

Suvad Isaković<sup>1</sup>

Alaudin Brkić<sup>2</sup>

Dženan Kulović<sup>3</sup>

## THE ROLE AND THE IMPORTANCE OF COMPETENCIES FOR THE EMPLOYABILITY OF UNIVERSITY GRADUATES

### SUMMARY

*The goal of this work is to explore the effects of various factors that affect the employment of graduates of the University of Zenica. Additional analysis of variables as well as the links between variables will offer the input information that can contribute to the decision-making process in the development of new curriculums. The survey was conducted in Zenica-Doboj Canton, which involved  $n = 47$  respondents. To process data, the following programs were used: Microsoft Excel, SPSS and SmartPLS3 - SEM program. The verification of the validity and the reliability of the measuring scale was carried out by calculating the Cronbach's Alpha coefficient. The review of the set of the hypotheses was carried out by the Regression analysis. The findings revealed that three hypotheses were accepted and one of them was rejected. The set hypotheses confirmed that the adopted expertise of graduates, the level of acquired skills and cooperation of the University with companies has a statistically significant impact on the employability of graduates. The organizational skills of graduates do not have a statistically significant impact on the employability of the University of Zenica graduates.*

**Keywords:** *competencies, employability, professional knowledge, skills, organizational skills*

**JEL:** *M2; J5; I2; K0*

---

1 Associate professor, Faculty of Polytechnic University of Zenica, e-mail: suvad@itc.ba

2 Associate professor, Faculty of Economics - University of Zenica. e-mail: alaudin.brkic@unze.ba

3 Assistant professor, Faculty of Economics - University of Zenica. e-mail: dzenan.kulovic@unze.com

## 1. Literature review

The positive effects of globalisation, the development of information technologies, the standard of life of citizens, the emergence of the coronavirus pandemic and many other factors significantly determine the requirements that the labour market places before employers. Researching the factors that promote labour market dynamics, i.e., factors that contribute to harmonising supply and demand for the workforce has never occupied the economic waistline as it does today. Each higher education institution wants to align its curriculums with the needs of the labour market on one hand, and make the end of their educational institutions competitive and attractive to potential employers, on the other hand. By following this logical trick, many higher education institutions seek to match out-of-the-way compensation of their students and labour market requirements. According to Knight, Yorke (2003), “higher education institutions are often criticized for not preparing graduates for the real contexts involved in their professional practice”. Römgens, Scoupe, and Beusaert (2020) define employability as “a competency-based dimension”.

A competency-based approach to employability also implies the discussion of what competency means. Recent studies (Hoffmann, 1999; Römgens, I., Scoupe, R., Beusaert, S. 2020) takes this term under different perspectives. There is a lack of clarity about what competencies mean. For instance, some authors (Cockerill, Hunt, 1995; Spencer, Spencer, 1993) assume the complexity of the concept, identifying three different perspectives about competencies also known as knowledge, skills (Katz, 1973), abilities (Ackerman, Heggstad, 1997) or KSA. More recently, some authors (Römgens, I., Scoupe, R., Beusaert, S. (2020) have argued the need for integration of other characteristics, which takes into account the specification of different values, cultures, and motivation. In the context of higher education, employability is considered more than merely ‘getting a job’ (Harvey, 2003), as it implies a set of competencies-knowledge, skills and abilities-that makes graduates more likely to gain employment and be successful in their chosen jobs. (Yorke, 2006) „This discussion is not new, but still necessary when considering the central role of competencies in the context of higher education. This is one of the reasons why competencies and employability are interrelated concepts. “(Abelha, Fernandes, Meswuita, Seabra, Ferreira-Oliveira, 2020) As Fullan (2016) noted, a whole-system plan is required for a successful and sustained educational change.

Authors Kulović and others (2012:117) state that current literature is abundant in terms such as competitiveness, competency and competencies, which, however, are not clear enough, causing some confusion when interpreting them. Competency (pl. competencies) are complex forms of behaviour involving knowledge skills and abilities.

These concepts in literature are often viewed together with the acronym KSA's (Knowledge, Skills, Abilities), in particular, when studying the role of employees in a broader context. Over the past few years, the term competency, competencies in pl., is increasingly used in literature to explain the reasons for employee work success.

Although, according to Isaković (2015:295) this term, “includes the following factors: abilities, skills and knowledge, which define the results of business activities thus further contributing to the fact that there is still no clear definition of the term competency”. It is actually about the term, i.e. the concept, which represents specific qualifications and personal characteristics that an individual should possess in order to do a particular job.

Over time, as new insights emerged, the concept was expanded to KSAO's (Knowledge, Skills, Abilities and Other characteristics), and then there was the notion of competencies that, according to some authors, actually bring the aforementioned knowledge, skills and abilities into the concept, even though the term itself includes the values, motivation and interests of a particular employee. (Sikavica, Hernaus, 2011:85) Scientific confirmation can be found in the works of McClelland (1973), who published the paper in the journal *American Psychologist* titled: Testing for competence rather than for intelligence, then in a somewhat recent work by Sanchez (2002), who published the paper in the *Journal of Business Research* titled: Understanding competence-based management identifying and managing five modes of competence and Boyatzis (1982) who published the first research book titled: *The Competent Manager: a model for effective performance*. In other words, employees aspire to jobs that match their level of knowledge, skills and abilities acquired while studying.

As a result, many higher education institutions seek to harmonise the output requirements of their graduates with the market requirements, which requires a significant effort in order to remove certain obstacles. As Mocanu, Zamfir and Pirciog (2014) say, when harmonising curriculums with the needs of the labour market, there are certain obstacles such as a lack of a general vision that needs to provide an answer to the question about where a higher education institution wants to be.

Furthermore, a low level of quality education while attending high school can significantly reduce the quality of high school students. Lack of quality contributes to reducing students' motivation, which increases their fluctuations. All of this can result in difficulties that prevent attracting employers who have a clear demand in respect to what profile a higher education institution should create. Addressing these obstacles can significantly, as Gawrtecka, Kujawska and Tomaczak (2019) say, help develop the competencies that can define the future of the labour market.

Of course, the inevitable factor that needs to help quality competencies developing involves a comparison of the attitudes of employers and future employees with the desirable competencies of the potential labour market participants. However, the authors did not offer a methodology for the development of high-quality competencies, which can be considered as a shortcoming.

The development of quality competencies poses a challenge to every higher education institution. Employers' attitudes can contribute to determining desirable competencies. However, if we take this approach to the development of competencies, then the higher education institution must adapt the curriculum every year. As a result, most higher education institutions resort to a model of creation of, as the authors of Pugelis and Pileicikene (2012) state, "generic competencies that should be the foundation of higher education curriculums" and then, Boyatzis (1982) and McClelland (1987) also add "specific competencies that should contribute to the recognition of specific employer requirements". The authors believe that generic competencies imply the backbone of the quality study programs, and the specific competencies meet the demands of the labour market. Isakovic (2015:295 finds the reason for determining generic competencies) within the difficulty to "clearly determining the competencies that lead to increasing attempts to determine some general generic competency". Maintaining a permanent link between higher education and the labour market is achieved, as the authors say, by constantly upgrading the specific competencies that the labour market needs.

As Varga, Szir, Bardos and Hajós, (2015) claim „good teacher preparedness that provides more practical knowledge through theoretical training involving student visits to companies belongs to the most relevant factors that enable the development of generic and specific ones. The emergence of a crisis caused by the Coronavirus pandemic requires compensation which forces the need to harmonise curriculums to the new situation. However, when creating or upgrading curriculums, Cerkovskis and Titko (2017) state that it is important to perceive what students find to be important during studying but what also upgrades a certain level of student competence. If high school institutions do not have the practice of respecting students' self-perception, student motivation levels may decline significantly, directly implying an increased rate of student fluctuation.

So if a higher education institution wants to build an image of a respectable institution, it should respect the demands of the labour market, the wishes of students and its own resources. By including student perception, it implies a significant upgrade that means respecting the interests of a key interest group when (re)designing curriculums. Following such practice, there is a justifiable need to explore the compliance of the competencies of the University of Zenica graduates with the needs of the labour market.

## 2. Methodology

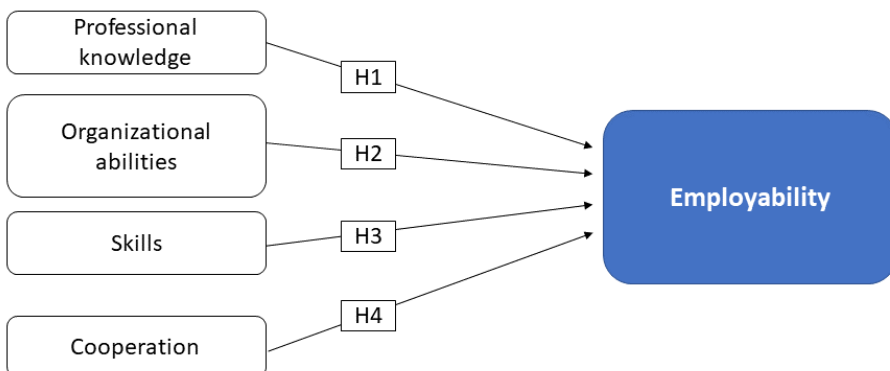
The research instrument used to check research hypotheses defined by the system of hypotheses of this research consists of 11 questions, containing three scales as follows and three open questions:

1. The scale used to identify the acceptability of employment sources for workers. This scale consists of five options in which the respondents express their position on the Likert scale with a preference from 1 to 5.
2. The scale used to identify the perception of Zenica-Doboj Canton businessmen about the acquired knowledge of the University of Zenica graduates. This scale consists of four subscales: Expertise; Organizational abilities; Skills and Innovation. Each of these subscales has five options on a Likert scale to express preference from 1 to 5. The scale has a total of 20 options.
3. The scale used to identify the attitude of businessmen about the importance of adopted knowledge and skills by university graduates. This scale consists of four options in which the respondents express their opinion on a Likert scale with a preference from 1 to 5. and one open-ended question.

The system of hypotheses in this work was created as follows:

- H1 - Professional knowledge affects the employability of UNZE graduates.
- H2 - Organizational abilities affect the employability of UNZE graduates.
- H3 - Level of acquired skills affects the employability of UNZE graduates.
- H4 - University's cooperation with the economy affects the employability of UNZE graduates.

**Figure 1:** Research model hypothesis



**Source:** Authors

Data gathering was carried out through an online platform. The sample selected  $n = 100$  companies from Zenica-Dobož Canton, out of which  $n = 47$  companies submitted a neatly filled survey questionnaire. Statistical methods below were used to process data:

- Descriptive statistics - a descriptive analysis of the sample and descriptive analysis of factors using frequency tables and graphs, as well as indicators such as arithmetic mean, standard deviation, minimum and maximum value;
- The validity and reliability of the measuring instrument - this chapter shows the results of exploratory factor analysis, as well as validity and reliability tests via Cronbach's Alpha values, factor loads, correlations, AVE values, etc.;
- Inferential statistics - shows a list of hypotheses, a research model, and the results of research at the level of each hypothesis individually, using the Regression method and the IPMA maps.

The following programmes were used for the purposes of these statistical analyses, which are adequate for statistical processing and analysis of data, as follows:

- Microsoft Excel,
- Statistical programme for social sciences (SPSS),
- SmartPLS3 - SEM programme.

### 3. The interpretation of the research results

#### 3.1. Descriptive analysis

The survey sample is made up of 14.9% microenterprises, 53.2% small businesses, 25.5% medium-sized enterprises and 6% large enterprises.

According to the data presented, it is evident that most of the employer respondents, who took part in this study were based in Zenica (53.19%). The second place in relation to participants' location is shared by Tešanj and Visoko with 8.51% of the total employers participating in the survey.

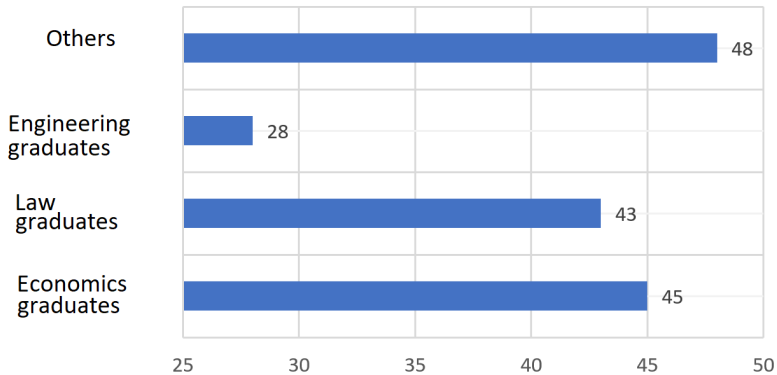
**Table 1:** Employment of UNZE graduates in employer's company

Status	Number	%
YES	40	85.1
NO	7	14.9
Total	47	100.0

**Source:** *Authors*

A total of 40 employers responded that the company employed Graduates of the University of Zenica, while only 7 responded negatively. Accordingly, 85.1% of employers surveyed, at the time of their participation in this study, have employed University graduates, which adds to the value of their participation in the study.

**Figure 2:** Profession of UNZE graduates as employees in employers' companies



**Source:** Authors

#### *Descriptive analysis of the variables of the hypotheses system*

Table 2 indicates that the average employer sees the "candidate recommendation", "acquaintance with the candidate", "ad in the media", "social networks", "employment bureaus/portals" as acceptable sources for employment. However, if we compare indicators regardless of the measuring scale, it is significant to point out that the "Candidate Recommendations" indicator has the highest average value, while the "Social Network" indicator has the lowest average value, which suggests that, from an employer's angle, the most important thing for a candidate is to have recommendations.

**Table 2:** Descriptive analysis of the "Source Acceptability" variable

1- absolutely unacceptable; 2- unacceptable; 3 - I don't have an opinion; 4 - acceptable; 5 - very acceptable						
Code	Indicator	N	Min	Max	Arithmetic Mean	Std. Deviation
PI1	Recommendations for a candidate	47	2	5	4.30	.778
PI2	Acquaintance with the candidate	47	2	5	3.60	.798
PI3	Media ad	47	2	5	3.96	.908
PI4	Social networks	47	1	5	3.51	1.159
PI5	Employment bureau or Portals	47	2	5	3.94	.791
PI	Source Acceptability	47	1	1	3.860	.6775

**Source:** Authors

Describing the expertise of UNZE graduates, Table 3 indicates that the average employer describes the level of "Task Execution", "Application of Professional Terminology", "Problem Identification", "Problem Solving", "Use of Computer Tools" as good. However, if we compare indicators regardless of the measuring scale, it is significant to point out that the "Problem Identification" indicator has the highest average value, while the "Execution of Work Tasks" indicator has the lowest average value, which suggests that from an employer's point of view, the most important thing is that employees can recognise problems, while carrying out work tasks is implied anyway.

**Table 3:** Descriptive analysis of the "Professional knowledge" variable

1 - very bad; 2 - bad; 3 - I don't have an opinion; 4 - good; 5 very good						
Code	Indicator	N	Min	Max	Arithmetic Mean	Std. Deviation
SZ1	Work tasks performance	47	2	5	3.87	1.055
SZ2	Application of professional terminology	47	2	5	3.89	.983
SZ3	Identification of the problem	47	3	5	4.15	.859
SZ4	Troubleshooting	47	2	5	3.98	.989
SZ5	The use of computer tools	47	2	5	4.04	.955
SZ	Professional knowledge	47	2	5	3.987	.9074

**Source:** *Authors*

Assessment of the organizational abilities of UNZE graduate employees presented in table 4, the average employer considers that the level of "Plan analysis", "Time Management", "Conflict Management", "Delegating tasks" and "Execution Control" is good. However, if we compare indicators regardless of the measuring scale, it is significant to point out that the "Delegating Tasks" and "Execution Control" indicators received the highest average value, while the Conflict Management indicator has the lowest average value.

If we mention here that all values are very close to the threshold of the value "I don't have an opinion", we come to the clear conclusion that all aspects of the organizational capabilities of UNZE graduates need to be developed, especially when it comes to conflict management.

**Table 4:** Descriptive analysis of the "Organizational Capability" variable

1 - very bad; 2 - bad; 3 - I don't have an opinion; 4 - good; 5 very good						
Code	Indicator	N	Min	Max	Arithmetic Mean	Std. Deviation
OS1	Plan Analysis	47	1	5	3.57	1.229
OS2	Time Management	47	1	5	3.57	1.175
OS3	Conflict Management	47	1	5	3.51	1.214
OS4	Delegating tasks	47	1	5	3.68	1.144
OS5	Execution control	47	1	5	3.68	1.218
OS	Organizational abilities	47	1.0	5.0	3.604	1.1447

**Source:** *Authors*



Assessing the acquired skills of UNZE graduates presented in Table 5, the average employer considers that the level of "Efficient Task Performance", "Improvements in Business Processes", "Acquired Knowledge Applied in Practice", "Oral" and "Written Correspondence" is good. However, if we compare the indicators regardless of the measuring scale, it is significant to point out that the "Written Correspondence" indicator has the highest average value, while the "Improving Business Processes" indicator has the lowest average value. It is clear from this that graduates are much better at correspondence, while at the same time they do not make a significant contribution to improving business processes.

**Table 5:** Descriptive analysis of the "Acquired Skills" variable

1 - very bad; 2 - bad; 3 - I don't have an opinion; 4 - good; 5 - very good						
Code	Indicator	N	Min	Max	Arithmetic Mean	Std. Deviation
SV1	Performs work tasks efficiently	47	1	5	3.81	1.296
SV2	Speeds up business processes	47	1	5	3.55	1.316
SV3	Acquired knowledge applies in practice	47	1	5	3.70	1.350
SV4	Oral correspondence	47	1	5	3.87	1.209
SV5	Written correspondence	47	1	5	3.94	1.241
SV	Acquired skills	47	1.0	5.0	3.774	1.2277

**Source:** *Authors*

Describing their opinion on the quality of UNZE shown in Table 6, the average employer considers the "Infrastructure of the University", "Expertise of professors", "Quality of teaching processes" and "Confidence in the University" are good indicators. On the other hand, employers do not have a clearly defined position when it comes to the "University presence in the media" indicator. If we compare indicators regardless of the measuring scale, it is significant to point out that the "University Infrastructure" indicator received the highest average value, while the "University presence in the media" indicator has the lowest average value. It is clear from the above that employers have a generally positive opinion on the quality of the University.

**Table 6:** Descriptive analysis of the "UNZE Quality Opinion" variable

1 - very bad; 2 - bad; 3 - I don't have an opinion; 4 - good; 5 - very good						
Code	Indicator	N	Min	Max	Arithmetic Mean	Std. Deviation
KV1	Infrastructure of the University	47	3	5	4.06	.734
KV2	Expertise of professors	47	1	5	3.74	.966
KV3	University presence in the media	47	1	5	3.38	1.226
KV4	Quality of teaching processes	47	3	5	3.89	.699
KV5	Confidence in the University	47	2	5	3.91	.974
KV	Opinion on quality	47	1	5	3.80	0.92

**Source:** *Authors*

When it comes to UNZE's cooperation with companies, according to the results of the survey shown in Table 7, the average employer does not have a clear position for indicators "Cooperation regarding curriculums", "Cooperation regarding labour market needs", "Cooperation in student scholarship", "Organizing joint professional gatherings" and "Cooperation in scientific research work". It is very interesting that the arithmetic mean is not rated as good for any of the aspects of cooperation. If we compare indicators regardless of the measuring scale, it is significant to point out that the "Student Scholarship Cooperation" indicator has received the highest average value, while the indicator "Cooperation regarding labour market needs" has the lowest average value. It is clear from the above that all aspects of cooperation should be addressed, particularly cooperation regarding the needs of the labour market.

**Table 7:** De-analysis of the "Cooperation" variable

1- absolutely irrelevant; 2 - irrelevant; 3 - I don't have an opinion; 4 - important; 5 - very important						
Code	Indicator	N	Min	Max	Arithmetic Mean	Std. Deviation
S1	Cooperation regarding curriculums	47	1	5	3.30	1.196
S2	Cooperation regarding labour market needs	47	1	5	3.19	1.116
S3	Cooperation in student scholarship	47	2	5	3.47	.997
S4	Organizing joint professional gatherings	47	1	5	3.30	1.196
S5	Cooperation in scientific research work	47	1	5	3.36	1.258
S	Cooperation	47	1	5	3.324	1.153

**Source:** *Authors*

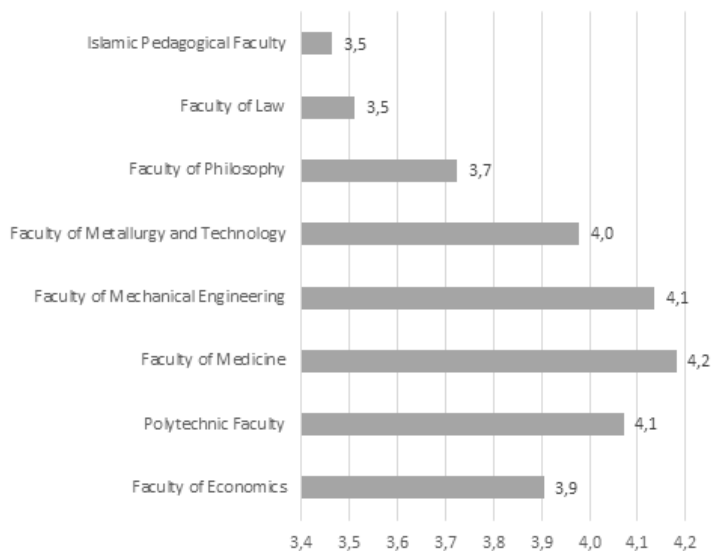
Describing their position on the employability of UNZE graduates in Table 8, the average employer considers that all employment indicators such as "Acceptance of challenges", "Determination in business", "Suggesting ideas", "Energy in business", "Persistence in business", "Expertise", "Organizational Ability", "Skills" and "Innovation" are on a good level. If we compare indicators regardless of the measuring scale, it is significant to point out that the "Expertise" indicator has received the highest average value, while the indicators "Suggesting Ideas" and "Energy in Business" have the lowest average value. It is clear from the above that employers have a generally positive opinion on the employability of University graduates, but there is also room for improvement, especially when it comes to proposing ideas and energy in business.

**Table 8:** Descriptive analysis of the "Employability of the Graduates" variable

1 - very bad; 2 - bad; 3 - I don't have an opinion; 4 - good; 5 - very good						
Code	Indicator	N	Min	Max	Arithmetic Mean	Std. Deviation
Z1	Accepting challenges	47	1	5	3.96	1.268
Z2	Determination in business	47	1	5	3.91	1.248
Z3	Proposing ideas	47	1	5	3.85	1.351
Z4	Energy in business	47	1	5	3.85	1.233
Z5	Persistence in business	47	1	5	4.02	1.310
Z6	Professional knowledge	47	1	5	4.32	1.163
Z7	Organizational ability	47	1	5	4.26	1.052
Z8	Skills	47	1	5	4.23	1.237
Z9	Innovation	47	1	5	4.26	1.206
Z	Employability of the Graduates	47	1	5	4.07	1.135

Source: Authors

It can be concluded that from the angle of the average employer, the attractiveness of all faculties as assessed in Figure 3. can be considered as good except for the "Islamic Pedagogical Faculty" for whose attractiveness they did not have a defined attitude. Nevertheless, it is important to point out that the highest average value when it comes to the attractiveness of the faculty was obtained by "The Faculty of Medicine", while the lowest value had "The Faculty of Law" and "The Islamic Pedagogical Faculty ". It is important to note that this result is partly influenced by a small number of employer respondents, as well as by the sector the employers come from.

**Figure 3:** Attractiveness of Faculty from the employers' point of view

Source: Authors

Based on the results shown in Figure 3, we can see that the most effective for employers is The Faculty of Medicine followed by The Faculty of Polytechnics and The Faculty of Engineering.

For validity and reliability checks, the SPSS software package was primarily used, and an exploitative factor analysis and reliability test were conducted through the value of Cronbach's Alpha.

The results of the exploratory factor analysis are presented in Table 9. All indicators (claims) of the following variables have been in correlation with the factor, which is measured with satisfactory values (above 0.5): (1) Source acceptability, (2) Professional knowledge, (3) Organizational skills, (4) Level of Acquired Skills, (5) Cooperation, (6) Quality Opinion, (7) Employability. Accordingly, the validity of the measuring scales of these variables has been proven and there was no need for any intervention by the researchers in terms of eliminating faulty indicators.

**Table 9:** Factor load indicators per variable ( $> 0.5$ )

SOURCE ACCEPTABILITY		PROFES- SIONAL KNOWLEDGE		ORGANISATIONAL ABILITIES		(7) EMPLOYABILITY	
PI1	.626	SZ1	.974	OS1	.968	Z1	.931
PI2	.689	SZ2	.969	OS2	.965	Z2	.961
PI3	.794	SZ3	.883	OS3	.975	Z3	.887
PI4	.779	SZ4	.984	OS4	.914	Z4	.955
PI5	.911	SZ5	.864	OS5	.961	Z5	.955
						Z6	.933
						Z7	0.840
						Z8	0.923
						Z9	0.910

LEVEL OF ACQUIRED SKI- LLS		COOPERATI- ON		QUALITY OPINION	
SV1	.961	S1	.922	KV1	.594
SV2	.932	S2	.975	KV2	.834
SV3	.978	S3	.900	KV3	.906
SV4	.952	S4	.959	KV4	.919
SV5	.963	S5	.972	KV5	.896

*Source: Authors*

The results of the reliability test shown in Table 10 indicate that they undoubtedly fully meet the criterion, given that each of the seven variables had a value of Cronbach's Alpha greater than 0.8, significantly above the 0.7 threshold. Therefore, given that factors with values of 0.7 to 0.8 are satisfactory, in this study, when it comes to the reliability of measuring instruments, the condition is above satisfactory and could be characterized as good and extraordinary. So PI and KV factors have "good reliability" given that values are 0.8 to 0.89. On the other hand, factors SZ, OS, SV, S and Z have shown extraordinary reliability given that Cronbach's Alpha values are above 0.9.

**Table 10:** Reliability of measurements by variables

Code	Variable	Cronbach's Alpha (>0.7)	N of Items
SA	Source Acceptability	0.81**	5
PK	Professional knowledge	0.96*	5
OA	Organizational abilities	0.97*	5
AS	Level of acquired skills	0.97*	5
Q	Opinion on quality	0.88**	5
C	Cooperation	0.97*	5
E	Employability	0.98*	9
* outstanding reliability			
** good reliability			

**Source:** *Authors*

Additional validity and reliability analysis in the SmartPLS3 program confirmed the results explained previously and obtained by exploratory analysis in the SPSS software package.

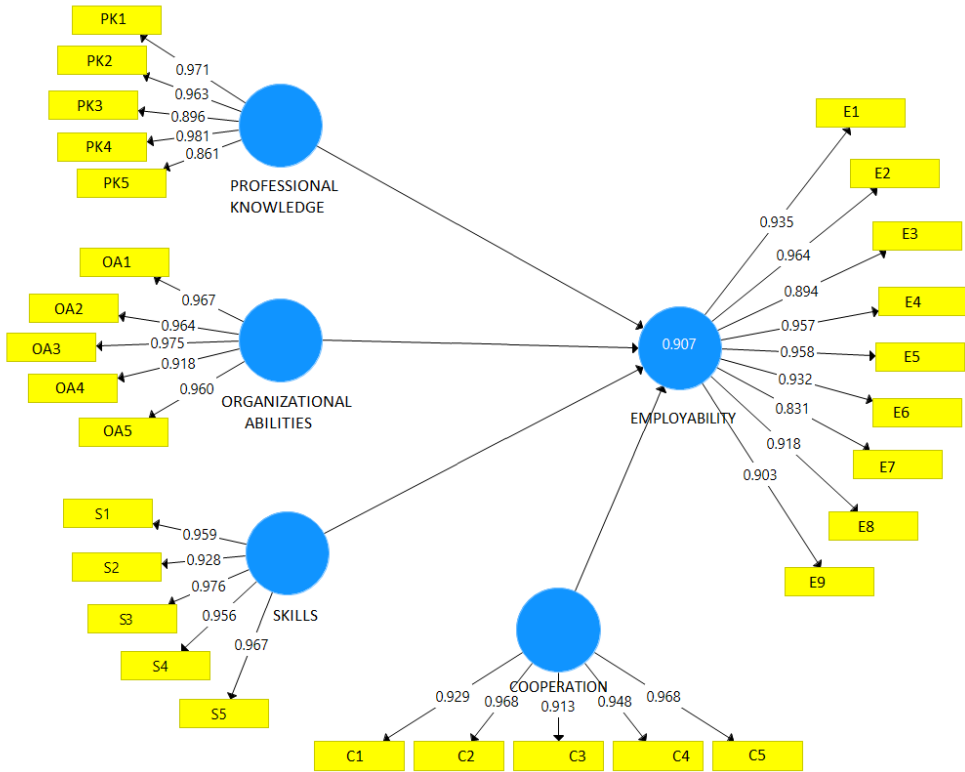
Table 11 presents the results of the analysis in the SmartPLS3 program, and it is possible to gain insight into AVE values, Cronbach's Alpha and Composite Reliability. AVE values by all factors are above the 0.5 threshold, which unequivocally indicates satisfactory discriminatory validity. On the other hand, Cronbach's Alpha values and composite reliability values surpass the 0.7 threshold and thus once again indicate the fully reliable measuring scales used for all factors measured in this study.

**Table 11:** Discriminatory validity and reliability according to the results of the analysis in SmartPLS3

Code	Variable	Cronbach's Alpha >0.7	Composite Reliability >0.7	AVE >0.5
OA	ORGANIZATIONAL ABILITIES	0.977	0.982	0.916
S	COOPERATION	0.971	0.977	0.893
SZ	PROFESSIONAL KNOWLEDGE	0.964	0.972	0.875
SV	SKILLS	0.977	0.982	0.916
Z	EMPLOYABILITY	0.978	0.981	0.851

**Source:** *Authors*

Figure 5 displays factor loads of each indicator by variable measured. It is clear that the values fully confirmed the previously conducted factor analysis in the SPSS program.

**Figure 3:** Correlation of indicators by variables

**Source:** Authors

The review of the research hypotheses was conducted using regression analysis in the Software Program for Social Research (SPSS). Results of the Regression Analysis show extremely high value "R<sup>2</sup>" (as much as 0,900), which means that independent variables of the research model explain as much as 90% of the dependent variable. Therefore, the degree of correlation unequivocally indicates that there is an impact of the independent side of the model on the dependent variable. ANOVA table presented below is an important part of the Regression output that explains the overall research model. Sig value of 0.000 (see Table 12) and F value of 94.526 (see Table 12) indicate that model where Cooperation, Professional Knowledge, Organizational Skills and Skills are independent variables. Employability as the main dependent variable is statistically significant. In other words, the effects of the independent side (predictors) altogether have statistically significant effects on the dependent variable.

**Table 12:** ANOVA table - part of Regression output

ANOVAa						
	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	53.363	4	13.341	94.526	.000b
	Residual	5.928	42	.141		
	Total	59.291	46			
a. Dependent Variable: EMPLOYABILITY						
b. Predictors: (Constant), COOPERATION, PROF_KNOWLEDGE, ORG_ABILITIES, SKILLS						

**Source:** *Authors*

In this regard, it is necessary to emphasize that the p value of 0.000 which is below the value of 0.05, and at the reliability interval of 95% indicates that the model can be accepted as correct, logical and relevant.

**Table 13:** Results of hypotheses testing (95% confidence interval)

#	Hypothesis	Status	Beta	Sig.
H1	Professional knowledge affects employability of UNZE graduates	Supported	-0.180	.009
H2	Organisational abilities affect the employability of UNZE graduates	Declined	0.135	.454
H3	Level of acquired skills affects the employability of UNZE graduates	Supported	0.948	.000
H4	University's cooperation with the economy affects the employability of UNZE graduates	Supported	-0.139	.010

**Source:** *Authors*

## 4. CONCLUSIONS

The H1 hypothesis is supported with a p-value of 0.009 (<0.05) and there is no doubt that expertise is a statistically significant factor in the perception of employers when it comes to the employability of graduates of the University of Zenica. However, the beta coefficient value of -0.180 indicates that currently the relationship is negative, which means that as the Professional knowledge of graduates increases for one unit, their Employability decreases by 0.18. The obtained negative relationship indicates that from the perspective of employers, the professional knowledge of graduates that they currently gain at the University does not contribute to their employability, which is of alarming importance for revising the content of curriculums that lead to such perception. Professional knowledge being taught at the University must be in line with the needs of employers, and the negative beta coefficient of -0.180 is an alarm that currently this is not the case. Therefore, it is important that the University of Zenica evaluates all study programs from the perspective of employers and to determine in which way it can improve them all to deliver professional knowledge that will be contributing to the employability of graduates.

The H2 hypothesis was rejected with a p-value of 0.454 ( $>0.05$ ), indicating that from an employer's point of view, the organizational skills of graduates at this point are not a statistically significant predictor of their employability. A beta coefficient of 0.135 indicates that the effects of graduates' organizational skills are positive for their employability. In other words, if organizational skills increase by 1, their employability increases by 0.135. Therefore, despite the statistically insignificant effects at 95% confidence interval, the University of Zenica should not neglect the organizational skills of graduates. Instead, it should make efforts to keep the organizational capabilities of graduates at an even higher level.

The H3 hypothesis is supported with a p-value of 0,000 ( $<0.05$ ) and there is no doubt that the level of acquired skills is a statistically significant factor in the eyes of employers when it comes to the employability of graduates of the University of Zenica. Not surprisingly, the beta coefficient of 0.948 indicated very strong effects of acquired skills on graduates' employability. It seems that employers appreciate skills and that the University of Zenica produces graduates with a high level of acquired skills. If acquired skills increase by one unit, the employability of graduates increases by even 0.948. Therefore, the University of Zenica must maintain and continuously improve all processes that will take the acquired skills of the University graduates to an even higher level.

The H4 hypothesis is supported with a p-value of 0.010 ( $<0.05$ ) and there is no doubt that the University's co-operation with the economy is a statistically significant factor in the eyes of employers when it comes to the employability of graduates of the University of Zenica. The beta coefficient of -0.139 indicates that if the University's cooperation (in its current form) increases by one unit, the employability of graduates decreases by 0.139. This leads to the conclusion that University's cooperation with the economy exists, it has statistically significant effects on employability, but its current form is not adequate from the perspective of its contribution to graduates' employability. Therefore, it is extremely important to revise the current form of cooperation between University and the economy and improve it in such a way that will make it contributing to the graduates' employability, instead of downgrading it.



## LITERATURE

1. Abelha, M., Fernandes, S., Meswuita, D., Seabra, F., Ferreira-Oliveira, A. T. (2020): Graduate Employability and Competence Development in Higher Education-A Systematic Literature Review Using PRISMA, *Sustainability* 2020, 12
2. Ackerman, P. L., Heggstad, E. (1997): Intelligence, personality and interests: Evidence for overlapping traits, *Psychological Bulletin*, 121.
3. Boyatzis, B. (1982): *The Competent Manager: A Model for Effective Performance*, John Wiley & Sons
4. Boyatzis, E. R., Melvin, L. S., Blaize, N. (2004): *Developing Sustainable Leaders Through Coaching and Compassion*, Weatherhead School of Management, Case Western Reserve University, Cleveland, OH, 3, 11
5. Cerkovskis, E., Titko, J. (2017): *Matching Competencies and Modern Labour Market Needs: Students' Self-Perception Study // Economic and Social Development: Book of Proceedings*, Varazdin Development and Entrepreneurship Agency (VADEA)
6. Cockerill, T. Hunt, J. (1995): Managerial Competencies: Fact or Fiction? *Business Strategy Review*, 6 (3), 1-12
7. Fullan, M. (2016): *The new meaning of educational change* (5th ed.). New York, NY: Teachers College Press.
8. Gawrtcka, M., Kujawska, J. and Tomaczak, M. T. (2019): Competencies of graduates as future labour market participants - preliminary study, *Economic Research*, Volume 33
9. Harvey, L. (2003): *Transitions from Higher Education to Work: A Briefing Paper Prepared by Lee Harvey*. York: LTSN Generic Centre
10. Hoffmann, T. (1999): The meanings of competency, *Journal of European Industry Training*, Vol. 23, 275-286.
11. Isaković, S. (2015): *Small and Middle Business Management*, Zenica: Faculty of Economics
12. Katz, R. L. (1971): Skills of an effective administrator, *Harvard Business Review*, 52 (5)
13. Knight, P., Yorke, M. (2003): *Learning, Curriculum and Employability in Higher Education*, Hove: Psychology Press
14. Kulović, Dž. et al. (2012): *Manager's compensation and company success*, Sa-

rajevo: Chemigraphy

15. Mocanu, C., Zamfir, A. M., Pirciog, S. (2014): *Matching Curricula with Labour Market Needs for Higher Education: State of Art, Obstacles and Facilitating Factors*. Procedia-Social and Behavioural Sciences, 149.
16. Narayan, V. K., Zane, L. J., Kemmerer, B. (2011): The Cognitive Perspective in Strategy: An Integrative Review, *Journal of Management*, 37 (1).
17. Pukelis, K., Pileicikene, N. (2012): *Matching of Developed Generic Competences of Graduates in Higher Education with Labour Market Needs*, <http://dx.doi.org/10.7720/1822-1645.9.6>
18. Römgens, I., Scoupe, R., Beusaert, S. (2020): Unravelling the concept of employability, bringing together research on employability in higher education and the workplace, *Studies in Higher Education*, Vol. 45
19. Sanchez, J. (2002): *Understanding competence-based management: Identifying and managing five modes of competence*, *Journal of Business Research* 57(5)
20. Sikavica, P., Hernaus, T. (2011): *Design organization*, Zagreb: New Informant
21. Spencer, L., Spencer, S. (1993): *Competence at Work: A Model for Superior Performance*, New York: Wiley
22. Ulrich, D. (1997): *Human Resources Champions: The Next Agenda for Adding Value and Delivering Results*, Boston: McGraw-Hill
23. Varga, E., Szira, Z., Bardos, K. I. and Hajós, L. (2015): *The Most Relevant Labour Market Competencies for Employers and their Assessment by Students*. *Practice and Theory in Systems of Education*, Volume 11, Number 2.
24. Yorke, M. *Employability in Higher Education (2006): What It Is, What It Is Not; Learning & Employability Series*, Heslington: Higher Education Academy (HEA)

Suvad Isaković

Alaudin Brkić

Dženan Kulović

## ULOGA I ZNAČAJ KOMPETENCIJA NA ZAPOŠLJAVANJE DIPLOMANATA UNIVERZITETA

### SAŽETAK

*Cilj ovog rada je istražiti efekte različitih faktora koji utječu na zapošljavanje diplomanata Univerziteta u Zenici. Dodatnim analizama varijabli kao i veza među varijablama ponudit će se ulazne informacije koje mogu doprinijeti u procesu odlučivanja inoviranja novih nastavnih programa. Istraživanje je provedeno u Zeničko-dobojskom kantonu u okviru kojeg je učestvovalo  $n = 47$  respondenata. Za obradu podataka korišteni su programi: Microsoft Excel, SPSS i SmartPL S3 - SEM program. Provjera validnosti i pouzdanosti mjerne skale provedena je izračunavanjem koeficijenta Cronbach Alpha. Provjera postavljenih hipoteza provedena je Regresionom analizom varijabli kojom su od četiri postavljene hipoteze tri prihvaćene te jedna odbačena. Postavljenim hipotezama potvrđeno je da usvojena stručna znanja diplomanata, nivo stečenih vještina i saradnja Univerziteta s privredom ima statistički značajan utjecaj na zapošljavanje diplomanata. Organizacijske sposobnosti diplomanata nemaju statistički značajan utjecaj na zapošljavanje diplomanata Univerziteta u Zenici.*

**Ključne riječi:** kompetencije, zapošljavanje, stručna znanja, vještine, organizacijske sposobnosti

**JEL:** M2; J5; I2; K0,