

Cypriot Journal of Educational Sciences



Volume 17, Issue 5, (2022) 1680-1695

www.cjes.eu

Entrepreneurial creativity and intention: Structural equation modelling among university students

Firman Firman ^a *, Universitas Jambi, Jl. Raya Jambi - Muara Bulian KM.15 Mendalo Indah Muaro Jambi, Jambi 36361, Indonesia https://orcid.org/0000-0001-9275-2119

Budi Setiawan ^b, Universitas Pendidikan Indonesia, Jl. Dr. Setiabudi No.229, Isola, Sukasari, Bandung 40154 Indonesia https://orcid.org/0000-0001-5371-8129

Suggested Citation:

Firman, F. & Setiawan, B. (2022). Entrepreneurial creativity and intention: Structural equation modelling among university students. *Cypriot Journal of Educational Science*. *17*(5), 1680-1695. https://doi.org/10.18844/cjes.v17i5.7273

Received from January 25, 2022; revised from April 10, 2022; accepted from May 13, 2022. © 2022 Birlesik Dunya Yenilik Arastirma ve Yayincilik Merkezi. All rights reserved.

Abstract

The context of this research aims to analyse the effects of entrepreneurial creativity (EC) empirically on entrepreneurial intention through structural equation modelling by proposing and testing the model that has been developed previously developed. The goal of this study is to understand some of the determinants of entrepreneurial intention among university students consisting of 1,035 respondents. The research findings by testing EC and entrepreneurial intention (EI) models show that student creativity at the university has a very high level of significance in influencing students' own entrepreneurial intention. Moreover, it is followed by creativity within family and the individuals' creativity. The research findings will later become recommendations and options for campus policy in fostering student EI, especially for university students.

Keywords: Entrepreneurial creativity, entrepreneurial intention, structural equation modeling (SEM)

E-mail address: firman.fkip@unja.ac.id / Tel.: +62-812-7321-088

^{*} ADDRESS FOR CORRESPONDENCE: Firman Firman, Universitas Jambi, Jl. Raya Jambi - Muara Bulian KM.15 Mendalo Indah Muaro Jambi, Jambi 36361, Indonesia

1. Introduction

Entrepreneurship has become a global issue of quality development, and it is increasing the number of entrepreneurs in each of their countries, as entrepreneurship is critical to a country's success (Baumol & Strom, 2007). In order for Indonesian students to develop into quality human resources, entrepreneurial spirit must be developed in them as potential university graduates and the younger generation who will contribute to the country's economic development. An opinion (Akhir, 2019) in the Okezone e-paper on 9 April 2019 with the topic of economics states that the requirement to become a developed country is that the number of entrepreneurs must be more than 14% of the population ratio. Meanwhile in Indonesia, only 3.1% of entrepreneurs are involved. Thus, it is necessary to accelerate and provide convenience to increase Indonesian economic actors significantly.

According to Florida (2019), the 21st century will require inventiveness due to the shifting global economy. Today, creative employment is on the rise, and in the current economic climate, businesses are orienting themselves to be attractive and innovative. Creativity is regarded as vital in the field of management (Arifin & Setiawan, 2022; Chang & Chen, 2020) and is an investment due to the crucial role organisations play in fostering long-term, sustainable innovation (Kozbelt et al., 2010). Ahlin et al. (2014) explain that creativity is a sufficient ability needed in entrepreneurship, considering that many obstacles occur when someone starts or becomes an entrepreneur.

Although numerous researchers explain the many disagreements and ambiguities around the notion of creativity, there are some basic concepts of creativity that are identical. Creativity is the process of changing current things into unique products. These tangible and intangible goods must be original to the creator and must meet the inventor's objective requirements and values (Pramanik, 2019). Amabile (2012) claims that creativity is a set of concepts that can be applied to any subject, and she also claims that understanding what creativity is requires answering two questions. These are the following questions: (a) how does creative performance vary from conventional work? (b) what are the best conditions for creative performance? Amabile (2018) defines creativity as the creation of something that was previously inaccessible in the context. According to Hon and Lui (2016), a creative person has the ability to solve problems, produce new products, or offer fresh questions in a domain in unconventional ways that are later accepted by at least one cultural group. As a result, the concept of 'creativity' covers invention, synthesis, and adaptation. However, there are a variety of other perspectives on creativity, including the 'trait viewpoint,' the'managerial perspective,' and the 'entrepreneurial perspective' (Chassagnon et al., 2016).

Entrepreneurship is critical for innovation and job creation. It is also regarded to be an effective method for addressing the problem of employment vacancy shortage. Entrepreneurship research, particularly entrepreneurial intention, is a beneficial trend. Desire or intention is a direct predictor of an individual's behaviour (Ajzen, 1991). As a result, entrepreneurial intent and entrepreneurial behavior are closely intertwined. Because entrepreneurial behavior is a planned behavior (Krueger et al., 2000), intention can take precedence when forecasting entrepreneurial activity (Zampetakis et al., 2009).

Scholars have become increasingly interested in numerous aspects that attempt to explain entrepreneurial passion or purpose. The study of the factors that influence entrepreneurial purpose is still important, especially in view of the socioeconomic benefits that are frequently linked with entrepreneurial activity, as detailed further below. According to Linan (2004), entrepreneurial intention is a crucial indicator of one's efforts in achieving entrepreneurial success. Personal qualities, as well as many psychological/cognitive aspects associated to the formation of entrepreneurial intention/desire and the entrepreneurial process itself (Ferreira et al., 2012; Padilla-Melendez et al.,

2014), have been shown to have an impact on entrepreneurial success. The development of an entrepreneur is linked to personal attributes as well as a number of psychological/cognitive elements.

The population of undergraduate (Bachelor) students at the Faculty of Teacher Training and Education will be tested using the research paradigm provided in this study. Students are potential aspiring academic entrepreneurial and natural media for integrating effective knowledge in entrepreneurial practice, as evidenced by the previous literature review (Bienkowska et al., 2016; Boardman & Ponomariov 2009). Entrepreneurship is one of the types of ability transfer processes (Turker & Solmez, 2009; Zimmerer, 2012).

A researcher, in particular, analyzes the creativity model with entrepreneurial aim and includes a control variable to examine the demographic variations between students majoring in social, language, and science. The perceptions and differences in perceptions of the three majors in the Faculty of Teacher Training and Education are examined using this control variable. By developing and evaluating a conceptual model built by prior research, the elements of entrepreneurial creativity, namely individual creativity (IC), creativity in the university, and creativity in the home, have a partial and simultaneous impact on students' entrepreneurial purpose (Zampetakis & Moustakis, 2006). The purpose of this study is to look into some of the factors that influence entrepreneurial intent among students at the Faculty of Teacher Training and Education.

2. Methodology

2.1. Participants and Procedures

In the survey design of quantitative research method, there are several stages to be carried out. Stage (1) involves planning for the necessary research to obtain research questions and research objectives based on the research problems. This is followed by a comprehensive review of the literature and relevant theories from reputable scientific articles. Stage (2) is the literature review that helps researchers define and analyse theory. Stage (3) is adaptation and construction of survey instruments. At this stage, the instruments have been defined as described. Furthermore, content validation will be carried out. In stage (4), a preliminary study will be carried out to test the reliability/validity of the survey and to refine the instrument.

Hypothesis testing was carried out to study more deeply into the hypothesised variable relationship and to answer the research questions. The data collected in this study using a questionnaire were to answer questions of entrepreneurial creativity and entrepreneurial intention. Questionnaire instrument was chosen as a research instrument because it is widely available, efficient, short time and easy to manage (McMillan, 2012; McMillan & Schumacher, 2006). Thus, in this study, a modified set of questionnaires from previous studies was used in data collection, both offline and online, directly from respondents. The research will be carried out at Jambi University. The researcher chose the location at the Faculty of Teacher Training and Education in Jambi University and selected students who received the Bidikmisi scholarship in the last academic year of 'Semester 6'.

2.2. Sample and data Collection

The population of this study was 1,035 students of the Faculty of Teacher Training and Education in Jambi University. The researcher used stratified sampling in the quantitative phase. To obtain the expected amount of data, the researcher used a questionnaire instrument. Data collection techniques in this study are offline and online by using Google Form. Students who were willing to become participants were asked to sign the inform consent form letter to be able to participate in this research. After that, the researcher gave a questionnaire that was made in two parts. The first part is

about demographic personal data information (such as semester, sex, major, learning style and Internet usage time).

The questionnaire used in this study was in the form of a closed questionnaire (closed-ended) by providing answer options. The questions for each construct of the proposed variables are from instruments that have been previously validated. All quantitative questionnaire items are graded on a seven-point Likert scale, with strongly disagree (1), disagree (2), slightly disagree (3), neutral (4), slightly agree (5), agree (6), and strongly agree (7) being the most common (7). Closed replies will, however, be changed to the form of the questions asked for some variable constructs.

2.3. Analysing of data

The path analysis test with structural equation modelling (SEM) was the data analysis method applied. SEM is a complex analytical technique for determining the relationship between conceptions by examining a sequence of assumed causal relationships (Alma, 2011). This method, which is based on confirmatory factor analysis, is one of the most widely used for evaluating hypotheses in the context of research (Alvarez & Barney, 2007; Chin & Marcolin, 1995). Partial least squares (PLS) is a component-based SEM method that has been utilised extensively in recent studies to examine the relationship between independent and dependent variables (Ardichvili et al., 2003; Blunch, 2012; Coakes et al., 2006). PLS modelling, according to Cohen et al. (2002), is a significant solution for researchers who are concerned with human attitudes/behaviour and intention, among other things. During this time, PLS-SEM is the most appropriate approach for theory development and hypothesis testing. As a result, PLS-SEM is employed to evaluate the hypotheses that have been created in this study. In this research, the measurement model and the assessment of the structural model are carried out in two stages in SEM. The PLS algorithm is used to measure the data quality criterion and PLS bootstrapping is used to measure the final model.

Bootstrapping is a non-parametric approach for statistical significance testing of PLS-SEM data such path coefficients, Cronbach's alpha, HTMT, and R2 values. PLS-SEM is a non-parametric method that does not require data to follow a predefined distribution. However, parametric significance testing (such as that employed in regression analysis) cannot be utilized to determine the significance of coefficients like outer weight, outer loading, or path coefficient. To examine the significance of various results, such as path coefficients, Cronbach's alpha, HTMT, and R2 values, PLS-SEM use the non-parametric bootstrap approach (Creswell & Creswell, 2017; Cropley, 2001).

3. Findings/ Results

3.1. Descriptive method

This research aims to examine a structural model that tests the effects of students' entrepreneurial creativity variable consisting of three dimensions, namely, IC, creativity in university (CU) and creativity in family (CF) under the entrepreneurial intention (EI) variable. The student creativity variable is adapted from a questionnaire developed by Zampetakis and Moustakis (2006). The EI variable is adapted from an instrument developed by Linan and Chen (2009). Through an adaptation process to the Indonesian context and the context of students, 27 question items are obtained in the research questionnaire distributed online and offline to 1,053 students of the Faculty of Teacher Training and Education selected through the simple random sampling technique. Descriptive statistics is analysed to determine separate items on the questionnaire. Based on the number of respondents (n = 1,053), the maximum score for the questionnaire is 5 and the minimum score is 1. Statistical results are calculated with mean, standard deviation (SD) and skewness/kurtosis as part of the item's reliability and normal distribution (see Table 1). The highest score for creativity variable (CRV) is item 'CRV.OC.3', 'I can easily think lots of and various ideas', with mean = 4.316 and SD = 0.78, and the lowest score of creativity variable is item 'CRV.FC.8', 'My family members always think of new ideas to

make their life easier', with mean = 3.695 and SD = 0.734. Item 'EI.PBC.11', 'I understand the practical details needed to establish a business,' had the highest EI score, with mean = 4.048 and SD = 0.733. Meanwhile, item 'EI.PEI.17', 'I have seriously considered starting a business,' has the lowest EI score, with mean = 3.433 and SD = 0.792. The researcher also decides and performs a multivariate normality test of the study data in Table 1 to confirm that the data is normally distributed. The skewness and kurtosis values were employed statistically by the researcher. The skewness and kurtosis values must be between 2 and 2 percent (Garson, 2012). All skewness and kurtosis values are within the normal distribution range, according to the findings of the multivariate normality test.

Table 1. Descriptive research variables

No	Indicators (Items)	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
1	CRV.OC.1	3.776	4	1	5	0.78	0.117	-0.33
2	CRV.OC.2	3.824	4	1	5	0.751	0.294	-0.385
3	CRV.OC.3	4.316	4	1	5	0.679	0.208	-0.653
4	CRV.UEPC.4	4.314	4	1	5	0.674	0.245	-0.643
5	CRV.UEPC.5	3.698	4	1	5	0.743	-0.269	0.065
6	CRV.UEPC.6	3.915	4	1	5	0.721	0.273	-0.344
7	CRV.FC.7	3.733	4	1	5	0.75	-0.179	-0.075
8	CRV.FC.8	3.695	4	1	5	0.734	-0.282	0.042
9	CRV.FC.9	4.172	4	1	5	0.658	-0.123	-0.319
10	EI.PA.1	3.961	4	1	5	0.694	0.137	-0.272
11	EI.PA.2	4.11	4	1	5	0.679	0.363	-0.413
12	EI.PA.3	3.877	4	1	5	0.701	-0.129	-0.124
13	EI.PA.4	3.841	4	1	5	0.694	-0.084	-0.102
14	EI.PA.5	3.998	4	1	5	0.769	0.394	-0.525
15	EI.SN.6	3.857	4	1	5	0.739	-0.522	-0.048
16	EI.SN.7	3.995	4	1	5	0.71	-0.346	-0.2
17	EI.SN.8	4.23	4	1	5	0.666	-0.162	-0.414
18	EI.PBC.9	4.033	4	1	5	0.717	-0.462	-0.219
19	EI.PBC.10	3.879	4	1	5	0.788	-0.738	-0.075
20	EI.PBC.11	4.048	4	1	5	0.733	-0.626	-0.22
21	EI.PBC.12	3.969	4	1	5	0.717	-0.686	-0.062
22	EI.PBC.13	3.858	4	1	5	0.724	-0.754	0.101
23	EI.PEI.14	3.734	4	1	5	0.735	-0.205	-0.067
24	EI.PEI.15	3.941	4	1	5	0.677	-0.084	-0.167
25	EI.PEI.16	3.45	3	1	5	0.781	-0.208	0.1
26	EI.PEI.17	3.433	3	1	5	0.792	-0.177	0.135
27	EI.PEI.18	3.669	4	1	5	0.738	-0.486	0.202

3.2. Testing of construct validity and reliability (PLS-Algorithm)

In order to get the output statistical data needed to analyze the validity of variable constructs, it is important to evaluate the loading factor assessment (as indicated in Figure 1), where each indication

must be more than 0.708. (as shown in Table 2). Cronbach's alpha (CA) and composite reliability (CR) are used to examine the instrument's reliability, and the convergent and discriminant validity tests, which are based on the PLS-SEM construct validity evaluation approach, are used to analyze the instrument's validity. To measure the indicator's dependability, the loading factor must be more than 0.708. The loading factor of an item reflects the degree to which it is consistent with the construct being assessed. In terms of evaluating the construct's performance, a high loading factor on the construct suggests that the associated items have a high degree of similarity (Hair et al., 2017).

Throughout this study, the PLS algorithm is used in conjunction with the Smart PLS software to calculate the loading factor for all items. According to Table 2, all factor loadings are more than 0.7, with the exception of the items (codes) EI.PA.1, EI.PA.2, EI.PA.3, EI.PA.4, EI.PA.5, EI.PEI.16, EI.PEI.17, EI.PEI.18 and EI.SN.6 (nine indicators), that have been removed due to factor loading (EI = 0.708). For this reason, the nine items in question are removed from the measurement model, and the PLS algorithm test is reprocessed so that all item values range from 0.7009 to 0.875 (all values are greater than 0.708). As a result, all goods have reached the stage where they can be relied upon. CA (Falat, 2000) and CR (Feldman & Bolino, 2000) are used to calculate construct dependability, with values greater than 0.7 acceptable, and while the average variance extracted (AVE) value must be equal to or larger than 0.500, the CA value must be equal to or greater than 0.500. (Hair et al., 2006, 2017).

All Cronbach's alpha and CR values are better than 0.7, and AVE is greater than the permissible value of >0.5, suggesting that the questionnaire items meet and ensure the instrument's reliability. As a result, the questionnaire items satisfy and ensure the instrument's dependability (indicators are consistent in measuring the construct). Table 2 shows that the item dependability value (consistency) has a Cronbach alpha value of 0.700 to 0.924, which is considered to be in the 'excellent' category and consistent in delivering an assessment by the respondent who analyzes the items

Table 2. Results of construct reliability test based on convergent validity

Construct Variables	Code of Question Items	Factor Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Individual	CRV.OC.1	0.831	0.768	0.866	0.684
Creativity (IC)	CRV.OC.2	0.875			
	CRV.OC.3	0.772			
Creativity in	CRV.UEPC.4	0.761	0.700	0.827	0.614
University (CU)	CRV.UEPC.5	0.777			
	CRV.UEPC.6	0.812			
Creativity in	CRV.FC.7	0.839	0.748	0.857	0.667
Family (CF)	CRV.FC.8	0.861			
	CRV.FC.9	0.746			
Entrepreneurial	EI.PBC.10	0.824	0.924	0.937	0.622
Intention (EI)	EI.PBC.11	0.787			
	EI.PBC.12	0.792			
	EI.PBC.13	0.785			
	EI.PBC.9	0.816			
	EI.PEI.14	0.709			
	EI.PEI.15	0.806			
	EI.SN.7	0.809			
	EI.SN.8	0.781			

Indicator is deleted because loading factor <0.7, namely EI.PA.1; EI.PA.2; EI.PA.3; EI.PA.4; EI.PA.5; EI.PEI.16; EI.PEI.17; EI.PEI.18; EI.SN.6.

Table 3 shows the findings of investigating construct reliability based on discriminant validity. The AVE value, which represents the indicator variation in the construct, can be used to indicate the construct reliability. This is based on Fayolle and Linan (2014) study, which determined that the AVE

value must be less than 0.5 to be considered discriminant validity. The results in Table 3 demonstrate that all AVE values are more than 0.5. The square root value of the AVE (shown in bold) demonstrates an excellent discriminant validity value and is acceptable because the AVE square root values of all construct variables are greater than the correlation values (correlation) between the other construct values (see Additional Information).

Table 3. Discriminant validity (Fornell-Larcker criterion)

, ,	•	
Squared Root of AVI	E's and Correlation	
o		

		Squared Root of AVE's and Correlation							
Construct Variables		Creativity In Family	Creativity In University	Entrepreneurial Intention	Individual Creativity	AVE	AVE		
Creativity i	in	0.817				0.667	0.817		
Family									
Creativity i	in	0.682	0.784			0.614	0.784		
University									
Entrepreneuria	I	0.625	0.663	0.789		0.622	0.789		
Intention									
Individual		0.561	0.729	0.565	0.827	0.684	0.827		
Creativity									

3.3. The square root of AVE is shown in bold numbers

In order for the measurement of all associated items to achieve the criteria value, the constructs generated must have a greater value than cross loading of other columns and rows. It is, therefore, possible to establish whether or not discriminant validity is reliable if these requirements are met. After all is said and done, the construct data collected in this investigation are credible and valid. The results of the tests shown in Table 4 demonstrate that the criterion for cross-loading values have a greater value than the criteria for other columns or rows. The concept data that is generated can therefore meet the criteria for discriminant validity.

Collinearity statistics [variance inflation factor (VIF) also demonstrates the importance of multicollinearity, which occurs when the predictor model relates to the response model and provides response redundancy. The VIF is used to determine multicollinearity. If the VIF value is greater than 4.0, then there is a problem with multicollinearity in the data stream (Hair et al., 2017). According to this study, there is no VIF value greater than 4.0. Only the value with the highest score is informed by the score displayed in the VIF column (3.156). Having received this score indicates that multicollinearity is not a concern in this study.

Table 4. Discriminant validity (Factor Loading with Cross Loading)

Indicators Creativity in Family		ators		Individual Creativity	Collinearity Statistics (VIF)	
CRV.FC.7	0.839	0.552	0.489	0.414	1.982	
CRV.FC.8	0.861	0.564	0.505	0.449	2.064	
CRV.FC.9	0.746	0.549	0.530	0.503	1.234	
CRV.OC.1	0.460	0.540	0.413	0.831	1.921	
CRV.OC.2	0.486	0.592	0.501	0.875	2.026	
CRV.OC.3	0.443	0.670	0.479	0.772	1.316	
CRV.UEPC.4	0.440	0.761	0.516	0.685	1.272	
CRV.UEPC.5	0.533	0.777	0.469	0.537	1.392	
CRV.UEPC.6	0.623	0.812	0.566	0.499	1.370	
EI.PBC.10	0.501	0.547	0.824	0.442	2.605	
EI.PBC.11	0.475	0.494	0.787	0.440	2.538	
EI.PBC.12	0.489	0.483	0.792	0.426	3.156	
EI.PBC.13	0.461	0.468	0.785	0.395	3.017	
EI.PBC.9	0.487	0.552	0.816	0.454	2.627	
EI.PEI.14	0.497	0.485	0.691	0.425	1.697	
EI.PEI.15	0.524	0.559	0.806	0.484	2.307	
EI.SN.7	0.507	0.547	0.809	0.454	2.507	
EI.SN.8	0.489	0.556	0.781	0.479	2.270	

A satisfactory degree of discriminant validity is also achieved, as seen by the low heterotrait-monotrait ratio (HTMT) value (0.90), as indicated by Hair et al. (2017), in addition to an acceptable level of discriminant validity. Each and every HTMT reading is less than 0.9. HTMT has the greatest possible value (Table 5). Additionally, the confidence interval for HTMT indicates that the resulting confidence interval is one following the bootstrapping process. HTMT indicates that all HTMT values are significantly different from the first HTMT value.

Table 5. Heterotrait-monotrait ratio (HTMT)

	Creativity in Family	Creativity in University	Entrepreneurial Intentions	Individual Creativity
Creativity in Family				
Creativity in University	0.845			
Entrepreneurial Intentions	0.749	0.826		
Individual Creativity	0.736	0.803	0.665	

3.4. Measurement of structural model with PLS Bootstrapping

About 5,000 re-samplings of each construct are used in this study's bootstrapping stage to determine the significant level of the path of each construct. The degree of significance is reported when the bootstrapping stage is completed. In bootstrapping, a subset of observations from the original data set are selected at random and used to construct a new subsample (with replacement). After that, the subsample is used to estimate the PLS path model. This procedure is repeated until a significant number of randomly selected subsamples has been generated, at which point the procedure is terminated (usually around 5,000). The standard error for PLS-SEM results is calculated by estimating the bootstrap subsample and averaging the results. In order to determine the significance of the PLS-SEM results, t-values, p-values and confidence intervals are calculated based on this information.

Figure 1 and Table 6 inform about path value (β) and significance (p-value). The results show that the three proposed hypotheses have significant and supported effects (see Table 6). Hypothesis 1: Creativity in family affects entrepreneurial intention. The result of the statistical t-value is $10.000 \ge 1.96$, which concludes that there is an influence of creativity in family on entrepreneurial intention.

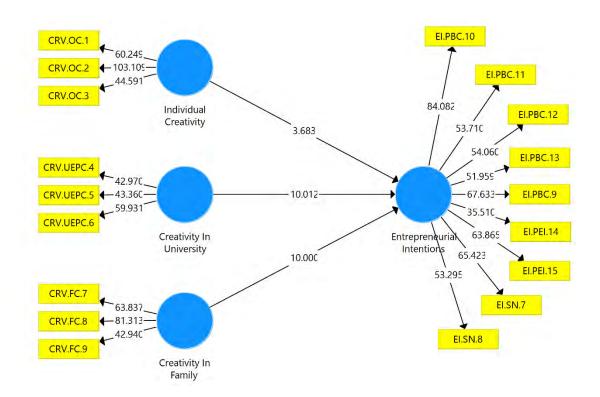


Figure 1. Evaluated path coefficient through bootstrap

Hypothesis 2: Creativity in university affects entrepreneurial intentions. The statistical t-value yields the result of $10.012 \ge 1.96$, which concludes that there is an effect of creativity in university on entrepreneurial intention. Hypothesis 3: Individual creativity affects entrepreneurial intention. The statistical result of t-value is $3.683 \ge 1.96$, which concludes that there is a significant effect of IC on entrepreneurial intentions. As a result, the end of this study shows that student creativity at the

university has a very large level of significance in influencing students' own entrepreneurial intention. Besides, it is followed by creativity in the family and the ability to be creative in the individual.

Table 6	Path	coefficients and effect size	
Table 0.	rauı	COETHCIETIES ATTO ETTECT SIZE	

Hipotesis	Path	β	Sample Mean (M)	S. D	T Statistics	P Values	Decision
H1	Creativity in Family -> Entrepreneurial Intentions	0.307	0.308	0.031	10.000	0.000	Supported
H2	Creativity in University -> Entrepreneurial Intentions	0.357	0.359	0.036	10.012	0.000	Supported
Н3	Individual Creativity -> Entrepreneurial Intentions	0.132	0.131	0.036	3.683	0.000	Supported

4. Discussion

Entrepreneurship is a creative effort that is very important because of its impact on job vacancy, economic efficiency and innovation (Fishbein & Azjen, 1977). However, it is important that there are surprisingly only a few studies focusing on the determinants that impact student intention in entrepreneurship.

This research proposes seven hypotheses that will empirically analyse how the intention of students receiving Bidikmisi scholarship towards entrepreneurial activities/decisions is influenced by socio-psychological construction, namely entrepreneurial creativity. A person's entrepreneurial intention can be seen from the extent of the attitude he/she shows in responding to entrepreneurship (Kline, 2005; Setiawan & Asrowi, 2018; Setiawan et al., 2020). This research contributes to one of the most important problems in entrepreneurship research, especially for students, which is related to the question of why some people become entrepreneurs while others do not. This research is very useful for students (Krueger & Brazeal, 1994). Furthermore, this research also supports a strategic adaptation perspective (Al Edwan et al., 2021; Lee et al., 2004) which explains that a person decides whether they want to start business and how they become entrepreneurs.

Based on the results of the analysis using SEM, the findings of this study empirically show that the factors that become the construct of research, namely, EC consisting of the dimensions of IC, creativity in university and creativity in the family, show a significant influence on entrepreneurial intention (EI). As a result, this study shows that student creativity at the university has a very large level of significance in influencing students' own entrepreneurial intentions. Moreover, it is followed by creativity in the family and IC.

EC in this study is an assessment of students' perceptions upon their creative behaviour and activities. The research findings explain that creativity (C) has a significant effect on EI. Empirically, the findings of this study show a model that the dimension with the greatest effect and impact of the construct of creativity is the dimension of university environment that promotes creativity or a university environment that supports the development of creativity. According to Louw et al. (2003), developing creativity is considered to be one of the most important goals of training, including entrepreneurship, and the findings presented here indicate that university programmes that emphasise psychological aspects, specifically the attitudes of college students, may be a possible way

to strengthen creativity. Individual creativity is considered the main dimension of an individual in entrepreneurship (Lumpkin et al., 2003). Other studies also support this research, which states that entrepreneurship discusses the main role of IC in innovation as a driver of economic activity (Linan & Fayolle, 2015; Liu et al., 2020). Creativity and innovation are the notions of creating something new. Meyers et al. (2016) explain that entrepreneurial creativity is the centre of the entrepreneurial process. In today's knowledge economy, which is built on the production and sharing of knowledge and information, the value of creativity and innovation is emphasized (Olufunso, 2010). Furthermore, entrepreneurship, which is realized in the act of beginning and maintaining a firm, is seen inextricably linked to creativity and innovation. According to Shalley and Perry (2008), "creativity is definitely a vital aspect of entrepreneurial abilities required to launch a business." Entrepreneurs who have recently established a firm are a key source of innovation (Shapero, 1984), not only in terms of the products and services they provide, but also in terms of the technology and processes they employ (Sternberg, 2012). As a result, new entrepreneurs, including students, can be considered the primary drivers of entrepreneurial creativity and innovation.

EI, also known as a person's intention to engage in entrepreneurial activities, can be influenced by a variety of factors, including requirements, values, aspirations, habits and religious beliefs (Bird, 1988; Lee & Wong, 2004). The findings of the El concept demonstrate that of the four aspects describing El, namely, personal attitude (PA), subjective norm (SN), perceived behavioural control (PBC) and social support; PA is more important than PBC and perceived entrepreneurial intention (PEI). Empirically, the dimension of perceived behavioural control or perception of controlling behaviour has the greatest effect or provides the greatest contribution in explaining a person's intention in entrepreneurship. The findings of this study are specifically supported by Ajzen (1991), who emphasises that the construct of cognitive variables that influence intention is called the factor that motivates a person. A more favourable factor will increase a person's intention (Linan, 2004). Obviously, the situational factor also influences entrepreneurial intention (Strzalecki, 2000; Tabachnick et al., 2007). The external factors influence a person's attitude towards entrepreneurship. Lee and Wong (2004) explain that variable constructs, such as time constraints, task difficulties and the influence of others in a supportive social environment, can be examples of a person's situational factors in entrepreneurial intention. An individual's aim, according to Krueger (2003), is to seek and uncover new business prospects, and 'it becomes obvious that what we term entrepreneurial activity is intentionally planned behavior.' (Krueger and colleagues, 2000). The finding of this study supports the research (Tomarken & Waller, 2005) that empirically shows that successful intention predicts behaviour and successful behaviour predicts intention.

4.1. Weaknesses and suggestions for further researches

This study refers to the standardised models and scales validated from various literatures. The analysis is carried out using SEM with the Smart PLS-3 programme, which offers a powerful analysis tool. The results of the analysis are satisfactory. Although all the variables tested have a significant effect on entrepreneurial intentions, entrepreneurial attitude has the lowest effect of all the direct effects tested. The findings of this study provide several theoretical and practical implications that are important for entrepreneurship development, especially in increasing student intention to carry out entrepreneurship through creativity. This research is the first research reports the form of university student entrepreneurial intention model through complex structural equation. It certainly provides new input and recommendations for stakeholders and researchers in all study programmes at university in an effort to develop student entrepreneurship through exploring attitudes, competencies and creativity. Treffinger et al.'s (2000) perspective of the relationship between prior knowledge that

shapes creativity and the discovery of entrepreneurial chances is also supported by empirical evidence in this study. Entrepreneurial intention is a process that occurs intuitively for each individual (Wang & Wong, 2004). Individuals, on the other hand, require the appropriate competencies in order to fully follow their entrepreneurial ambitions. This is why we have included the competency variable in the model. The inclusion of this variable in the model is one of the study's major advantages.

5. Conclusion

There are three major limitations to this study. First and foremost, this study only examines EI in a subset of university students at Faculty of Teacher Training and Education, which may restrict the generalisability of our findings to other groups of individuals. Second, this study does not follow-up on the benefits that respondents had as a result of their entrepreneurial education after completing the survey. Third, the results of this study were not analysed at a broader level; for example, pupils from across the province of Jambi were not included. Researchers urge that future studies be based on greater data management in order to establish whether or not students have an entrepreneurial intention based on their attitudes, competences and creative thinking. Other categories at were not included in this study, including students who are involved in extracurricular activities, students who are religious and others who attend the university.

Recommendations

In an effort to develop entrepreneurship programmes among students, should include a course on how to create a business because it increases students' attitudes to become entrepreneurs. It provides students with practical information as they learn on the job and with theoretical understanding about business creation through frequent trainings or courses. Entrepreneurial-oriented teaching strategies, such as business creation training, should also be included to encourage students' entrepreneurial ambitions.

Acknowledgements

The author expresses gratitude and appreciates all the stakeholders of Jambi Province, Jambi University, and all related parties who took part in this research, not only financially but also for the permission to carry out this field study in this pandemic era.

References

- Ahlin, B., Drnovsek, M., & Hisrich, R. D. (2014). Entrepreneurs' creativity and firm innovation: the moderating role of entrepreneurial self-efficacy. *Small Business Economics*, 43(1), 101–117. https://doi.org/10.1007/s11187-013-9531-7
- Akhir, D.J. (2019). *Syarat Jadi Negara Maju: Jumlah Pengusaha 14% dari Rasio Penduduk*. Kolom Opini. https://economy.okezone.com.
- Al Edwan, Z. S., Abusadah, D. K., &. Daoud, A. I. (2021). The role of social studies teachers in enhancing consumption education in Jordan during COVID-19 pandemic. *Cypriot Journal of Educational Science*, *16*(5), 2137–2151. https://doi.org/10.18844/cjes.v16i5.6231
- Alma, B. (2011). Kewirausahaan. Alfabeta.

- Alvarez, S. A., & Barney, J. B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(2), 11–26. https://doi.org/10.1002/sej.4
- Amabile, T. M. (2012). Componential theory of creativity. *Harvard Business School, 12*(96), 1–10.
- Amabile, T. M. (2018). *Creativity in context: Update to the social psychology of creativity*. Routledge. https://doi.org/10.4324/9780429501234
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing, 18*(1), 105–123. https://doi.org/10.1016/S0883-9026(01)00068-4
- Arifin, Z., & Setiawan, B. (2022). Exploring students' literacy of information technology in higher education: Platforms and usage. *Cypriot Journal of Educational Sciences*, *17*(3), 859–872. https://doi.org/10.18844/cjes.v17i3.6877
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T
- Baumol, W. J., & Strom, R. J. (2007). Entrepreneurship and economic growth. *Strategic Entrepreneurship Journal*, 1(3), 233–237. https://doi.org/10.1002/sej.26
- Blunch, N. (2012). *Introduction to structural equation modeling using IBM SPSS statistics and AMOS*. Sage Publications. https://doi.org/10.4135/9781526402257
- Bienkowska, D., Klofsten, M., & Rasmussen, E. (2016). PhD students in the entrepreneurial university-perceived support for academic entrepreneurship. *European Journal of Education*, *51*(1), 56–72. https://doi.org/10.1111/ejed.12160
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13(3), 442–453. https://doi.org/10.5465/amr.1988.4306970
- Boardman, P. C., & Ponomariov, B. L. (2009). University researchers working with private companies. *Technovation*, *29*(2), 142–153. https://doi.org/10.1016/j.technovation.2008.03.008
- Chang, Y. Y., & Chen, M. H. (2020). Creative entrepreneurs' creativity, opportunity recognition, and career success: Is resource availability a double-edged sword? *European Management Journal*, 38(5), 750–762. https://doi.org/10.1142/S136391961640003X
- Chassagnon, V., Haned, N., & Le Bas, C. (2016). The determinants of organisational creativity methods: An empirical study based on a French survey. *International Journal of Innovation Management, 20*(4), 1640003. https://doi.org/10.1142/S136391961640003X
- Chin, W. W., & Marcolin, B. (1995). The holistic approach to construct validation in IS research: Examples of the interplay between theory and measurement. In D. Compeau (ed.), *ASAC-23 Conference, IS Proceedings* (vol. 6(4), pp. 33–43). Kogan Page.
- Coakes, S. J., Steed, L. G., & Dzidic, P. (2006). SPSS version 13.0 for Windows: Analysis without Anguish. John Wiley & Sons Australia.
- Cohen, L., Manion, L., & Morrison, K. (2002). *Research methods in education*. Routledge. https://doi.org/10.4324/9780203224342
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches.* Sage Publications.

- Cropley, A. J. (2001). *Creativity in education & learning: A guide for teachers and educators*. Kogan Page.
- Falat, M. (2000). Creativity as a predictor of "good" coping? Studia Psychologica, 42, 317–324.
- Feldman, D. C., & Bolino, M. C. (2000). Career patterns of the self-employed: Career motivations and career outcomes. *Journal of Small Business Management*, 38(3), 53–67.
- Fayolle, A., & Linan, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research*, *67*(5), 663–666. https://doi.org/10.1016/j.jbusres.2013.11.024
- Florida, R. (2019). The rise of the creative class. Basic books.
- Ferreira, J. J., Raposo, M. L., Gouveia Rodrigues, R., Dinis, A., & do Paco, A. (2012). A model of entrepreneurial intention: An application of the psychological and behavioral approaches. *Journal of Small Business and Enterprise Development, 19*(3), 424–440. https://doi.org/10.1108/14626001211250144
- Fishbein, M., & Ajzen, I. (1977). *Belief, attitude, intention, and behavior: An introduction to theory and research.* Routledge.
- Garson, G. D. (2012). Testing statistical assumptions. Statistical Associates Publishing.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.), *Pearson new international edition*. Pearson Higher Ed.
- Hair, J. F., Hult, G. T. M., & Ringle, C. M. (2017). Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, 45(5): 616–632. https://doi.org/10.1007/s11747-017-0517-x
- Hon, A. H., & Lui, S. S. (2016). Employee creativity and innovation in organizations. *International Journal of Contemporary Hospitality Management*. https://doi.org/10.1108/IJCHM-09-2014-0454
- Kline, R. B. (2005). *Principles and practice of structural equation modeling*. Guilford.
- Kozbelt, A., Beghetto, R. A., & Runco, M. A. (2010). Theories of creativity. *The Cambridge handbook of creativity*, 2, 20-47. https://doi.org/10.1017/CBO9780511763205.004
- Krueger, N. F. (2003). *The cognitive psychology of entrepreneurship. In* Handbook of entrepreneurship research (pp. 105–140). Springer. https://doi.org/10.1007/0-387-24519-7 6
- Krueger Jr, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5–6), 411–432. https://doi.org/10.1016/S0883-9026(98)00033-0
- Krueger, N. F. J., & Brazeal, D.H. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice,* 19(4), 91–104. https://doi.org/10.1177/104225879401800307
- Lee, S. Y., Florida, R., & Acs, Z. J. (2004). Creativity and entrepreneurship: A regional analysis of new firm formation. *Regional Studies, 38*, 879–891. https://doi.org/10.1080/0034340042000280910
- Lee, S. H., & Wong, P. K. (2004). An exploratory study of technopreneurial intentions: A career anchor perspective. *Journal of Business Venturing*, 19, 7–28. https://doi.org/10.1016/S0883-9026(02)00112-X

- Louw, L., van Eeden, S. M., Bosch, J. K., & Venter, D. J. L. (2003). Entrepreneurial traits of undergraduate students at selected South African tertiary institutions. International *Journal of Entrepreneurial Behaviour & Research*, *9*, 5–26. https://doi.org/10.1108/13552550310461027
- Lumpkin, G. T., Hills, G. E., & Shrader, R. C. (2003). Opportunity recognition. In H. P. Welsch (Ed.), Entrepreneurship: The way ahead (pp. 73–90). Routledge.
- Linan, F. (2004). Intention-based models of entrepreneurship education. *Piccolla Impresa/Small Business*, *3*(1), 11–35.
- Linan, F., & Chen, Y. W. (2009). Development and cross–cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, *33*(3), 593–617. https://doi.org/10.1111/j.1540-6520.2009.00318.x
- Linan, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, *11*(4), 907–933. https://doi.org/10.1007/s11365-015-0356-5
- Liu, H. C., Liang, C., Chang, C. C., Ip, C. Y., & Liang, C. T. (2020). Optimizing personality traits and entrepreneurial creativity to boost the precursors of social entrepreneurial intentions: Five studies in Taiwan. *Journal of Social Service Research*, 1–23. https://doi.org/10.1080/01488376.2019.1708840
- McMillan, J. H. (2012). *Educational research: Fundamentals for the consumer*. HarperCollins College Publishers.
- McMillan, J. H., & Schumacher, S. (2006). *Research in education: Evidence based inquiry* (6th ed.). Allyn and Bacon.
- Meyers, L. S., Gamst, G., & Guarino, A. J. (2016). *Applied multivariate research: Design and interpretation*. Sage Publications.
- Olufunso, O. F. (2010). Graduate entrepreneurial intentions in south Africa: Motivation and obstacles. *International Journal of Business and Management, 5*(9), 87–98. https://doi.org/10.5539/ijbm.v5n9p87
- Padilla-Melendez, A., Fernandez-Gamez, M. A., & Molina-Gomez, J. (2014). Feeling the risks: effects of the development of emotional competences with outdoor training on the entrepreneurial intent of university students. *International Entrepreneurship and Management Journal, 10*(4), 861–884. https://doi.org/10.1007/s11365-014-0310-y
- Pramanik, A. (2019). 'Problems' in the concept of creativity. *Research Journal of Humanities and Social Sciences*, 10(2), 584–590. https://doi.org/10.5958/2321-5828.2019.00095.0
- Setiawan, B., & Asrowi. (2018). *English grammar on 2013 curriculum: The development of game based learning multimedia*. MATEC Web of Conferences 205, 00011. https://doi.org/10.1051/matecconf/201820500011
- Setiawan, B., Sunardi., Gunarhadi., & Asrowi. (2020). Meeting teachers' and learners' perceptions on mobile learning: a case of Indonesian vocational high school in Surakarta city. *Universal Journal of Educational Research*, 8(3D), 90–96. https://doi.org/10.13189/ujer.2020.081713

- Shalley, C. E., & Perry-Smith, J. E. (2008). The emergence of team creative cognition: The role of diverse outsideties, socio-cognitive network centrality, and team evolution. *Strategic Entrepreneurship Journal*, 2(1), 23–41. https://doi.org/10.1002/sej.40
- Shapero, A. (1984). The entrepreneurial event. In C. A. Kent (ed.), *Environment for Entrepreneurship* (pp. 21–40), D.C. Heath.
- Sternberg, R. J. (2012). The assessment of creativity: An investment-based approach. *Creativity research journal*, 24(1), 3-12. https://doi.org/10.1080/10400419.2012.652925
- Strzalecki, A. (2000). Creativity in design. General model and its verification. Technological forecasting and Social Change, *64*, 241–260. https://doi.org/10.1016/S0040-1625(00)00077-9
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). Using multivariate statistics (vol. 5). Pearson.
- Tomarken, A. J., & Waller, N. G. (2005). Structural equation modeling: Strengths, limitations, and misconceptions. *Annual Review of Clinical Psychology,* 1, 31–65. https://doi.org/10.1146/annurev.clinpsy.1.102803.144239
- Treffinger, D. J., Isaksen, S. G., & Dorval, B. K. (2000). *Creative problem solving: An introduction* (3rd ed.). Prufrock.
- Turker, D., & Sonmez, S. S. (2009). Which factors affect entrepreneurial intention of university students? *Journal of European Industrial Training, 33*(2), 142–159. https://doi.org/10.1108/03090590910939049
- Wang, C. K., & Wong, P. (2004). Entrepreneurial interest of university students in Singapore. *Technovation*, *24*, 163–172. https://doi.org/10.1016/S0166-4972(02)00016-0
- Zampetakis, L. A., & Moustakis, V. (2006). Linking creativity with entrepreneurial intentions: A structural approach. *The International Entrepreneurship and Management Journal*, *2*(3), 413–428. https://doi.org/10.1007/s11365-006-0006-z
- Zampetakis, L. A., Kafetsios, K., Bouranta, N., Dewett, T., & Moustakis, V. S. (2009). On the relationship between emotional intelligence and entrepreneurial attitudes and intentions. *International Journal of Entrepreneurial Behavior & Research*, 15(6), 595–618. https://doi.org/10.1108/13552550910995452
- Zimmerer, K. S. (2012). The indigenous Andean concept of Kawsay, the politics of knowledge and development, and the borderlands of environmental sustainability in Latin America. *PMLA*, 127(3), 600-606. https://doi.org/10.1632/pmla.2012.127.3.600