

The Effectiveness of Entrepreneurship Education in Indonesia: A Triangle Approach

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ABSTRACT

This study aims to analyze the model for measuring the effectiveness of entrepreneurship education carried out in tertiary institutions by taking into account the variables that influence it. The variables identified in this study are Entrepreneurship Learning Effectiveness, Entrepreneurial Barriers, Entrepreneurial Competence, and Entrepreneurial Intentions/Interests. This research is quantitative research with an explanatory survey method. The research design used a survey (descriptive and correlational). The tool used to test the relationship between variables is the Structural Equation Model (SEM). The population of this study was students of the University of Education Indonesia who were still actively studying, totaling 27,082 students. The sample in this study was selected using Nonprobability Sampling. The sampling technique chosen in Nonprobability Sampling is a purposive sampling technique, which is a sampling technique for data sources with certain considerations. The criteria used are UPI Bandung students who are currently or have taken entrepreneurship courses in every faculty at UPI. With the sampling technique using the Solvin formula, a sample of 394 people was obtained spread over several academic units. The results show that with the Triangle approach the effectiveness of entrepreneurship learning in universities in Indonesia is positively influenced by entrepreneurial competencies and entrepreneurial intentions, negatively influenced by entrepreneurial barriers. This finding implies that to increase the effectiveness of entrepreneurship education in higher education, it is necessary to increase entrepreneurial competence and entrepreneurial intention among students. This can be done through entrepreneurship education by the increasing practice where students not only learn theory but directly enter the world of entrepreneurship, so they can be motivated to set up new businesses. In addition, sharing experiences with practitioners also needs to be improved because it can change the mindset of students to become entrepreneurs.

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1. INTRODUCTION

Entrepreneurship is the spirit, attitude, and conduct of a person's capacity to manage a business or activity, which leads to efforts to discover, create, and apply new ways of working, technologies, and goods by boosting efficiency in order to give better service and/or earn profits. The risky process of invention and innovation that produces added value for items that are useful to society [Rahmadani, Suwatno, and Machmud] (2018). Entrepreneurship has been viewed as a significant pillar of economic growth by fostering the creation of new enterprises and jobs. A rise in the rate of entrepreneurship can produce jobs, spur innovation, and boost the productivity of numerous economic sectors (Asimakopulos, G., Hernández, V., & Peña Miguel, J. (2019); Hasan, Muhammad, St Hatidja, R. Abd. Rasyid, Nurjanna, Abdi Sakti Walenta, Juharbi Tahir, and M. Ikhwan Maulana Haeruddin. 2020).

Entrepreneurship can be promoted by entrepreneurship education (Fietze & Boyd, 2017; Saeed, Yousafzai, Yani DeSoriano, & Muffatto, 2015). [Fatoki, O., & Gerba, D. T., 2014; Gerba, D. T., 2012] Entrepreneurial learning is the purposeful effort made by individuals to widen their perspectives on entrepreneurship and nurture entrepreneurial spirit and conduct. [Majdi, M. Z.] Entrepreneurship learning is an educational process that tries to instil an entrepreneurial spirit in pupils in order for them to become creative, innovative, and productive people (2012). Entrepreneurship education seeks to develop an understanding of the process of creating and operating a new firm or business [Harianti, A., Malinda, M., Nur, N., Suwarno, H. L., Margaretha, Y., and Kambuno, D., 2020]. Entrepreneurship education leads to the development of entrepreneurial attitudes, skills, and capacities. (Piperopoulos, P., & Dimov, D. (2015).

The results of the study of several research studies Machmud, A., & Hidayat, Y. M. (2020). Sumawidjaja, R. N., Ahman, E., & Machmud, A. (2019). Machmud, A., & Ahman, E. (2019) show that entrepreneurial intentions among students are actually included in high criteria but are still not able to practice in business. Factors that influence these conditions include self-efficacy, academic support, family environment, and entrepreneurial orientation. The effectiveness of learning is a very important thing in achieving learning objectives. Effective learning is learning that makes it easier for students to learn something useful such as facts, skills, values, concepts, and how to live in harmony with others or the desired learning outcome [Asep Jihad dan Abdul Haris. 2010]. In line with Wragg, Nieveen opined that effective learning is learning that operationally gives results as expected.

The effectiveness of entrepreneurship learning can be measured by three indicators, namely entrepreneurial competence, entrepreneurial barriers, and entrepreneurial intentions. Entrepreneurship learning is considered to increase entrepreneurial competence, reduce entrepreneurial barriers, and can change entrepreneurial intentions [Liu, H., Kulturel-Konak, S., & Konak, A. (2021). The concept of entrepreneurial competence is the ability of an entrepreneur to start and grow a business and successfully identify and combine various resources [Gumusay, A. A., & Bohne, T. M. (2018). Using the boundary analysis method found that as the literature increased, fewer and fewer new entrepreneurial competencies were proposed. Based on research [Gumusay, A. A., & Bohne, T. M. (2018), entrepreneurial competence is divided into five categories, namely 1) opportunity competence, 2) relationship competence [Mitchelmore, S., & Rowley, J. (2010). Schelfhout, W., Bruggeman, K., & Maeyer, S. (2016), 3) innovation competence, 4) sponsorship competence, and 5) learning competence (Miller, T. L., Wesley, C. L., & Williams, D. E. (2012).

The concept of entrepreneurial barriers is closely related to the Planned Behavior Theory developed by Ajzen. Some experts believe that there are barriers that can affect entrepreneurship, including fear of failure (Rachel, D. 2011), lack of experience [Arranz, N., Arroyabe, M. F., & Fdez de Arroyabe, J. C. (2018).], unstable income [Gill, A., & Biger, N. (2012).], so these entrepreneurship barriers should be considered when developing entrepreneurship education programs [Fayolle, A., & Gailly, B. (2015)]. Entrepreneurship education can effectively make entrepreneurs less vulnerable to perceived barriers (Shahverdi, M., Ismail, K., & Qureshi, M. I., 2018).

Many reasons can cause shifts in entrepreneurial intentions, and while this indicator is commonly used to analyze and evaluate entrepreneurial learning, it is also considered a primary antecedent of firm development in the literature (Fayolle, A., & Gailly, B.) (2015). Contextual factors such as entrepreneurial learning/education, academic support, social support, and environmental support, and socio-demographic factors such as gender and age, parental occupation, and entrepreneurial experience and field of study, can both be used as indicators of entrepreneurial intent (Kebaili, B. e., 2015; Malo, M., 2012).

The final indication of the measuring methodology developed in this study is entrepreneurial intention. The findings of previous studies on aspiring entrepreneurs led researchers (Malo, M., 2012) to the conclusion that entrepreneurship education, in conjunction with other variables or via various mediating variables, can have an effect on aspiring entrepreneurs' intentions to start a business. There have been several studies showing that the effect of entrepreneurship education on entrepreneurial intention is fairly gradual in coming to fruition (Fayolle, A., & Gailly, B., 2015). and changes in entrepreneurial intentions are not easily measured by measuring tools (Liu, H., Kulturel-Konak, S., & Konak, A, 2021). This finding explains several studies that found a weak relationship between entrepreneurial intention and entrepreneurial education. Research based on the Theory of Planned Behavior also reveals a positive relationship between individual entrepreneurial behaviour and intentions (Nabi, G., Lin˘an, ´ F., Fayolle, A., Krueger, N., & Walmsley, A, 2017; Bazzy, J. D., Smith, A. R., & Harrison, T., 2019).

This study aims to analyze the effectiveness of measuring entrepreneurial education carried out in universities through the triangle method, namely entrepreneurial competence, entrepreneurial barriers, and entrepreneurial intentions (Liu, H., Kulturel-Konak, S., & Konak, A, 2021). Education effectiveness framework, the entrepreneurial intention is an appropriate measurement indicator to measure the effectiveness of entrepreneurship education. The entrepreneurial intention was adopted as the third indicator of the model for measuring the effectiveness of entrepreneurship education with entrepreneurial behavior and intentions. Similar to entrepreneurial attitude [Mathews, R. D., Wessel, R., & Goldsby, M., 2020), passion (Nowinski, W., Haddoud, M. Y., Lancaric, D., Egerova, D., & Czeglledi, C, 2019), enthusiasm and motivation (Li, L., & Wu, D., 2019). feedback positive impact of entrepreneurship education on entrepreneurial intention.

2. METHODS

This research is quantitative research with a survey method. The tool used to test the relationship between variables is the Structural Equation Model (SEM). There are two models tested in SEM, namely the measurement model and the structural model.

The variables studied to measure effectiveness refers to the Triangle Measurement Model for the Entrepreneurship Education Effectiveness' (TMM) model developed by Liu et al. (2021). This model considers three variables to measure the level of effectiveness of entrepreneurship education. The three variables are entrepreneurial competence, entrepreneurial barriers, and entrepreneurial intentions. The relationship between the three variables is shown in Figure 1.

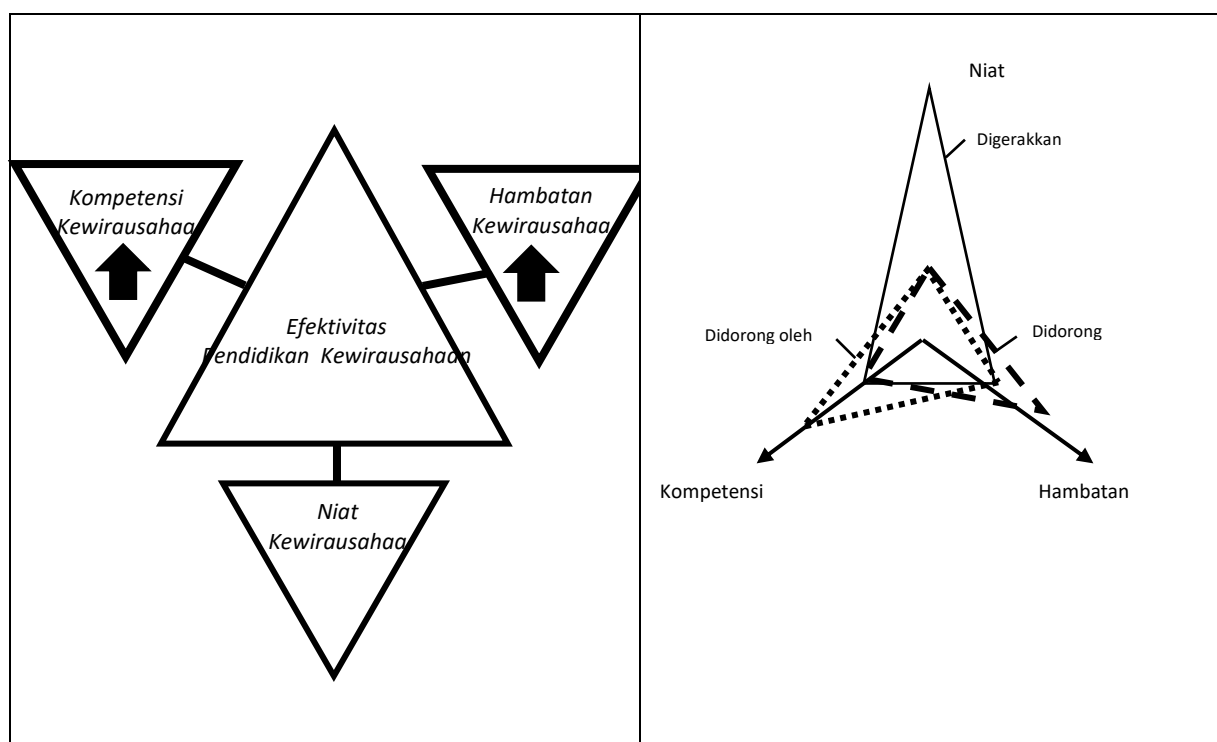


Fig.1 3D Measurement Model for Entrepreneurship Education Effectiveness

As can be seen in Figure 1, which presents a study of the TMM-based entrepreneurship education triangle, we can visualize entrepreneurship, impediments, and intentions as three axes emanating from the same origin. Competency-driven entrepreneurial education, such as that found in university-level entrepreneurship programs, is depicted here by the slanted triangles and dashed lines. For instance, a set of lectures or workshops on the subject of entrepreneurship, incubators, and creating space would be considered Problem-driven entrepreneurship education if the Triangle's angle fell on the axis of the entrepreneurial barrier (the Triangle is biased to the right and connected by a dotted line). Career-driven education, for instance, is a course that combines career planning and entrepreneurship education broadly, and this course focuses on enlightenment and the rise of entrepreneurship; if the corner of the Triangle is on the axis of entrepreneurial intention (the upper biased Triangle and is connected by a solid line), then the education is said to be entrepreneurship-focused (Liu et al., 2020).

The definition of the variable studied refers to previous research, namely Entrepreneurial Competence (Bird, 1995). Barriers to Entrepreneurship (Iskandar & Mulyati 2018; Ulrich Schoof, 2006 ; (Liu et al., 2020), Entrepreneurial Intentions (Malo, 2012; Lieli Suharti, H. S. 2011; Utami, 2017; Rajijman, 2001).

The population of this study was students of the Universitas Pendidikan Indonesia (UPI) who were still actively studying, totalling 27,082 students. The sample in this study was selected using Nonprobability Sampling. The sampling technique chosen in Nonprobability Sampling is a purposive sampling technique, which is a sampling technique for data sources with certain considerations. The criteria used are UPI students who are currently or have taken entrepreneurship courses in every faculty at UPI. With the sampling technique using the Solvin formula, a sample of 394 people was obtained spread over several academic units. In terms of gender, most of the respondents in this study were female, namely 64.72%, while only 35.28% were male.

The data that has been collected will then be analyzed using descriptive and quantitative analysis. The descriptive analysis uses descriptive statistics while the quantitative for hypothesis testing uses SEM. The SEM model is depicted in Figure 2.

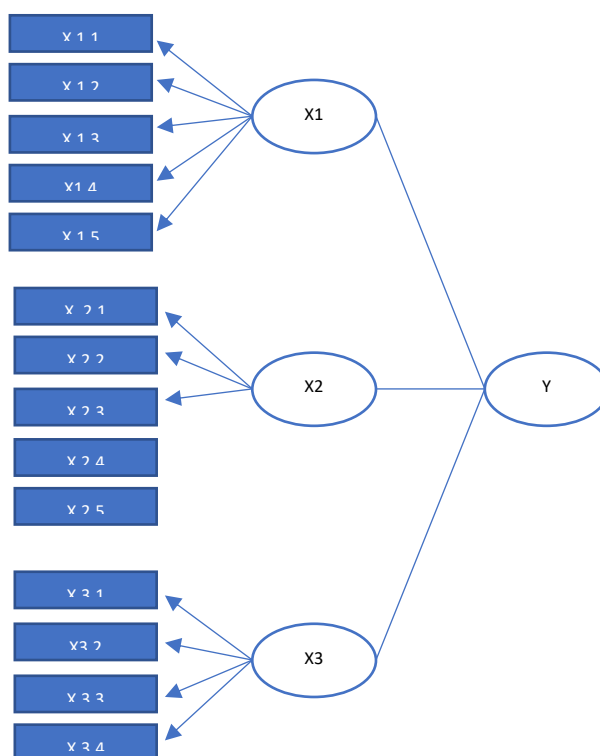


Fig 2. Research SEM Model

The proposed hypothesis:

1. The level of entrepreneurial competence affects the effectiveness of entrepreneurship learning
2. The level of intention affects the effectiveness of entrepreneurship learning
3. The level of entrepreneurial barriers affects the effectiveness of entrepreneurship learning

3. FINDINGS AND DISCUSSION

Finding

The Structural Equation Model was used to test hypotheses in this investigation (SEM). The input data matrix may be used in either the variance/covariance or the correlation analysis in the SEM. The covariance matrix will be used as an input for an additional estimate in this study. Covariance matrices are preferred to correlation matrices because they allow for more accurate comparisons between populations and samples. Figure 3 displays the outcomes of the AMOS SEM analysis structural modelling.

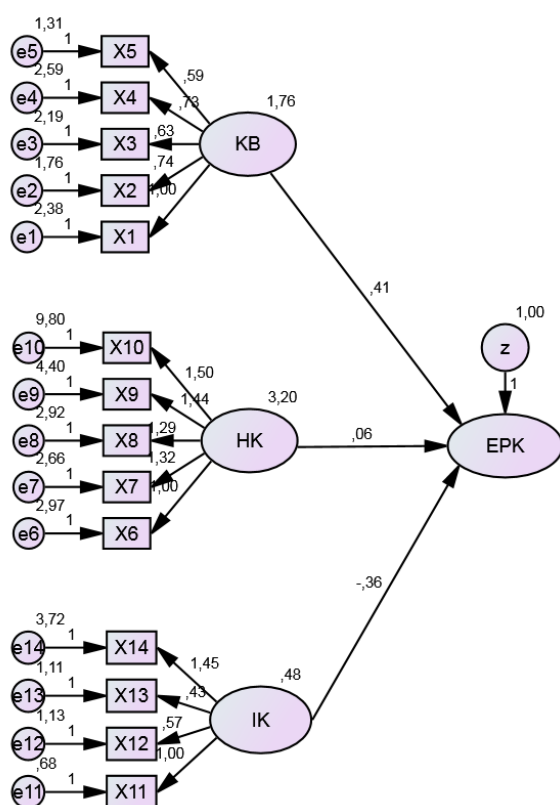


Fig. 3. Structural Model Measurement 1.

Based on Figure 4.1, the following structural equation is obtained:

$$ELE = 0.41 EC + 0.06 BE - 0.36 EI$$

$$R^2 = 0.274$$

Description:

ELE: Entrepreneurship Learning Effectiveness

EC: Entrepreneurship Competence

BE: Barriers to Entrepreneurship

EI: Entrepreneurial Intention

The above equation explains the positive and significant influence that entrepreneurship competence and entrepreneurship intentions have on entrepreneurship learning effectiveness, whereas entrepreneurship barriers have no effect on entrepreneurship learning effectiveness, concerning using the standardized regression coefficient to verify the theory. Table 1 displays the results of estimating the parameters of the structural model.

Table 1. Summary of Structural Model Parameter Estimation Results

Variable	R ²	SRW	S.E	C.R	P
<i>Standardized direct effect</i>					
ELE ← EC	0,414	0,468	0,063	6,566	***
ELE ← BE	0,06	0,091	0,033	1,799	0,072
ELE ← EI	-0,364	-0,215	0,121	-3,007	0,003

Hypothesis testing is done by looking at the value of the Critical Ratio (C.R) at a significant level of 5%. If the C.R with a probability value (P-Value) < 0.05 , the hypothesis proposed is significant. Conversely, if the C.R value with (P-Value) > 0.005 then the proposed hypothesis is not significant.

Hypothesis Testing 1: The level of entrepreneurial competence affects the effectiveness of entrepreneurship learning

The path coefficient value (SRW) in Table 4.1 is 0.468 (positive) > 0 , which indicates the level of effectiveness of entrepreneurship learning is influenced by the level of entrepreneurial competence. The significant value in the critical ratio is 6.566 > 1.960 with probability $*** < 0.05$, then the null hypothesis can be rejected, and the alternative hypothesis is accepted. This means that the level of entrepreneurial competence has a positive and significant effect on the effectiveness of entrepreneurship learning. The magnitude of the influence of entrepreneurial competence on the effectiveness of student entrepreneurship learning is shown in Table 4.2

Table 2. Entrepreneurship Competency Level Affects the Effectiveness of Entrepreneurship Learning

Effect of EC on ELE	SRW	R ²
	0,468	0,414

The magnitude of the influence of entrepreneurial competence on entrepreneurial effectiveness is shown in Table 4.13, where the R2 value of 0.414 which means the high and low variations that occur in the effectiveness of student entrepreneurship learning can be explained by entrepreneurial competence of 41%.

Hypothesis Testing 2: The low level of barriers affects the effectiveness of entrepreneurship learning

The path coefficient value (SRW) in Table 4.12 is 0.091 (positive) > 0 . A significant value in the critical ratio is 1.799 < 1.960 with a probability of 0.072 > 0.05 , the null hypothesis is accepted, and the alternative hypothesis is rejected. This means that the level of barriers to entrepreneurship has no positive and insignificant effect on the effectiveness of entrepreneurship learning. This means that there are no obstacles that occur, while the data that shows that there is no influence of entrepreneurial barriers on the effectiveness of student entrepreneurship learning is shown in Table 4.3.

Table 4.3 The Low Level of Barriers Affects the Effectiveness of Entrepreneurship Learning

Effect of BE on ELE	SRW	R ²
	0,091	0,06

Based on Table 4.3, it can be seen that the P-Value is greater than 0.005, meaning that entrepreneurial barriers have no effect and are not significant on the effectiveness of entrepreneurship learning. In other words, there are no entrepreneurial barriers that occur.

Hypothesis Testing 3: The level of entrepreneurial intention affects the effectiveness of entrepreneurship learning

The path coefficient value (SRW) in Table 4.2 is -0.215 < 0 , which indicates the high and low effectiveness of entrepreneurial learning is influenced by entrepreneurial intentions. The significant value in the critical ratio is -3.007 < 1.960 with a probability of 0.003 > 0.05 , so the null hypothesis can

be rejected and the alternative hypothesis is accepted. This means that the level of entrepreneurial intention has a positive and significant effect on the effectiveness of entrepreneurship learning. The magnitude of the influence of entrepreneurial intentions on the effectiveness of student entrepreneurship learning is shown in Table 4.4.

Table 4.4 Entrepreneurial Intention Level Affects the Effectiveness of Entrepreneurship Learning

Effect of EI on ELE	SRW	R ²
	-0,215	-0,364

The magnitude of the influence of entrepreneurial intentions on the effectiveness of entrepreneurship learning is shown in Table 4.4, where the R² value is -0.364, which means the high and low variations that occur in the effectiveness of student entrepreneurship learning can be explained by entrepreneurial intentions of 36%. The remaining 64% is the influence of other variables that are not explained in this model

Discussion

Entrepreneurship Competence affects the effectiveness of entrepreneurship learning

The findings of this study indicate that Entrepreneurship Competence has a positive and significant effect on the Effectiveness of Student Entrepreneurship Learning. The coefficient is positive, which means that the lower and higher the Entrepreneurial Competence, the lower and the higher the Entrepreneurship Learning Effectiveness. So it can be said that the effectiveness of Entrepreneurship Learning can be measured by Entrepreneurial Competence. This finding is by what was stated by Liu, H., Kulturel-Konak, S., & Konak, A. (2021), which is a reference journal which states that the effectiveness of Entrepreneurship Learning can be seen through the improvement of Entrepreneurial Competence.

This is consistent with the findings of a number of studies which find that an entrepreneur's level of entrepreneurial competence affects how well they absorb new information (Lekoko, M., et al. 2012; Elmuti, D., Khoury, G., & Omran, O. 2012). With the ability to innovate and be creative, to take risks, to have strong self-confidence, to have a leadership spirit, and detect possibilities, students with high entrepreneurial competence will be more likely to want to become young entrepreneurs and establish their own enterprises.

Entrepreneurial Barriers Have No Effect on the Effectiveness of Entrepreneurship Learning

The findings of this study indicate that Entrepreneurship Barriers have no positive and insignificant effect on the Effectiveness of Student Entrepreneurship Learning. So it can be said that there were no obstacles found in the research on students of the Indonesian Education University. This finding is by what was stated by Liu, H., Kulturel-Konak, S., & Konak, A. (2021) which is a reference journal which states that the effectiveness of Entrepreneurship Learning can be seen and measured through the lack of entrepreneurial barriers. Several studies also state that the lack of barriers that occur in entrepreneurship learning can increase students' potential in entrepreneurship (Iskandar & Mulyati 2018; Ulrich Schoof 2006; Retno and Trisnadi, 2012; Liu, H., Kulturel-Konak, S., & Konak, A. . 2021). Automatically the effectiveness of entrepreneurial learning can be measured by the lack of entrepreneurial barriers. Entrepreneurial Barriers which include lack of support, lack of knowledge, lack of competence, lack of self-confidence, and risk aversion, are not experienced by students at the Indonesian so that with the lack of Entrepreneurship Barriers, it is hoped that students can become young entrepreneurs.

Entrepreneurial Intentions Affect the Effectiveness of Entrepreneurship Learning

The findings of this study indicate that entrepreneurial intention has a positive and significant effect on the effectiveness of student entrepreneurship learning. The coefficient is positive, which means that the lower and higher the Entrepreneurial Intention, the lower and the higher the Entrepreneurship Learning Effectiveness. So it can be said that the effectiveness of Entrepreneurship Learning can be measured by Entrepreneurial Intentions.

This finding is by what was stated by Liu, H., Kulturel-Konak, S., & Konak, A. (2021), which is a reference journal which states that the effectiveness of Entrepreneurship Learning can be seen through changes in entrepreneurial intentions. The results of research from Fayolle A, (2015) also strengthen the findings of this study which states that entrepreneurial intention is an indicator that is widely used to measure and evaluate entrepreneurial learning. This is also in line with several other research results which state that entrepreneurial intention can be measured by socio-demographic factors and contextual factors. Socio-demographic factors include; gender and age, parental occupation, entrepreneurial experience, and field of study, while contextual factors include; entrepreneurial learning/education, academic support, social support, and environmental support (Malo, 2012; Lieli Suharti, H. S. 2011; Utami, 2017).

4. CONCLUSION

The Triangle approach to the effectiveness of entrepreneurship learning in universities in Indonesia is positively influenced by entrepreneurial competence and entrepreneurial intentions, negatively influenced by entrepreneurial barriers. This finding implies that to increase the effectiveness of entrepreneurship education in higher education, it is necessary to increase entrepreneurial competence and entrepreneurial intention among students. This can be done through entrepreneurship education by the increasing practice where students not only learn theory but directly enter the world of entrepreneurship, so they can be motivated to set up new businesses

This study experienced several limitations; among others, this research study was only conducted with one university. These limitations have paved the way for further research by increasing the sample size and including adding many universities. These two studies only use a few indicators of each variable studied. This also opens the way for further researchers to add some indicators that are not listed in this study.

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