

## Cooperation as a Mediator between Entrepreneurial Competences and Internationalization of New Venture

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*Most entrepreneurs have adequate knowledge and skills, however, they lack internal resources for commercialization of products on foreign markets. This group of entrepreneurs recognizes the chance through collaboration with other organizations, ensuring the engagement of new technologies that contribute to fast and early commercialization on the global market. The focus of this research is related to the analysis of the influence of entrepreneurs' competences on cooperation with the other organization as well as on the internationalization of a new business venture. In order to provide deeper insight, the subject of research is also expanded with the field of new technology usage, as a moderator variable, to consider its role of strengthening the relationship between cooperation with other organizations and internationalization of a new venture. This paper aims to analyse the impact of entrepreneurial competences based on knowledge, skills and abilities (KSA's) on cooperation with the other organization as well as mediating influence of cooperation with other organizations on internationalization of a new venture, in the South East Europe region. The main source of data in this study is the GEM research database for 2013. For this research, the authors included six countries in the research sample of the South East Europe region: Slovenia, Croatia, Hungary, Romania, Bosnia and Herzegovina, and FYR of Macedonia. The results of path analyses of Structure Equation Modelling indicate a positive direct and indirect impact of entrepreneurial intentions on cooperation and internationalization of a new venture. Results also indicate that the usage of new technologies, as a moderator variable, strengthens the relationship between cooperation and internationalization of a new venture.*

**Keywords:** *KSA's; Cooperation; Open Innovation; Technology; Internationalization.*

### Introduction

In the previous period, the number of works increased focused on the discipline of entrepreneurship and innovation (Shane 2012; Bae *et al.*, 2014; Busenitz *et al.*, 2014). One of the main tasks of management, related to entrepreneurial activity, is the innovation of new products and services (Lekovic *et al.* 2018). It also can be recognized as a driver of the internationalization process (Autio *et al.*, 2000). Therefore, internationalization of business ventures has become a relevant factor and a central research question in many research papers (e.g. Madsen, 2013; Han *et al.*, 2014; Lee *et al.*, 2015; Park *et al.*, 2015), especially when it comes to the influence of cooperation with other organizations on internationalization of a business venture (Fernhaber & Li, 2013; Menendez & Casillas, 2014; Battisti *et al.*, 2015). The reason for this is found in the fact of replacing an existing, traditional model of innovation. An alternative was found in a model based on knowledge sharing outside organizational boundaries (Battisti *et al.*, 2015). The concept of open innovation has attracted the attention of many researchers when it comes to its application in multinational companies (Kirschbaum, 2005) and its adoption in small and medium enterprises (Lichtenthaler, 2008). The significance of this concept is also recognized in the case of entrepreneurs, which is also covered by the research conducted by Chaston and Scott (2012) examining it in developing countries.

Accepting the concept of open innovation, entrepreneurs form cooperative networks that in some cases may include partners from other countries. Based on cooperation with foreign partners, entrepreneurs increase their chances of identifying and exploiting opportunities in foreign markets, thus gaining their business internationalization. This process is based on entrepreneurial competences. As the open innovation process characterizes the transfer of knowledge, entrepreneurs based on their knowledge and skills, as well as enriching knowledge resulting from partnerships, can quickly adapt internal forces in order to have a successful presence in foreign markets (Ejler, 2012). Thus, the co-operation capacity of an entrepreneur, to a large degree, defines the efficiency of the open innovation concept as a means of achieving business internationalization. In line with previous statements, some authors point out that business internationalization is dependent on collaboration and networking processes (Sekliuckiene *et al.*, 2014).

Entrepreneurial new venture success in domestic and international markets can be affected by its technology capability (Yiu *et al.*, 2007). There is much research that covers the field of new technology and its specific influence on business internationalization (Kylaheiko *et al.*, 2011; Amoros *et al.*, 2016). Based on recent literature, the positive influence of new technologies is evident. Some authors recognize that the use of new technologies and

cooperation capability can be significant in predicting a new venture's international strategic orientation (Zou *et al.*, 2010). Due to this reason, technological capability gains its significance as an interaction term between cooperation and business internationalization.

The available literature clearly indicates the deficiency of the research papers they are considering the influence of entrepreneur's knowledge, skills and abilities (KSAs) and intentions on cooperation with other organizations, as well as its effect on the process of internationalization. While some determinants of the internationalization process have been identified, there is a need for a wider and more complex view of how different factors jointly determine the entrepreneurial export activities. We address this research gap by investigating how entrepreneurial competences based on KSA's and cooperation can affect the internationalization process, especially when it comes to entrepreneurial ventures who apply new technologies in their business. The main objective of this paper is to analyse the impact of entrepreneurial competences on cooperation with other organizations, as well as mediating influence of cooperation with other organizations on the internationalization of a new venture, observed in the context of the South East Europe region. Based on the previous research (Zou *et al.*, 2010), which analysed the impact of enterprise's cooperation and technological ability on internationalization, the field of research was expanded to define the role of new technologies, as a moderator variable, in strengthening relationships between cooperation and internationalization.

The structure of this paper is as follows. In the first part, we have presented a literature review, while the second part of the paper is related to the methodology of our research (data sample, variables, conceptual framework, etc.). In the third part, we have presented the results from statistical analysis and the last part reflects our discussion on obtained results, suggestions for future studies, and some theoretical and practical implications.

## Theoretical Background

Entrepreneurship can be perceived as "the process of creating value by bringing together a unique package of resources to exploit an opportunity" (Stevenson & Roberts, 1989). Risk-taking, proactiveness, opportunity identification and exploitation as entrepreneurial abilities affect entrepreneurs' collaborative activities, which was pointed out by some authors in leading literature (Espinosa & Suanes, 2011; Diaz-Fonca & Marcuello, 2013;). Furthermore, the fact is that the majority of entrepreneurs decide to cooperate with other organizations to innovate based on previously encountered opportunities (Nieto & Gonzalez Alvarez, 2016). Entrepreneurship based on inter-firm collaboration, with the intention of enhancing entrepreneurial competences, has been recognized by researchers under the term open innovation (Lassen *et al.*, 2008). Innovative activities related to cooperation with external entities creates the opportunity to obtain the missing resources within the organization. Niehaves (2010) Niehaves (2010) stated that open innovation makes business boundaries porous, so external knowledge can be more easily integrated and internal knowledge more easily

shared. This achieves the ability to share knowledge and comprehensive customization of identified missing internal resources. In particular, the problem of resource scarcity is characteristic of the latest innovative ventures, which was confirmed in the research conducted by Schwartz and Hornych (2010), where they noted the gap between the key resources needed for a stable business and the current resources available. Accepting the concept of open innovation is especially interesting for startups to overcome all the obstacles created by newness and smallness of enterprise (Bogers, 2011). which can be overcome by pooling resources for the successful business internationalization (Welge & Borghoff, 2005). By joining competencies, collaborative internationalization of business not only requires a lower amount of internationalization of know-how, on the side of the cooperative partner.

The key factor of open innovation concept adoption is knowledge and its management (Bigliardi & Galati, 2013). Knowledge is a condition for inclusion in the process of open innovation through this concept that can enrich their knowledge and skills by integrating other actors into the innovation process (Enkel *et al.*, 2009). The process of internationalization is increasingly based on networking, i.e. finding partners for cooperation beyond the boundaries of national economies. In support of the previous statement, the research conducted by Vahlne (2013), which points to networking activity with foreign partners as the main factor of influence on internationalization. This view is based on the assumption that open innovation-oriented companies create networking capabilities that allow them to enter foreign markets (Bianchi *et al.*, 2011). The relationship between open innovation and internationalization is very specific, there is mutual influence between them, which in their work Moreno-Menendez and Casillas (2014) have confirmed that open innovators have a stronger international presence as opposed to innovators who rely on internal resources. Previously consulted reigning views in the literature have led to the development of following research hypotheses by the authors of this research:

*H1: Entrepreneurial competences (based on entrepreneurial KSA's) have a positive effect on cooperation with other organizations.*

*H2: Cooperation with other organizations mediates the relationship between entrepreneurial competences (based on entrepreneurial KSA's) and internationalization of new ventures.*

Opportunities for developing entrepreneurial ventures are often seen outside the borders of national economies. The interest in business internationalization has recently been going hand in hand with the growing importance of the process of globalization of business (Casas & Dambrauskaite, 2011). Business internationalization derives its importance from the fact that it has an impact on the long-term competitiveness of an enterprise (Sekliuckiene *et al.*, 2016). It is not only a privilege of multinational companies. Also, it represents an attribute newly established entrepreneurial ventures who base their growth using new technologies and developing innovative products. There is a lot of research that focuses on business internationalization (Blomstermo *et al.*, 2006; Cort *et al.*, 2007; Sakarya *et al.* 2007; Seggie & Griffith, 2008),

cooperation between organizations caused by the same (Robson *et al.*, 2006; Forlani *et al.*, 2008), and technology-oriented entrepreneurs, which base their operations on the creation and use of new technology platforms (Onetti *et al.*, 2010).

Financial allocations for R&D activities, acquisition and integration of new technologies into business are key concepts if we try to theoretically shape the concept of a technology-oriented entrepreneur (Han, *et al.*, 2001). The importance of this group of entrepreneurs is recognized in the performance of new ventures caused by the use of technologies (not necessarily new and innovative) whether they were developed by entrepreneurs or their acquisition was made Cai *et al.* (2014). However, entrepreneurial ventures that involve the use of new technologies (up to one year of age according to the GEM methodology) are the ones that exploit a particular technology in their operation, developing not necessarily the same technology (Pathak *et al.*, 2014). A characteristic of this group of entrepreneurs is the high rate of productivity growth that inevitably contributes to economic growth. (Boothby *et al.*, 2010).

Engaging technological capacities based on the company's efforts or in cooperation with other organizations is the decision made by the organization, the operations of which are dependent on research and development activities. Organizations with few R&D activities use other companies or scientific-research as an external sources in order to retrieve knowledge deficit (Audretsch & Caiazza, 2016). There are several ways in which cooperation affects the usage of technologies when the strategic focus of a new venture is on internationalization. First, a new venture often lacks sufficient knowledge about foreign markets, and second, Newly established ventures can use its networking potential to customize products according customer needs (Zou *et al.*, 2010). In their research, the mentioned group of authors discovered results that confirmed the assumptions of the positive effect of cooperation and the use of technology on the internationalization of a business venture. These organizations can receive and absorb external knowledge through technology transfer structure (technology transfer offices, science, and technology parks) and formal arrangements (alliances, joint ventures, mergers and acquisitions, and corporate venture capital investments) (Schildt *et al.*, 2005). For this reason, entrepreneurial activities are focused on the acceptance of the new concept of open innovation to find the missing resources outside the company. According to Djukic *et al.*

(2015), sees the concept of open innovation as an exchange of knowledge with the intention of accelerating the development of internal innovation while expanding markets for the successful external appearance of new products or services. These approaches assume that faster and cheaper innovation processes can be achieved by using external knowledge and stimuli, financial resources, experience, and spillover effects (Prokop & Stejskal, 2017). The importance of this concept is highlighted by many authors in their research (Ketchen *et al.*, 2004; Vrande *et al.*, 2009 Lee *et al.*, 2010; Monsef *et al.*, 2012; West & Bogers, 2014; Saebi & Foss, 2015). Previously consulted reigning views in the literature have led to the development of following research hypotheses by the authors of this research:

*H3: Cooperation with other organizations has a positive effect on internationalization.*

*H4: The use of new technologies strengthens the positive relationship between cooperation with other organizations and internationalization.*

### Research Methodology

The empirical research conducted in this paper is based on data from Global Entrepreneurship Monitor (GEM). The generated database for the subject research includes the database – Adult population Survey (APS component of the GEM database) for 2013. GEM is a worldwide database on entrepreneurship and measures differences in entrepreneurial attitudes, activities and aspirations of entrepreneurs, demystifies the factors affecting the nature and extent of national entrepreneurial activity, identifies major determinants for the development of entrepreneurship at national and global levels. As the authors of this research are primarily interested in the SEE region, six countries are included in the research sample: Slovenia, Croatia, Hungary, Romania, Bosnia and Herzegovina, and FYR of Macedonia. Number of respondents in each country, as well as total number of respondents, can be seen in Table 1. There have been several criteria for influencing the choice of countries in this research. First of all, the European Commission's guidance in the South program was used to identify the SEE countries. In the first step, 16 countries were identified. In the second step, GEM participant countries for 2013 have been identified. The third step represents a result of observing the regional aspect and similar socio-cultural patrimony.

Table 1

Research Sample					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hungary	2000	16,6	16,6	16,6
	Romania	2021	16,8	16,8	33,4
	Croatia	2000	16,6	16,6	50,1
	Slovenia	2002	16,6	16,6	66,7
	Bosnia and Herzegovina	2004	16,7	16,7	83,4
	Macedonia	2000	16,6	16,6	100,0
	Total	12027	100,0	100,0	

Source: Author's calculation

The research sample countries have a common historical heritage, given the dominant influence of socialism in the second half of the 20th century, which was

present until 1990. Some countries have successfully completed the transition process while some countries are still in the process of transforming the economy. GEM

represents one of two available international comparative data sets related to entrepreneurship (Estrin *et al.*, 2013). Another one is the World Bank "Entrepreneurship Survey" focused on registered companies while GEM captures entrepreneurial activity at the macro level, the level of national economies (Acs *et al.*, 2008). Long-term research in the field of entrepreneurship, which is enabled by GEM methodology, let us use 2013 database. It can contribute in understanding of the observed complex phenomenon such as entrepreneurial activity (Lekovic *et al.*, 2018).

As the survey covered KSA's, cooperation with other organizations, use of new technologies as well as internationalization of new venture, authors of the paper decided to include the following variables in the study of this problem area: 1.) "Expects to start a new business in the next 3 years" – a variable that indicates entrepreneurial intention. 2.) „Currently involved in business start-up” – a variable that indicates nascent entrepreneurial activities; 3.) „Good conditions to start business next 6 months in area I live” - a variable that indicates entrepreneurial alertness; 4.) „People consider starting business as good career choice” - a variable that indicates societal value regarding entrepreneurship; 5.) “Has required knowledge/skills to start business” – a variable that indicates self-efficacy regarding KSA's. Taking into account the aforementioned variables, the focus of the research is on individuals with entrepreneurial intentions or already existing entrepreneurs who base their business on their self-confidence, which is usually determined by their entrepreneurial knowledge and skills. The mentioned individual characteristics of future / current entrepreneurs point to entrepreneurial competences. 6.) „Weak international orientation (more than 1 % of customers from the outside country)“ 7.) „25–75 % of customers outside the country“, 8.) „75–100 % of customers outside the country" – variables that indicate the level of internationalization. By observing the above variables, the survey includes respondents who have a weaker and stronger international business orientation. 9.) „Working together with other enterprises or organizations to produce goods or services", 10.) "Working together with others to make new business effective" – variables that indicate cooperation with other organizations. By combining the previous two variables, the authors had the intention to observe the entrepreneurial cooperative capacity when it comes to product development and the effectiveness of business. The potential answers to all the variables used in this research were: 0.) No and 1.) Yes. For exploratory factor analysis IBM SPSS 20 was used. And, for Confirmatory Factor Analysis, as well as for Path Analysis in Structure Equation Modelling, AMOS 20 was used.

### The Context of the Research

The geographic context of this research is South East Europe. As previously mentioned by Lecuna *et al.* (2017), these specific regions that consist of developing countries have been understudied, when it comes to the discipline of entrepreneurship. Most studies were carried out on a sample of highly developed countries, known as innovation-driven countries. The results obtained through these studies are difficult to be applied in a different socio-

economic context (Ulhoi, 2005), which is present in the SEE region. The development of SEE countries, when it comes to the economy, historical and cultural heritage, is significantly different concerning highly developed countries, e.g. West European countries. Since then, entire economies have been different from market economies of highly developed countries. When we talk about the SEE region, we must take into consideration that this is specific model of capitalism, which is found to be somewhere between Coordinated Market Economies (CMEs) and Liberal Market ones (LMEs), named Emerging Market Economies (EMEs) (Hancke *et al.*, 2007) or Dependent Market Economies (DMEs), because it is still in the process of transition and institutionalization. Even though some SEE countries completed the transition process, while some countries are still in this process, these countries do not have Entrepreneurial Framework Conditions developed to promote entrepreneurial activity. One of the biggest challenges is the building of knowledge and skills as well as the motivation for launching entrepreneurial ventures in this group of countries. Consideration should be given to the fact that this region was isolated from the capitalist influence and market economy for several decades. However, some studies point to positive changes taking place in this region. The proximity of the SEE region and European Union countries, as well as the fact that several countries in this region have the status of a full member of the EU, opens up the possibility of internationalization of business. Although the contribution of the entrepreneurial sector to the internationalization process in transitional economies is currently understated, there is a much-untapped potential that still exists (Lloyd-Reason *et al.*, 2007). Lack of innovative culture, traditionally low technological capacities, and a diminished base of research and development staff point to the need to develop support policies to improve the region's innovative potential, especially taking into account the needs of this policy when it comes to less developed regions. Future policies should be based on the prevention of brain drain, the development of the availability of new technologies, as well as the advancement of cooperation between the scientific-research sector and the economy.

### Research Results

To test the hypotheses, the research authors decided to use the structural equation modeling method. As recommended by Anderson and Gerbing (1988) we used a two-step procedure. Conducting exploratory factor analysis (EFA) was the first step. Then we estimated the measurement model using confirmatory factor analysis (CFA) to test the goodness of fit of the measurement scales (Anderson & Gerbing, 1988). The Kaiser-Meyer-Olkin measure of sampling adequacy was .73, above the commonly recommended value of .6 and Bartlett's test of sphericity was significant ( $\chi^2(78) = 552.887, p < .05$ ).

Finally, the commonalities were all above .3 (see Table 2), further confirming that each item shared some common variance with other items. Given these overall indicators, factor analysis was deemed to be suitable for all 13 items. Related to convergent validity, loading

amplitudes in pattern matrix had primary loadings over .5. Due to discriminant validity, based on results depicted in table 4, authors have noticed that there are no major cross-

loadings or correlation. Reliability was examined using Cronbach's alpha, as can be seen from table 2, all results are greater than .7

Table 2

Pattern Matrix and Communalities

Cronbach's Alpha	Factor			Commonalities
	0.887	0.784	0.900	
Expects to start a new business in the next 3 years	0,968			.869
Currently involved in business start-up	0,898			.775
Good conditions to start a business next 6 months in the area I live	0,708			.616
People consider starting a business as a good career choice	0,591			.352
Has the required knowledge/skills to start a business	0,769			.705
Export: 75-100% of customers outside the country		0,812		.674
Export: 25-75% of customers outside the country		0,943		.919
weak international orientation (more than 1% of customers from the outside country)		0,852		.726
Working together with other enterprises or organizations to produce goods or services			0,828	.719
Working together with others to make new business effective			0,993	.955

Extraction Method: Maximum Likelihood. Rotation Method: Promax with Kaiser Normalization.<sup>a</sup>

Source: Author's calculation

The cumulative percent of variance explained by these variables is 72.28 %. While no absolute threshold has been adapted, for the social sciences a minimum of 60 % of the cumulative variance is quite accepted (Hair *et al.*, 2006). Results of the pattern matrix, depicted in table 2, refer to adequate factor organization of variables in this research. The first factor includes variable which represents *entrepreneurial competences*, the second factor represents *internationalization*, the third factor is related to cooperation with other organization – *open innovation*.

We observed convergent and discriminant validity as evidenced by table 3. According to Hu and Bentler (1999), observed results in table 3 are greater than thresholds, convergent validity is AVE and it is above

0.5; discriminant validity is the square root of AVE and they are greater than correlations. Reliability has been tested and evidenced by the results of composite reliability CR, it is above 0.700.

Table 3

Convergent and Discriminant Validity

	CR	AVE	MSV	MaxR (H)	COOP	INTER	KSA's
COOP	0,902	0,822	0,068	0,918	<b>0,907</b>		
INTER	0,905	0,762	0,110	0,965	0,261	<b>0,873</b>	
KSA's	0,897	0,639	0,110	0,976	0,230	0,331	<b>0,800</b>

Source: Author's calculation

Table 4 contains data indicating the statistical validity of the developed and tested model. Having in mind the views of Kline (2010) aimed at determining the validity of the developed model, the authors observed the several parameters of the model:  $X^2 = 36.367$ ,  $df = 46$ ,  $p = 0.845$ ;  $RMSEA = 0.000$ ;  $CFI = 1.000$ . These results show a very suitable model as indicated by the value of  $RMSEA < 0.025$  (MacCallum *et al.*, 2001). The Comparative Fit Index ( $CFI = 1.000$ ) value exceeds the limit value of 0.90 (Hu & Bentler, 1999). Also, the developed model shows the value of (goodness-of-fit index)  $GFI = 0.928$ , which is a much higher value than the limit value of 0.90, thus indicating very good compliance of model development

with observed data. Another parameter of the model indicating its validity is (adjusted goodness-of-fit index)  $AGFI = 0.858$ , which also exceeds the limit value of 0.8. Also, the results of  $SRMR=0.0359$  are less than the threshold value of 0.09, so these results indicate a good model fit.

Table 4

Model Fit

Statistical parameters of model	Threshold (Hu & Bentler,1999)	Observed
Chi-square/df (cmin/df)	< 3 good	36.367 / 46
p-value for the model	> .05	0.845
CFI	> .95 great; > .90 traditional	1.000
GFI	> .90	0.928
AGFI	> .80	0.858
SRMR	< .09	0.0359
PCLOSE	> .05	0.956
RMSEA	< .05 good; 0.5 – 1.0 moderate	0.000

Source: Author's calculation

We ran a Cook's distance analysis to determine if any (multivariate) influential outliers existed. In no case did we observe a Cook's distance greater than 1. Most cases were far less than 0.500. We also examined variable inflation factors for all predictors on our dependent variable and observed no VIF greater than 1.2, which is far less than the threshold 10.

Also, we did a common method bias test where we compared the unconstrained common method factor model to fully constrain the common method factor model. In the compare chi-square test, p-value was significant ( $p = .003$ ), difference of Chi-square was ( $X^2 = 31,2$ ) and difference in degrees of freedom was ( $df=13$ ). We had a significant shared variance which led us to retain Common Latent Variable (CLF) to impute factor scores for path analysis method.

Table 5 contains data indicating the statistical validity of the developed and tested model as well as the direct and mediated effects of observed variables. Having in mind the views of Kline (2010) aimed at determining the validity of the developed model, the authors observed the several

parameters of the model:  $X^2 = 0.410$ ,  $df = 2$ ,  $p = 0.815$ ;  $RMSEA = 0.000$ ;  $CFI = 1.000$ . These results show a very suitable model as indicated by the value of  $RMSEA < 0.025$  (MacCallum *et al.*, 2001). The Comparative Fit Index ( $CFI = 1.000$ ) value exceeds the limit value of 0.90 (Hu & Bentler, 1999). Also, the developed model shows the value of (goodness-of-fit index)  $GFI = 0.997$ , which is a much higher value than the limit value of 0.90, thus

indicating very good compliance of model development with observed data. Another parameter of the model indicating its validity is (adjusted goodness-of-fit index)  $AGFI = 0.985$ , which also exceeds the limit value of 0.8. Also, the results of  $SRMR=0.0238$  are less than the threshold value of 0.09, so these results indicate a good model fit.

Table 5

Standardized Path Coefficients

Path and standardized path coefficients	Direct effect	Mediation	Hypotheses
Opportunity based entrepreneurs → Cooperation	0.248 (0.035)*		H1: Confirmed
Opportunity based entrepreneurs → Internationalization		0.039 (0.048)*	H2: Confirmed
Cooperation → Internationalization	0.270 (0.021)*		H3: Confirmed
Statistical parameters of the model	Threshold	Observed	
Chi-square / df (cmin / df)	< 3 good	0.410 / 2	
p-value for the model	> .05	0.815	
CFI	> .95 great; > .90 traditional	1.000	
GFI	> .90	0.997	
AGFI	> .80	0.985	
SRMR	< .09	0.0238	
PCLOSE	> .05	0.841	
RMSEA	< .05 good; 0.5 – 1.0 moderate	0.000	

\*  $p < 0.05$ , \*\* $p < 0.01$  Critical values (Hair et al. 1995)

Source: Author's calculation

To investigate do new technologies strengthens the positive relationship between cooperation with other organizations and internationalization, authors have

chosen to include the use of new technologies as a moderator variable.

Table 6

Standardized Path Coefficients

Path and standardized path coefficients	Direct effect	Interaction	Hypotheses
Technology → Internationalization	0.007 (0.908)		
Cooperation X Technology → Internationalization		0.003 (0.026)*	
Cooperation → Internationalization	0.230 (0.002)**		H4: Confirmed
Statistical parameters of the model	Threshold	Observed	
Chi-square / df (cmin / df)	< 3 good	4.815 / 5	
p-value for the model	> .05	0.439	
CFI	> .95 great; > .90 traditional	1.000	
GFI	> .90	0.977	
AGFI	> .80	0.904	
SRMR	< .09	0.0502	
PCLOSE	> .05	0.536	
RMSEA	< .05 good; 0.5 – 1.0 moderate	0.000	

\*  $p < 0.05$ , \*\* $p < 0.01$  Critical values (Hair et al. 1995)

Source: Author's calculation

Table 6 contains data indicating the statistical validity of the developed and tested model as well as the moderated effect of variables related to the usage of new technologies. Having in mind the views of Kline (2010) aimed at determining the validity of the developed model, the authors observed the several parameters of the model:  $X^2 = 4.815$ ,  $df = 5$ ,  $p = 0.439$ ;  $RMSEA = 0.000$ ;  $CFI = 1.000$ . These results show a very suitable model as indicated by the value of  $RMSEA < 0.025$  (MacCallum *et al.*, 2001). The Comparative Fit Index ( $CFI = 1.000$ ) value exceeds the limit value of 0.90 (Hu, & Bentler, 1999). Also, the developed model shows the value of (goodness-of-fit index)  $GFI = 0.977$ , which is a much higher value than the limit value of 0.90, thus indicating very good compliance of model development with observed data.

Another parameter of the model indicating its validity is (adjusted goodness-of-fit index)  $AGFI = 0.904$ , which also exceeds the limit value of 0.8. Also, the results of  $SRMR=0.0502$  are less than the threshold value of 0.09, so these results indicate a good model fit. As it is shown in table 7 and figure 2, the use of the latest technologies unequivocally strengthens the positive relationship between cooperation and internationalization.

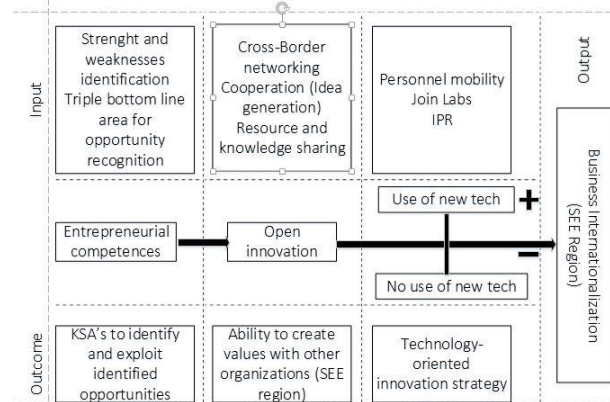
### Discussion

This paper examined the mediating role of cooperation between entrepreneurs' competences and internationalization of new ventures, as well as the moderating effect of usage of new technologies between cooperation and internationalization. The results provide some useful insights. Assuming direct positive influence of

entrepreneurial competences based on KSAs on cooperation with other organizations, as well as its indirect impact on internationalization through the mediated variable of cooperation with other organizations, the authors of this paper revealed a positive impact in both cases. Based on these results, the hypotheses H1 and H2 are confirmed. The obtained results from our research are following previous studies. Some authors confirmed that entrepreneurs through cooperation within established entrepreneurial networks can influence the internationalization of new ventures based on their knowledge and skills (Manolova *et al.*, 2002; Sharma & Blomstrom, 2003; Klyver & Christensen, 2007). Furthermore, entrepreneurs who believe that they have KSAs are more likely to develop an international venture, while the influence of cooperation with other organizations has a positive influence on entrepreneurial export activities (Evald *et al.*, 2011). Creating partnerships and co-operation with organizations from the target market can lead to overcoming obstacles in the form of legal barriers, as recognized by the authors Fink *et al.* (2008).

Assuming direct positive influence of cooperation with other organizations on internationalization of new ventures as well as the use of new technologies as a variable that strengthens this relationship, the authors of this paper revealed a positive impact in both cases. Based on these results, the hypotheses H3 and H4 are confirmed. The results are in favor of the assumption about the use of new technologies in the internationalization of business and are following the results of research conducted by Hessels and Terjesen (2008). The results represent the extension of available research conducted. Brach and Naude (2012) confirmed the results in the context of their research including the highly-developed countries. A step forward in observing technologies, i.e. their classification, was made in the research conducted by Amoros *et al.* (2016). In their study, they analysed the impact of the used technology from one to five years of age. The results of the study, which observed the impact of new technologies up to one year of age, are in full compliance with the above-mentioned research, thus confirming the importance of classification of technologies based on how new they are. Recent analyses have shown that the SMEs' export capabilities are highly dependent on co-opetition, while others suggest that the challenges of the international supply chain constitute a major driver to this combination (Galdeano-Gomez *et al.*, 2016). Cooperation with other organizations offers the possibility of acquiring new technological knowledge for the development of new products or services (Ritala *et al.*, 2009). Therefore, based on the development of cooperative forces and the company's capabilities, cooperation with other organizations is the possibility for the development of a business venture by technology-oriented entrepreneurs. Research results are in line with the research conducted by Brettel and Cleven (2011), who found a positive impact of technology-oriented entrepreneurs on cooperation with organizations, emphasizing universities and suppliers as institutions whose statistical significance was revealed in the analysis of their relations. The positive insignificant impact was observed in the competition, which is understandable, recognizing the complexity of relations

between competitors that acquire and develop their competitive advantage based on new technologies.



**Figure 1.** Framework for Business Internationalization (SEE Region)

The paper is exploring a particular gap and it can advance the understanding of the importance of entrepreneurial competences based on their KSA's, open innovation and new technologies to the internationalization of new ventures. Although theory recognizes this relation, yet there is a significant unexplored area related to the territory of the SEE region. This study is one of the first to examine before mentioned entrepreneurial elements that influence the internationalization process. The survey covered the SEE region, bearing in mind that these are emerging economies, it is very important to understand drivers of internationalization activity. This region is significant due to the proximity of the EU (observing non-EU countries in the research sample), as well as the fact that the survey includes some of the EU member states that have access to the European single market. Based on the above mentioned it is necessary to consider cooperation with other organizations as an opportunity to overcome the lack of resources and to accelerate the internationalization of the business venture. Because of the accession to other, not so distant markets, the possibility of networking entrepreneurial ventures between EU and non-EU countries is of particular interest. This networking would not only solve the problem of resource scarcity but would significantly facilitate the process of entry into foreign markets. By creating partnerships and networks with companies belonging to foreign markets, the administrative-procedural type barriers would soon be overcome. Also, knowing the market, in terms of consumer needs and habits, as well as the current state of the industry, when it comes to competition, can largely affect the positive outcome of entry into foreign markets. Potential for economic growth, the national economies of the countries covered by the research, should recognize in the internationalization of business and access to other markets. Since the characteristics of the surveyed countries, individually viewed, is a relatively small population and low purchasing power.

## Conclusion

The results of the conducted research provide practitioners and policymakers with additional insights into key factors and their positive impact on entrepreneurs' export intentions. The authors of this paper do not claim that these are the only elements that influence internationalization. It is necessary to point out that these are the elements of identified positive influence and should be considered as such. Policymakers should be aware of the fact that the larger part of entrepreneurship cooperation with other organizations takes place based on individual relationships, building a cooperative network. There is a need for a systematic approach and strengthening of cooperation between companies with export intentions, through the development of business incubators and science-technology parks, where a mentorship network will be created. Policymakers can easily initiate and arrange networks where nascent entrepreneurs can meet other entrepreneurs with prior international start-up experience. These networks can be useful to nascent entrepreneurs in providing valuable information about entering the foreign markets and finding an adequate international partner (Evald *et al.*, 2011). Research results are not only interesting for SEE countries. These findings can be of importance to all emerging economies who had similar challenges in business internationalization.

Observed from the perspective of entrepreneurs in emerging countries, the main contribution of this paper is the developed framework for business internationalization in the SEE region (Figure 1). Taking into account the results of the research, this framework represents a logical benefit of the author's scientific effort.

When it comes to the research methodology, we should be aware of the limitations that have been caused by cross-sectional data usage. This limitation can be seen as a potential for methodology improvement for future research. Instead of cross-sectional data, there is potential for panel data usage. The use of panel data has a greater number of observations to ensure that regression analysis and residual values are plausible and reliable. With more observations, the distribution of residuals and estimated values are closer to normal distribution. An increased number of observations will bring us closer to the assumptions of normal distribution. By analyzing the panel, our analysis would be enriched with individual-specific attributes at the observation unit level. Research on entrepreneurial orientation (proactiveness, innovation, and risk avoidance) and its influence on internationalization represent another potential future research. Entrepreneurial KSA's can certainly affect the awareness and exploitation of observed entrepreneurial opportunities. Considering additional entrepreneurial orientation variables and their influence, one might notice the characteristics of an entrepreneur and its international performance and behavior.

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