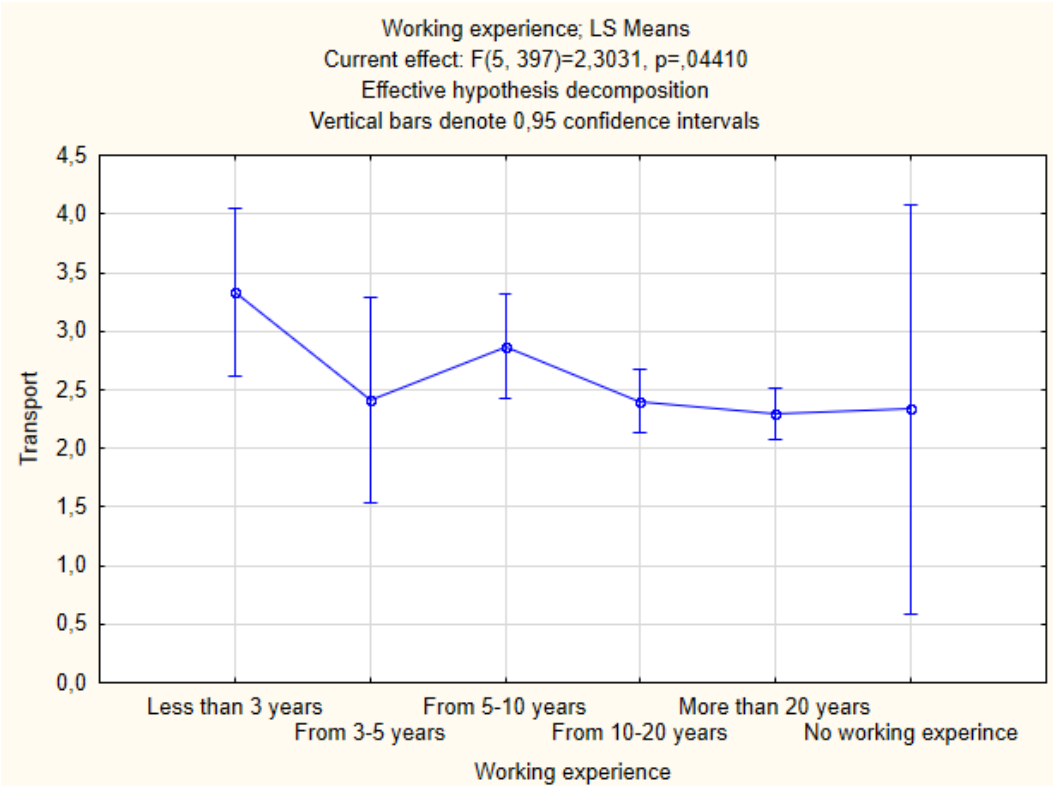
| Statements   | SS   |      | HS   |      | F_UB |      | F_OS |      | F_MD |      | MSc. |      | Ph.D |      | f    | p      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
|              | M    | SE   | M    | SE   | M    | SE   | M    | SE   | M    | SE   | M    | SE   | M    | SE   |      |        |
| A_Occup      | 2,70 | 0,12 | 2,75 | 0,19 | 3,00 | 0,22 | 3,12 | 0,11 | 3,09 | 0,16 | 2,50 | 0,37 | 3,56 | 0,22 | 2,68 | 0,014* |
| Q_HE         | 2,67 | 0,13 | 2,64 | 0,19 | 2,87 | 0,23 | 2,88 | 0,12 | 3,14 | 0,17 | 2,50 | 0,38 | 3,43 | 0,23 | 2,12 | 0,049* |
| Transport    | 2,56 | 0,15 | 2,20 | 0,23 | 2,45 | 0,27 | 2,22 | 0,14 | 2,73 | 0,19 | 2,33 | 0,44 | 2,71 | 0,27 | 1,23 | 0,286  |
| U_UC         | 2,56 | 0,16 | 2,20 | 0,24 | 2,45 | 0,28 | 2,18 | 0,15 | 2,42 | 0,21 | 2,33 | 0,47 | 3,00 | 0,29 | 1,34 | 0,237  |
| Scholarships | 2,19 | 0,16 | 1,57 | 0,23 | 2,21 | 0,27 | 1,73 | 0,14 | 2,22 | 0,20 | 2,25 | 0,46 | 2,56 | 0,28 | 2,31 | 0,033* |
| T_BAC        | 2,08 | 0,12 | 1,80 | 0,18 | 1,63 | 0,21 | 1,57 | 0,11 | 1,96 | 0,16 | 1,66 | 0,36 | 2,46 | 0,22 | 3,10 | 0,006* |
| J_TS         | 1,68 | 0,12 | 1,66 | 0,18 | 1,45 | 0,21 | 1,32 | 0,11 | 1,77 | 0,16 | 1,75 | 0,36 | 2,06 | 0,22 | 2,11 | 0,051  |
| A_TF         | 1,80 | 0,14 | 1,88 | 0,22 | 1,57 | 0,25 | 1,78 | 0,13 | 2,49 | 0,19 | 2,33 | 0,42 | 2,90 | 0,26 | 4,39 | 0,000* |

\*  $p<0,05$

As statistically significant differences were observed in 5 out of 8 elements of the construct of satisfaction with higher education as a public service, the hypothesis was accepted, with 95% confidence. Respondents holding PhD degrees showed the highest level of satisfaction with all of the elements of the construct of satisfaction with higher education as a public service. The average score of their overall satisfaction, measured for all elements, is  $M=2.83$ . Respondents holding associate degrees (HS) have the lowest overall average score of  $M=2.08$ .



**Graph 1.** Overall average assessment of citizens' satisfaction with the public service of higher education with regard to the level of education



**Figure 3.** Results of analysis of variance for difference by element of satisfaction construct, Transport of students to faculty in relation to work experience

Source: own

*H<sub>4</sub>: There are statistically significant differences between respondents by length of work experience, with regard to their level of satisfaction with higher education (faculties) as a public service.*

Hypothesis H<sub>4</sub> was tested using the variance analysis method. As the conducted variance analysis did not confirm any statistically significant differences in the level of satisfaction with higher education as a public service between respondents with regard to the length of their work experience, the hypothesis was rejected, with 95% confidence. A statistically significant difference was observed in only one element of the construct of satisfaction with higher education as a public service – “Transport of students to the faculty” (Figure 3).

## CONCLUSION

The University of Rijeka Strategy 2021-2025 underlines that one of the University’s fundamental objectives is to cooperate with local and regional self-governments in enhancing the quality of life and work of all citizens and in continuously improving the resilience and well-being of the community, thus confirming the fact that the University recognises citizens as being a vital stakeholder. Hence, the satisfaction of the citizens of Rijeka with higher education (faculties) as a public service was measured in this scientific discourse.

The construct of satisfaction with higher education as a public service in Rijeka was measured with 8 elements and the total average score of citizen satisfaction in Rijeka with “Higher education (faculties)” as a public service is  $M=2.27$  ( $SD=1.44$ ).

The citizens of Rijeka are the most satisfied with the availability of occupations and various types of faculties ( $M=2.98$ ;  $SD=1.30$ ) and with the quality of higher education ( $M=2.87$ ;  $SD=1.34$ ), but are the least satisfied with the ties between businesses (employers) and the academic community ( $M=1.86$ ;  $SD=1.27$ ) and with ensuring jobs for top students ( $M=1.60$ ;  $SD=1.26$ ).

With regard to the demographic variables of gender, age, educational level and work experience, statistically significant differences in the level of satisfaction with higher education as a public service can only be found among citizens with different educational backgrounds. Namely, citizens with higher educational levels are more satisfied with higher education (faculties) as a public service.

## REFERENCES

- Arpilleda, J.M. (2017), „Students’ Level of Satisfaction of the Senior High School. Program of Surigao Del Sur State University“, *Proceedings Journal of Education, Psychology and Social Science Research*, Vol 4, Issue 1, pp. 51-57.
- Araki, S. (2021), “Does Education Make People Happy? Spotlighting the Overlooked Societal Condition”, *Journal of Happiness Stud.* <https://doi.org/10.1007/s10902-021-00416-y>
- Abankina, I., Filatova, L. (2018), “Accessibility of Pre-School Education”, *Educational Studies*, No. 3, pp. 216-246 (in Russian)
- Bell, D. (1976), *The Coming of Post-Industrial Society: A Venture in Social Forecasting*, Harmondsworth Penguin.
- Bigs, D., Brown, J., Kingston, G. (1977), „Citizens' education values and their satisfaction with a state university“, *Research in Higher Education*, Vol. 6, pp. 157-167.
- Bigs, D., Barnhart, W. (1972), „Urban Citizens and Their Satisfaction with a University“, *Research Bulletin*, Vol. 13, No. 2, pp. 1-14.
- Botek, M. (2013), „Satisfaction with education“, 4th International Conference of *New Horizons in Education Procedia, Social and Behaviour Sciences*, Vol. 106, pp. 2289-2293.
- Brennan J., King R., Lebeau Y. (2004), "The Role of Universities in the Transformation of Societies", *Centre for Higher Education Research and Information/Association of Commonwealth Universities*. UK. <https://www.semanticscholar.org/paper/The-Role-of-Universities-in-the-Transformation-of-Brennan->
- Calderon & Crabtree (2019), *Fragile Community' Residents in U.S. Value Higher Ed*, Gallup, <https://news.gallup.com/poll/257597/fragile-community-residents-value-higher.aspx>

- Chlebisz, A., Mierzejewski, M. (2020), "Determinants of GDP growth in Scandinavian countries with special reference to scientific progress", *International Entrepreneurship Review*, Vol. 6, No. 3, pp. 21-35. doi: 10.15678/IER.2020.0603.02
- Clancy P., Goastellec G. (2007), "Exploring Access and Equity in Higher Education: Policy and Performance in a Comparative Perspective", *Higher Education Quarterly*, Vol. 61, pp. 136–54.
- Colton, J.A., White, M.A. (1985), „High school student satisfaction and perceptions of the school environment“, *Contemporary Educational Psychology*, Vol. 10, Issue 3, pp. 235-248.
- Douglas, J., Douglas, A., Barnes, B. (2006), „Measuring student satisfaction at a UK university“, *Quality Assurance in Education*, Vol. 14, issue 3, pp. 251-267.
- Draskovic, V., Jovovic, R., Draskovic, M., Jereb, B. (2013), *Knowledge - Keastone of the Modern Economy*, SPH, Celje-Osijek-Czestochowa-Kotor.
- Draskovic, V., Bilan, S. (2019), "Perception of the social status of intelligence in selected countries of the former Yugoslavia". *Economics and Sociology*, Vol. 12, No. 2, pp. 319-327. doi:10.14254/2071-789X.2019/12-2/19
- Drucker, P.F. (1969), *The Age of Discontinuity: Guidelines to our Changing Society*, Heinemann, London.
- Galbraith, J.K. (1996), *The Good Society: The Humane Agenda*, Mariner Books,
- Harari, N. Y. (2017), *Homo Deus – a Brief History of Tomorrow*, Focus of Communication, Zagreb (in Croatian).
- Jones, J. (2016), *Americans Still Say Postsecondary Education Very Important*, Gallup, <https://news.gallup.com/poll/190580/americans-say-postsecondary-education-important.aspx>.
- Knight J. (2019), *Financing Access and Equity in Higher Education*. *Financing Access and Equity in Higher Education*, Sense.
- Kurczewska, A., Doryń, W., Wawrzyniak, D. (2020), "An Everlasting Battle between Theoretical Knowledge and Practical Skills? The Joint Impact of Education and Professional Experience on Entrepreneurial Success", *Entrepreneurial Business and Economics Review*, Vol. 8, No. 2, pp. 219-237. doi:10.15678/ EBER.2020.080212
- Levin, I., Faraone, S., Herring, R. (1980), „Measuring personal satisfaction under varying economic conditions“, *Bulletin of the Psychonomic Society*, Vol. 16, No. 5, pp. 356-358.
- Lewis, B., Pattinasarany, D. (2009), „Determining Citizen Satisfaction with Local Public Education in Indonesia: The Significance of Actual Service Quality and Governance Conditions“, *Growth and Change*, Vol. 40, No. 1, pp. 85-115.
- Marquez-Ramos, L., Mourelle, E. (2019), „Education and economic growth: an empirical analysis of nonlinearities“, *Applied Economic Analysis*, Vol. 27, Issue 79, pp. 21-45.
- McMahon, WW, Oketch, M (2013), „Education's effects on individual life chances and on development: An overview“, *British Journal of Educational Studies*, Vol. 61, No. 1, pp. 79–107.
- Meyer H.D., John E.P.St., Chankseliani M., Uribe L. (2013), *Fairness in Access to Higher Education in a Global Perspective: Reconciling Excellence, Efficiency, and Justice*. Sense Publishers.
- Mihanovic, Z., Batinic A.B., Pavicic, J. (2016), „Students' satisfaction with student life and student performances“, *Review of Innovation and Competitiveness*, Vol. 2, Issue 1, pp. 37-60.
- Nussbaum, M.C. (2011), *Creating Capabilities: The Human Development Approach*, The Belknap Press of Harvard University Press, Cambridge, MA.
- Oreopoulos, P., Salvanes, K.G. (2011), „Priceless: The Nonpecuniary Benefits of Schooling“, *Journal of Economic Perspectives*, Vol. 25, No. 1, pp. 159–184.
- Poór, J., Juhász, T., Machová, R., Bencsik, A., Bilan, S. (2018), "Knowledge management in human resource management: Foreign-owned subsidiaries' practices in four CEE countries". *Journal of International Studies*, Vol. 11, No. 3, pp. 295-308. doi: 10.14254/2071-8330.2018/11-3/23
- Saulius, T., Valanciene, D., Bilan, S. (2020), "Critical Thinking in Contemporary Business Education: Philosophical Perspectives", *Transformations in Business & Economics*, Vol. 19, No 2 (50), pp. 21-37.
- Saad, L. (2019), *Americans' Satisfaction With U.S. Education at 15-Year High*, Gallup, <https://news.gallup.com/poll/266063/americans-satisfaction-education-year-high.aspx>.
- Singh M. (2011), "The Place of Social Justice in Higher Education and Social Change Discourses. Compare" *Journal of Comparative and International Education*, Vol. 41, pp. 481–494.

- Suldo S.M., Bateman L., McMahan, M. (2014), „School Satisfaction“ in Michalos A.C. (eds) *Encyclopedia of Quality of Life and Well-Being Research*, Springer, Dordrecht. [https://doi.org/10.1007/978-94-007-0753-5\\_2601](https://doi.org/10.1007/978-94-007-0753-5_2601)
- Tan, H., Lou, J., Zhang, M. (2021), “Higher Education, Happiness, and Residents' Health”, *Frontiers in Psychology*, <https://doi.org/10.3389/fpsyg.2020.01669>.
- Unterhalter E., Carpentier V., Unterhalter E., Carpentier V. (2010), *Introduction Whose Interests Are We Serving? Global Inequalities and Higher Education*, Macmillan Education.
- Volchik, V., Posukhova, O., Strielkowski, W. (2021), “Digitalization and Sustainable Higher Education: Constructive and Destructive Potential of Professional Dynasties”, *Transformations in Business & Economics*, Vol. 20, No 3 (54), pp. 21-43.
- Wielechowski, M., Cherevyk, D., Czech, K., Kotyza, P., Grzęda, L., Smutka, L. (2021), “Interdependence between human capital determinants and economic development: K-means regional clustering approach for Czechia and Poland”, *Entrepreneurial Business and Economics Review*, Vol. 9, No. 4, pp. 173-194. doi:10.15678/EBER.2021.090411
- Yang L., McCall B. (2014), "World Education Finance Policies and Higher Education Access: A Statistical Analysis of World Development Indicators for 86 Countries", *International Journal of Educational Development*, Vol. 35, pp. 25–36.