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THE EFFECTS OF CREATIVITY SUPPORTED AT THE UNIVERSITY ON ENTREPRENEURIAL BEHAVIOR

Abstract

Purpose: This paper examines direct and serial indirect effects of creativity supported at the university on male and female entrepreneurial behavior through entrepreneurial self-efficacy and individual entrepreneurial intent.

Methodology: The hypothesized model (which we tested) was a serial mediation model with two mediators. To examine the question of whether the relationship between variables varies by gender, model 6 in PROCESS macro (Hayes, 2018) was utilized separately for male (n = 218) and female (n = 385) students from nine different universities in Bosnia and Herzegovina.

Results: Serial mediation of entrepreneurial self-efficacy and individual entrepreneurial intent in the relationship between creativity supported at the university and student entrepreneurial behavior were supported in both male and female samples.

Conclusion: Serial mediation analyses indicated that a higher level of creativity supported at the university will improve student entrepreneurial self-efficacy, which may increase their entrepreneurial intent, and consequently, their entrepreneurial behavior. When the university encourages students to produce new ideas and examine old problems in new ways, it improves student confidence in their ability to mobilize cognitive, motivational, and behavioral facilities to perform entrepreneurial tasks successfully, and, in response, students demonstrate a higher level of individual entrepreneurial intent and a greater propensity for entrepreneurial behavior. However, it should be noted that an indirect effect of UC on EB only through EI was not significant in the female sample, which highlights the importance of ESE in the relationship between UC, female EI, and female EB. The results opened up a new field of research on how other types of creativity and other types of university support may affect students' entrepreneurial behavior.

Keywords: Creativity supported at the university, propensity for entrepreneurial behavior, entrepreneurial self-efficacy, entrepreneurial intention, students

1. Introduction

Google offers about 22,500,000 results to the query "definition of entrepreneurial behavior", which can indicate the relevance of the topic and an abundance of definitions. By analyzing these definitions, it is worth noting that several concepts frequently

occur when defining entrepreneurial behavior, and those are: discovering, creating, and taking advantage of opportunities (Bahtijarević-Šiber, 1990; Shane & Venkataraman, 2000; Sedlan-König, 2013). The multidimensionality of entrepreneurship and the relevance of entrepreneurial behavior have drawn attention to the identification of factors that stimulate entrepreneurial behavior. Krueger et al. (2000) stated that entrepreneurial activities could be precisely predicted by studying intention. Namely, "intentions are the single best predictor of any planned behavior" (Krueger et al., 2000, p. 412), while in the context of entrepreneurship, the relationship between intention and actual (entrepreneurial) behavior has been repeatedly proven (Kautonen et al., 2013).

Thompson (2009, p. 676) points out that "entrepreneurial intent is a necessary condition for a nascent entrepreneur." The best-known intention models are Shapero's entrepreneurial event model (SEE: Shapero, 1975; Shapero & Sokol, 1982) and the theory of planned behavior (TPB: Ajzen, 1991). According to Shapero's entrepreneurial event model, the following three factors are crucial for EI: perceived desirability, perceived feasibility, and the propensity to act (Molino et al., 2018). According to the TPB, there are three antecedents of intention: attitude toward behavior, subjective norms and perceived behavioral control, and "performance of a behavior is a joint function of intentions and perceived behavioral control" (Ajzen, 1991, p. 185).

Authors particularly point out the "sensitivity of measurements" of entrepreneurial intention (Krueger & Carsrud, 1993; Kruger et al., 2000; Gurel et al., 2010). Regardless of this sensitivity, a single-item measure was often used (Kruger et al., 2000).

Thompson's Individual Entrepreneurial Intent Scale (IEIS: Thompson, 2009) represents a significant improvement in the operationalization of entrepreneurial intention (Valliere, 2015). IEIS is a reliable internationally applicable scale (Thompson, 2009). However, it is interesting that research studies that measured entrepreneurial intent by the IEIS construct are limited. To the best of our knowledge, no research has explicitly examined the relationship between creativity supported at the university (UC), entrepreneurial self-efficacy (ESE), individual entrepreneurial intent (EI), and a propensity for entrepreneurial behavior (EB). Testing the hypothesized model from the current study provides a more detailed insight into these relationships.

After presenting the hypothesized model, variables, and a research sample, the results of testing the model are represented. The paper ends with a discussion, and the conclusion includes research limitations.

2. Literature review and the hypothesized model

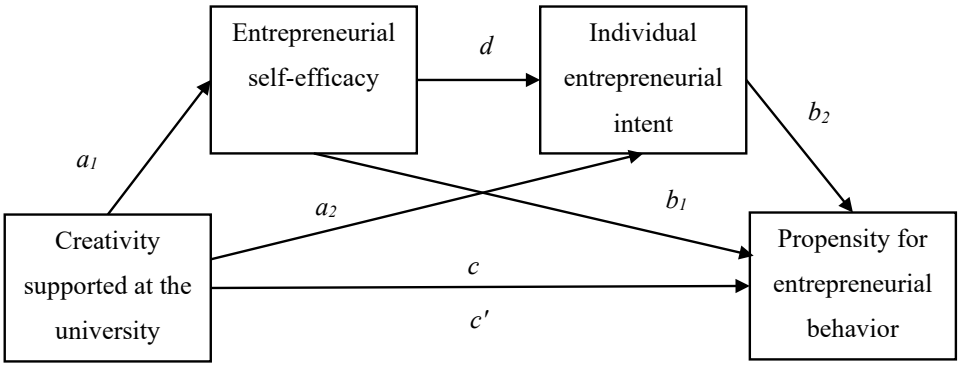
Intent is the most significant predictor of behavior (Miljković Krečar, 2010), but according to the TPB theory, perceived behavioral control affects behavior directly and indirectly through intentions (Ajzen, 1991). According to Ajzen (2002), self-efficacy should be seen as a component of perceived behavioral control. Therefore, we can expect that self-efficacy is positively related to both intention and behavior. In a theoretical model developed by Boyd and Vozikis (1994), self-efficacy was proposed as an antecedent of entrepreneurial intentions. Entrepreneurial self-efficacy can be defined as "an individual's confidence in his or her ability to successfully perform entrepreneurial roles and tasks" (Zhao et al., 2005, p. 1265). Entrepreneurial self-efficacy comes from Bandura's social cognitive theory (Newman et al., 2019). According to social cognitive theory (SCT: Bandura, 1986), self-efficacy beliefs are vital predictors of intention and direct predictors of behavior (Norman & Conner, 2017).

A sample of students proved a significant positive association between ESE and EI (Chen et al., 1998; Zhao et al., 2005; Darmanto & Yuliari, 2018; Shahab et al., 2019). In our hypothesized model, entrepreneurial self-efficacy directly affects EI and EB, and indirectly EB through EI. Therefore, if ESE is a vital tool in entrepreneurship education (EE) to increase students' entrepreneurial intentions (Fayolle, 2005, as cited in Sánchez, 2013, p. 450), the question arises as to how higher education institutions can affect students' entrepreneurial self-efficacy.

One of the factors of the environment that can potentially be associated with entrepreneurial self-efficacy and entrepreneurial intention is university support for creativity. Studies conducted by Zampetakis & Moustakis (2006) and Zampetakis et al. (2011) investigate how three types of creativity (individual creativity, creativity supported in the family, and creativity supported at the university) affect students' entrepreneurial intention. Their results suggest "that student own creativity has a positive effect to his/her entrepreneurial intentions. Moreover, perceived family environment supportive of creativity can predict increased levels of entrepreneurial intentions" (Zampetakis & Moustakis, 2006, p. 425). Although UC impact on entrepre-

neurial intention has not been confirmed in studies (Zampetakis & Moustakis, 2006; Zampetakis et al., 2011), we believe that this is one of the environmental factors associated with entrepreneurial self-efficacy, individual entrepreneurial intent, and students' entrepreneurial behavior. Namely, suppose the university encourages students to produce new ideas and examine old problems in new ways. In that case, the university creates an environment that stimulates entrepreneurial self-efficacy, increases entrepreneurial intention, and develops entrepreneurial behavior, as represented in Figure 1.

Figure 1 The hypothesized model



Source: Authors, based on the literature review and Hayes (2013)

In the hypothesized model, we examine direct and serial indirect effects of creativity supported at the university on entrepreneurial behavior through entrepreneurial self-efficacy and individual entrepreneurial intent. The hypothesized model is a serial mediation model with two mediators (based on Hayes 2013, p. 145, as cited in Demming et al., 2017, p. 79). As illustrated in Figure 1, a total effect (c) refers to the relationship between creativity supported at the university (UC) and entrepreneurial behavior (EB) without controlling for mediators; a direct effect (c′) refers to the relationship between UC and EB after controlling for mediators; a total indirect effect (a1b1+a2b2+a1db2) refers to the role of two mediators in the relationship between UC and EB; and a specific indirect effect (a1b1 and/or a2b2) refers to the role of a particular mediator in the relationship between UC and EB (explanation from Cabello & Fernandez-Berrocal, 2015).

Part of the statistical model are four covariates (U1: age, U2: the existence of a close person who is an entrepreneur, U3: student participation in extracurricular activities that focus on entrepreneurship, and U4: participation in the course *Entrepreneurship*) "included in the analysis to statistically remove these potential confounding influences on the paths in the process model (see Hayes, 2013, pp. 172-183)" (Hayes, 2015, p. 8). According to the results of the study conducted by Ćatić-Kajtazović et al. (2015a), there is a statistically significant correlation between entrepreneurial intention and student participation in extracurricular activities that focus on entrepreneurship and the existence of a close person who is self-employed. In addition, many other studies "show that the presence of role models within the family, relatives or friends can strongly influence the EIs and activities of students" (Karimi et al., 2014, p. 699). Paray & Kumar (2020) found a positive impact of entrepreneurship education on stimulating the start-up intention of students. The study (Ćatić-Kajtazović et al., 2015a) shows no difference in the entrepreneurial mindset, attitudes, and intentions considering whether or not the students attended the course/module *Entrepreneurship*. According to Nguyen (2018), gender is one of "two key demographic variables that influence entrepreneurship activities". Still, there are mixed findings on gender effects regarding the impact of entrepreneurship education on entrepreneurship activities (van Ewijk & Belghiti-Mahut, 2019).

The hypothesized model presented in Figure 1 examines male and female samples separately. Namely, studies in Bosnia and Herzegovina have shown that after graduation 28.21% of female students wish to start their own business, 61.54% and 10.26% wish to work in the public sector and in the private sector, respectively, while 48% of male students wish to start their own business after graduation (Ćatić-Kajtazović et al., 2016). Female students in B&H have statistically significantly lower entre-

preneurial intentions than male students (Ćatić-Kajtazović et al., 2016). Results such as these were expected bearing in mind characteristics of a patriarchal environment in B&H. Furthermore, results of previous studies suggest "that women have both lower entrepreneurial self-efficacy and lower entrepreneurial intentions" (Wilson et al., 2007, p. 391).

3. Measures and samples

A survey aimed at testing entrepreneurial intentions of B&H students studying at 9 different universities was conducted in the period May-June 2017. This paper presents part of research results that measured students' entrepreneurial intent by means of the IEIS scale. After rejecting incomplete questionnaires, a database with 610 questionnaires was created. By additional verification of missing values in the database, only those respondents were taken into account whose missing values do not exceed 2% (Liñán & Chen, 2009). After that, seven respondents were excluded. We have replaced missing values with series means. The sample of this study consisted of 603 students (63.8% female students and 36.2% male students) from nine different universities in Bosnia and Herzegovina. Among the respondents, 52.9% participated in the course *Entrepreneurship*, 30% of students participated in extracurricular activities that focus on entrepreneurship, and 64.7% have a close person who is an entrepreneur.

We have used construct measures adapted from existing scales to examine the relationship between UC, ESE, EI, and EB among male and female students.

Creativity supported at the university (UC) was measured with the construct "Attitudes towards a university environment that promotes creativity" (Zampetakis et al., 2011, p. 193; adapted from Amabile, 1996) with three items (e.g. At my university you learn that there is more than one solution to a problem; At my university you learn to examine old problems in new ways (1 - 5: strongly disagree - strongly agree)). According to the UC items, we have proposed the following definition of creativity supported at the university. Creativity supported at the university is the university environment that supports and promotes creativity. We recognize it as an environment in which students learn that there is more than one solution to a problem, in which students learn to examine old problems in new ways, and where faculties encourage students to produce and employ new ideas. M (SD) = 3.76 (0.87).

Entrepreneurial self-efficacy (ESE) "can be defined as an individual's confidence in his/her ability to mobilize cognitive, motivational and behavioral facilities to successfully perform entrepreneurial tasks" (Sedlan-König, 2016, p. 313). ESE was measured with the construct "Student self-report measures of entrepreneurial self-efficacy" (Sedlan-König, 2012a, 2012b, 2016) with eleven items (e.g. How successful are you in: 1) managing interpersonal relations; 2) dealing with uncertainty)). Each item is assessed on a Likert scale ranging from 1 -completely unsuccessful to 5 - very successful. M (SD) = 3.66 (0.69).

Individual Entrepreneurial Intent (EI) is defined as "self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future" (Thompson, 2009, p. 676). EI was measured with the construct "Individual Entrepreneurial Intent Scale" (IEIS: Thompson, 2009, p. 680) with six items, e.g. Thinking of yourself, how true or untrue is it that you: Never search for business start-up opportunities (R); Do not read books on how to set up a firm (R); (a 6-point interval measure; 1 = very untrue, 6 = very true). M (SD) = 3.76 (0.94).

Entrepreneurial behavior (EB) "consists of actions and reactions of individuals that are a response to external and internal stimuli, which are necessary for the creation and discovery of opportunities, making changes and the creation of organizations which aim to exploit these opportunities and cope with the increasing level of uncertainty and complexity" (Sedlan-König, 2012a, p. 146). In the current study, EB was measured with the construct "Propensity for entrepreneurial behavior" (Sedlan-König, 2012a, 2012b, 2016) with two items, e.g. How much are you interested in: Reaction to the observed opportunity (a 5-point scale ranging from 1- not interested to 5 - very interested). M (SD) = 4.00 (0.84).

The value of Cronbach's alpha for all variables was acceptable (George & Mallery, 2016), ranging from 0.74 for EI, 0.79 for EB, 0.87 for UC, and 0.89 for ESE.

4. Results

4.1 Correlation between study variables and the t-test

Statistical analyses were performed using IBM SPSS Statistics for Windows, Version 24 (IBM Corp, Armonk, NY, USA), in combination with the PROCESS version 3.1 macro by Andrew F. Hayes. It can be seen in the following table that there is a difference in mean values of UC ($t = 2.085$; $p < 0.05$),

ESE (t = -2.264; p < 0.05), EI (t = -3.379; p < 0.01), and EB (t = -3.362; p < 0.01), in terms of gender.

As expected, females had significantly lower level scores referring to the perception of entrepreneurial self-efficacy (M = 3.61), individual entrepreneurial intent (M = 3.66), and a propensity for entrepreneurial behavior (M = 3.92) than males. Nevertheless, females had a significantly higher score in creativity supported at the university (M = 3.82) than males (M = 3.66).

Table 1 Means, standard deviations, intercorrelations, and gender differences between study variables

	All students (N = 603)				Males / females			
	UC	**ESE**	**EI**	**EB**	**UC**	**ESE**	**EI**	**EB**
Creativity supported at the university (UC)	1				-	0.37**	0.21**	0.27**
Entrepreneurial self-efficacy (ESE)	0.35**	1			0.35**	-	0.37**	0.46**
Individual entrepreneurial intent (EI)	0.25**	0.39**	1		0.34**	0.40**	-	0.39**
Entrepreneurial behavior (EB)	0.24**	0.44**	0.42**	1	0.23**	0.37**	0.44**	-
	UC		**ESE**		**EI**		**EB**	
Mean (SD) for females	3.82 (0.83)		3.61 (0.66)		3.66 (0.90)		3.92 (0.85)	
Mean (SD) for males	3.66 (0.94)		3.74 (0.74)		3.93 (0.98)		4.15 (0.79)	
t	2.085*		-2.264*		-3.379**		-3.362**	

Notes: Correlations for the female sample (N = 385) and the male sample (N = 218) are presented above and below the diagonal, respectively.

*p < 0.05; **p < 0.01

Source: Authors' calculations

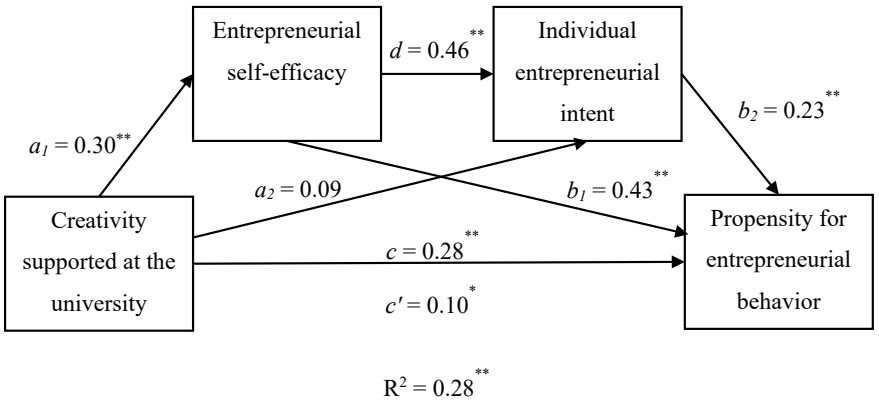
As can be seen in Table 1, there are statistically significant correlations between mediator variables (ESE and EI) and the independent variable (UC) and the dependent variable (EB). All correlation coefficients between variables are positive, which is in line with the hypothesized model.

4.2 Direct and indirect effects of creativity supported at the university on entrepreneurial behavior

In order to better understand the relationship between UC, ESE, EI, and EB, for each group of students, model 6 in PROCESS macro (Hayes, 2018) was tested twice: first without controlling for age, close person, extracurricular activities, and the Entrepreneurship course, and then by putting these variables in the covariate box. Special testing of statistical models in studies investigating student EI (first without controlling for some variables like age, level of education, and then when controlling these variables) is frequently used in research on students' entrepreneurial intentions (e.g. Karimi et al., 2014).

First, we have tested model 6 without putting U1, U2, U3, and U4 in the covariate box for the female sample (n = 385). With 95% bootstrap confidence intervals based on 5,000 bootstrap samples (Hayes, 2018), for female students, there was a significant direct effect of UC on EB (c' = 0.10, SE = 0.05, t = 2.14, p = 0.03, p < 0.05). The model is at a significance level (F(3-381) = 49.29, p = 0.00). Since two mediators were used, there were three specific indirect effects (Hayes, 2018) of UC on female EB. As can be seen in Figure 2, the first indirect effect of UC on female EB through ESE was positive and statistically significant (B = 0.1270, 95% CI [0.0780, 0.1854]). The second indirect effect of UC on female EB through EI was not significant because the confidence interval contained zero (B = 0.0208, 95% CI [-0.0083, 0.0517]). The third indirect effect is the specific indirect effect of UC on female EB through ESE and EI in serial (B = 0.0315, 95% CI [0.0163, 0.0510]). This so-called "long-way mediation" (X → M1 → M2 → Y) is small but significant (the confidence interval does not contain zero), which means that the results are consistent with the claim about serial mediation (Demming et al., 2017).

Figure 2 Relationship between UC, ESE, EI, and EB of female students



Notes: N = 385. Unstandardized path coefficients are presented.
*p < 0.05; **p < 0.01
Source: Authors' calculations

Age (U1), the existence of a close person who is an entrepreneur (U2), student participation in extracurricular activities that focus on entrepreneurship (U3), and participation in the course *Entrepreneurship* (U4), were controlled throughout the subsequent analyses. As shown in Table 2, adding these variables did not significantly change the results shown in Figure 2. In addition, the model overall was seen to be at a significant level ($F_{(7\text{-}377)} = 22.89$, $p = 0.00$, $R^2 = 0.30$). The existence of a close person who is an entrepreneur is significantly associated with ESE (B = 0.20, p < 0.01) and EI (B = 0.25, p < 0.01). Student participation in extracurricular activities that focus on entrepreneurship is only significantly associated with EI (B = 0.30, p < 0.01). Participation in the course *Entrepreneurship* is only, but negatively (1 = No, 2 = Yes), associated with female EB (B = - 0.23, p < 0.01).

Table 2 Serial mediation analysis to identify direct and indirect effects between UC and female EB

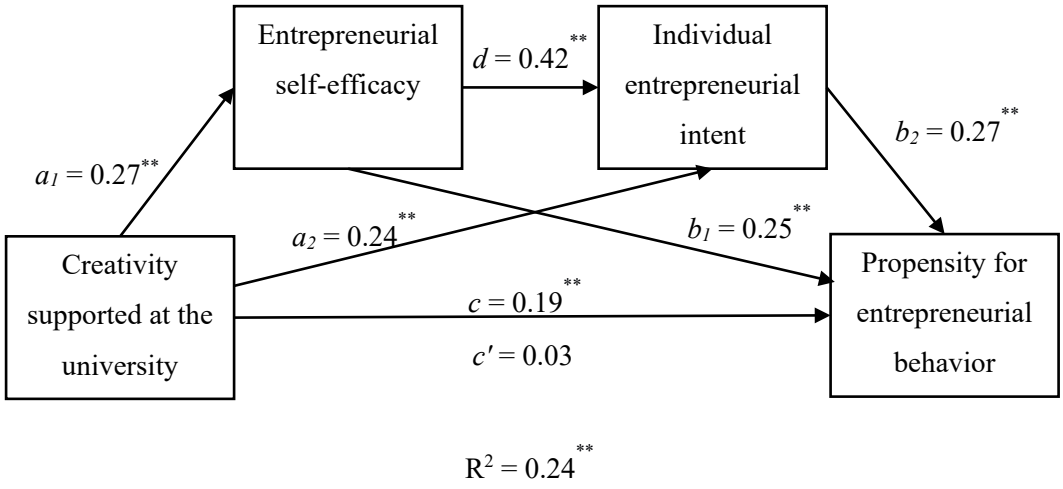
Effect	Path	Coefficient	SE	95% CI	
				LL	UL
Direct effect of UC on ESE	a_1	0.2781	0.0371	0.2051	0.3511
Direct effect of UC on EI	a_2	0.0945	0.0546	-0.0128	0.2019
Direct effect of ESE on EI	d	0.3971	0.0705	0.2584	0.5358
Direct effect of ESE on EB	b_1	0.4482	0.0640	0.3224	0.5741
Direct effect of EI on EB	b_2	0.2267	0.0448	0.1385	0.3148
Total effect of UC on EB without accounting for ESE and EI	c	0.2765	0.0499	0.1783	0.3747
Direct effect of UC on EB when accounting for ESE and EI	c'	0.1054	0.0478	0.0114	0.1993
Total indirect effect	a_1b_1+a_2b_2+a_1db_2	0.1711	0.0308	0.1158	0.2390
Indirect via ESE	a_1b_1	0.1247	0.0269	0.0770	0.1836
Indirect via EI	a_2b_2	0.0214	0.0139	-0.0029	0.0520
Indirect via ESE and EI	a_1db_2	0.0250	0.0078	0.0122	0.0428
Behavior total effect model (R^2 = 0.30**)					

Notes: N = 385. CI - confidence interval. LL - lower limit. UL - upper limit. SE - standard errors. 5,000 bootstrap samples.
[a] Age, a close person, extracurricular activities, and the Entrepreneurship course were covaried.
Source: Authors' calculations

As a whole (with covariates) direct effect of UC on female EB is significant (c' = 0.11, SE = 0.05, t = 2.21, p = 0.03, p < 0.05), the shortcut indirect effect (UC → ESE → female EB) is significant (B = 0.1247, 95% CI [0.0770, 0.1836]), and the long-way specific indirect effect is significant (B = 0.0250, 95% CI [0.0122, 0.0428]), so we can conclude that ESE and EI did serially mediate the link between UC and female EB, but only partially (for more information about mediation types, see Zhao et al., 2010).

Findings obtained on serial mediation of ESE and EI in the relationship between UC and EB in the male sample (without covariates) are shown in Figure 3. The direct effect of UC on male EB was not significant (c' = 0.03, SE = 0.05, p = 0.58, p > 0.05) when accounting for ESE and EI. The model is at a significance level (F (3-214) = 27.32, p = 0.00, R2 = 0.24). All indirect effects of UC on male EB are significant. So a serial multiple indirect effect was supported on male students. To be more precise, single mediation of ESE (B = 0.067, CI [0.0245, 0.1356]), single mediation of EI (B = 0.0643, 95% CI [0.0184, 0.1173]), and serial mediation of ESE and EI (B = 0.0307, 95% CI [0.0134, 0.0527]) were found statistically significant.

Figure 3 Relationship between UC, ESE, EI, and EB of male students



Notes: N = 218. Unstandardized path coefficients are presented.

*p < 0.05; **p < 0.01

Source: Authors' calculations

Then, age, the existence of a close person who is an entrepreneur, participation in extracurricular activities, and participation in the course *Entrepreneurship* were controlled. Only "a close person who is an entrepreneur" is significantly associated with ESE (B = 0.31, p < 0.01). Also, the model overall was seen to be at a significant level ($F_{(7\text{-}210)}$ = 9.50, p < 0.001, R^2 = 0.24).

Table 3 Serial mediation analysis to identify direct and indirect effects between UC and male EB

Effect	Path	Coefficient	SE	95% CI	
				LL	UL
Direct effect of UC on ESE	a_1	0.2642	0.0489	0.1678	0.3605
Direct effect of UC on EI	a_2	0.2460	0.0668	0.1143	0.3777
Direct effect of ESE on EI	d	0.3758	0.0880	0.2023	0.5492
Direct effect of ESE on EB	b_1	0.2492	0.0751	0.1012	0.3973
Direct effect of EI on EB	b_2	0.2650	0.0564	0.1539	0.3761
Total effect of UC on EB without accounting for ESE and EI	c	0.1927	0.0563	0.0817	0.3037
Direct effect of UC on EB when accounting for ESE and EI	c'	0.0354	0.0564	-0.0759	0.1466
Total indirect effect	$a_1b_{1+}a_2b_{2+}a_1db_2$	0.1573	0.0369	0.0902	0.2348
Indirect via ESE	a_1b_1	0.0658	0.0276	0.0224	0.1299
Indirect via EI	a_2b_2	0.0652	0.0245	0.0210	0.1159
Indirect via ESE and EI	a_1db_2	0.0263	0.0095	0.0107	0.0471
Behavior total effect model ($R^2 = 0.24^{**}$)					

Notes: N = 218. CI - confidence interval. LL - lower limit. UL - upper limit. SE - standard errors. 5,000 bootstrap samples.

[a] Age, a close person, extracurricular activities, and the Entrepreneurship course were covaried.

Source: Authors' calculations

Overall, it can be argued that the relationship between UC and male EB is serially mediated through ESE and EI. Single mediation of ESE (B = 0.0658, 95% CI [0.0224, 0.1299]), single mediation of EI (B = 0.0652, 95% CI [0.0210, 0.1159]), and serial mediation of ESE and EI (B = 0.0263, 95% CI [0.0107, 0.0471]) were found statistically significant. It should be remembered that according to Preacher & Kelley (2011, p. 97), "it is more likely that a mediator will completely mediate a relatively small total effect (c) than a relatively large total effect."

5. Discussion, limitations and future directions

Results of the current study confirm that entrepreneurial self-efficacy is a predictor of entrepreneurial intentions and entrepreneurial behavior (Bandura, 1986; Boyd & Vozikis, 1994). The results indicate that the more students perceive their entrepreneurial self-efficacy as successful, the more likely they are to show high entrepreneurial intentions and high entrepreneurial behavior. These results are in line with findings of Sedlan-König (2016).

Serial mediation analyses indicated that higher levels of UC were associated with greater EB via two indirect mechanisms: ESE and EI. There is a significant total effect of UC on students' propensity for entrepreneurial behavior without accounting for ESE and EI. These findings could be ascribed to social cognitive theory (the environment may influence individual behavior) and support the claims that the university context has some influence on students' entrepreneurial activities (see Shirokova et al., 2016). The direct effect of UC on EI of male students and the indirect effects of UC through ESE on EI of male and female students are significant. We could conclude that the university environment that promotes creativity can stimulate entrepreneurial self-efficacy and increase entrepreneurial intention - directly and indirectly in male students and indirectly through ESE in female

students. These findings point to the importance of self-efficacy in the relationship between creativity and entrepreneurial intentions (Bellò et al., 2017), especially in the female sample. In this sense, our study extends the literature on creativity, self-efficacy, and EI.

The results of the direct and indirect effect of UC on the EI through ESE are opposite to the results of studies by Zampetakis & Moustakis (2006) and Zampetakis et al. (2011). However, they measured the impact of UC on students' EI (as stated before) through individual creativity (student own creativity). At the same time, they used two items to measure students' EI. Thompson (2009) previously pointed to the problem of using different constructs to measure EI. "This threat to research progress is evident in studies that find inconsistent results when using individual entrepreneurial intent as a key, but differently defined and measured variable" (Thompson, 2009, p. 670). In response to the "threat to research progress," Thompson (2009) proposed a reliable and internationally applicable IEIS scale, used also in this research, so in this context, our study extends and complements the literature.

We have found significant differences in which males had a higher level of entrepreneurial self-efficacy, a higher level of individual entrepreneurial intent, and a higher level of entrepreneurial behavior than females. These results are consistent with the findings of several previous studies (Wilson et al., 2007; Sedlan-König, 2012a). As Liñán and Fayolle (2015) state, part of this difference can be explained by gender stereotypes. This explanation is especially applicable in Bosnia and Herzegovina, given traditional perceptions of gender roles in B&H (Ćatić-Kajtazović et al., 2016). Also, in the findings of the GEM Women's Entrepreneurship Report 2018/2019 (Elam et al. 2019, p. 21), the lowest women's TEA rate across 59 countries was recorded at 2.7% in Bosnia and Herzegovina.

In comparison to males, females reported a higher level of creativity supported at the university, which can mean that females noticed more support provided by the university than males did. Results indicate that extracurricular activities and *Entrepreneurship* course attendance are more related to female than male entrepreneurship. *Entrepreneurship* course attendance is negatively associated with female entrepreneurial behavior. It looks like mixed findings on gender effects regarding the impact of entrepreneurship education on entrepreneurship activities (van Ewijk, & Belghiti-Mahut, 2019) will continue. Some authors explained negatively associated entrepreneurship education and entrepreneurship activities by the fact that during their education students "have obtained more realistic perspectives both on themselves as well as on what it takes to be an entrepreneur" (Oosterbeek et al., 2010, p. 452). When it comes to research results in Bosnia and Herzegovina, a study conducted by Ćatić-Kajtazović et al. (2015b) showed that more than half of students surveyed thought that starting a business is very difficult in B&H. In the current study, *Entrepreneurship* course attendance is negatively associated only with female entrepreneurial behavior. Similar to these results, Oosterbeek et al. (2010) found that a negative impact of entrepreneurship education on entrepreneurial intentions is more common for women.

Moreover, other results of this study support the claim that "men and women are to be treated as different target groups in raising entrepreneurial intentions" (Leroy et al., 2009, p. 18) as well as in developing entrepreneurial behavior. Contrary to male students, we found a significant direct effect of creativity supported at the university on female students' entrepreneurial behavior, accounting for entrepreneurial self-efficacy and individual entrepreneurial intent. It seems reasonable to explain such results with different motivating factors because instrumental factors drive male students, "while female students are more motivated by social factors" (Karimi et al., 2013, p. 211). The existence of a close person who is an entrepreneur is significantly related to ESE, so our results can follow the line of the explanation of Karimi et al. (2013, p. 211), who, in the light of SCT theory, pointed out that "role models, in particular, can encourage self-efficacy."

While there is a significant total effect of UC on EB in our analyses, without accounting for ESE and EI, future studies are needed to address this relationship rigorously. However, the current study can serve as a starting point to examine the role that creativity supported at the university plays in enhancing students' entrepreneurial behavior.

There are several limitations of this paper. The first relates to the use of constructs. For example, ESE was measured through a self-report construct, while in such constructs, the danger of overestimating one's own abilities is especially present. Entrepreneurship behavior is measured with two items

using a scale "Propensity for entrepreneurial behavior" (Sedlan-König, 2012a, 2012b, 2016). However, it is about very complex behavior that "consists of actions and reactions of individuals that are a response to external and internal stimuli…" (Sedlan-König, 2012a, p. 146). That is why we recommend for futures studies to measure EB with more than two items. There is still a "gap" between intention and actual behavior (Shirokova et al., 2016), and "not all entrepreneurial intentions are translated into actions (Kautonen et al., 2013)" (Shirokova et al., 2016, p. 9). So it would be good to repeat research on the same sample of students to see how many of them have actually "started their own business," how many are intrapreneurs, etc.

Second, "there is no well documented theory linking creativity attitude with entrepreneurial intention" (Zampetakis & Moustakis, 2006, p. 425). It is also necessary to include in the future studies measures like one's own creativity and a family environment that promotes creativity (e.g. Zampetakis & Moustakis, 2006, Zampetakis et al., 2011). Some of the questions from this research need to be expanded. For example, suppose there is a course in entrepreneurship. In that case, it is necessary to include more research questions such as curriculum content, creativity, and dedication of the teacher teaching the course. When it comes to close persons who are entrepreneurs, the questions must be extended with more details, e.g. who those close people are, whether they are successful and responsible entrepreneurs, whether the business is inherited, etc. We consider the percent of explanation of the total variance in entrepreneurial behavior (about 24% in the male sample and about 30% in the female sample) to be a limitation, which opened a path to the search for new variables which increase the percent of explanation of the total variance in entrepreneurial behavior in developing countries.

6. Conclusion

This paper contributes to the existing knowledge by understanding the relationship between creativity supported at the university, entrepreneurial self-efficacy, individual entrepreneurial intent, and a propensity for entrepreneurial behavior. In the male sample, we found that higher levels of UC were associated with greater EB, (a) indirectly via a higher ESE, (b) serially via a higher ESE and higher EI, and (c) indirectly via a higher EI. In the female sample, UC was associated with EB (a) indirectly via ESE, (b) serially via ESE and EI, and (c) directly when accounting for ESE and EI. Taken together, the results of the current study confirm serial mediation of entrepreneurial self-efficacy and individual entrepreneurial intent in the relationship between creativity supported at the university and students' entrepreneurial behavior.

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