

MEASURING ENTREPRENEURSHIP INTENTION WITH NEED FOR ACHIEVEMENT, LOCUS OF CONTROL, SELF-EFFICACY, AND READINESS INSTRUMENT: BUSINESS AND ENGINEERING STUDENT IN INDONESIA

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Abstract

Purpose of the study: This study purposes to recognize the determining factor of entrepreneurial intentions on public University students in Surabaya. We want to know about the differentiation of entrepreneurship intention students from business and engineering students. This research intends to prove that there are differences in entrepreneurship interests between these two groups of students and can prove that there are differences between these two groups of students.

Methodology: Quantitative research is a type of research. The method of this research uses multiple regression (one dependent and four independent variables) with sample size are 92 students (56 business and 36 engineering students) in Surabaya. The researcher uses SPSS (Statistical Package for the Social Sciences) IBM Version 20.0 software to analyze the data.

Main Findings: The result of this research indicates the differentiation of business and engineering students. For a business student, three variables (need for achievement, locus of control and instrument of readiness) have a significant and positive effect on entrepreneurship intention. But for engineering student, all variables (need for achievement, locus of control, self-efficacy and instrument of readiness) have not a significant effect on entrepreneurship intention.

Applications of this study: The university can also adjust its curriculum based on the results of this study so that it can effectively increase the intention and attitude to apply the entrepreneurship skills of university students. The application of this research is to build ways to increase entrepreneurial interest in students. this improvement can be done in different ways between business and engineering students.

Novelty/Originality of this study: Studies on the application of entrepreneurship intention has been done a lot, especially in identifying the factors that determine entrepreneurship intention. However, research that focuses on entrepreneurship intention, from business and engineering. While this object is very significant because university students are expected to become prospective entrepreneurs who are able to support the economic growth of a country.

Keywords: *Need for Achievement, Locus of Control, Self-efficacy, Instrumental Readiness, Entrepreneurial Intention, Business, and Engineering.*

INTRODUCTION

Academics and developing countries have a concern about the issue of entrepreneurship. the data shows that unemployment from university graduates is 21.14%. Based on this data, entrepreneurship becomes an important issue for students to prepare for the future. The government has a program for increasing entrepreneurship interest in the student that programs are Student Creativity-Entrepreneurship Program), entrepreneurship student program, business plan competition. What programs support student and graduates that are ready to work in the workplace or independently ([Indarti & Krinstiansen, 2018](#)). universities are expected to graduate students who already run businesses, this will strengthen the entrepreneurial vision ([Remeikiene et al., 2013](#)).

Entrepreneurship is defiance that demonstrates an individual's inspiration and skill to realize an opportunity and continue with it, in order to make new value or economic development ([Pretheeba, 2014](#)). Stimulating economic growth, innovation and job and venture creations are often related to entrepreneurship. In the economic development process, it needs to be based on the beginning of individual businesses and small businesses ([Indarti & Krinstiansen, 2018](#)). the creation of new businesses must be in a conducive environment, this conducive environment is in universities as a social transformer ([Minuto, 2018](#)).

According to [Tessema Gerba \(2012\)](#), this research helps to increase scientific knowledge in the field of entrepreneurial intentions. Second, the results of this research have the potential to provide university recommendations about entrepreneurship programs and entrepreneurship education to promote the intention to become entrepreneurs. Third, the results of this research can provide insight for policymakers to provide support and incentives provided to graduates to enhance their entrepreneurial careers. ([Remeikiene et al., 2013](#)) explained that economics and mechanical engineering students have the same motivation in starting a business.

Research gaps from this study are according ([Remeikiene et al., 2013](#)); ([Thaief & Musdalifah, 2015](#)); ([Samydevan et al., 2015](#)). The need for achievement has a positive influence on entrepreneurship intention, whereas research conducted by [Indarti & Krinstiansen, \(2018\)](#) need for achievement has no effect on entrepreneurship intentions on students in Norway.

The second variable that affects entrepreneurship intention is Locus of control. According to studies conducted by ([Rokhman & Ahamed 2015](#)); ([Sesen, 2013](#)); ([Luca et al., 2012](#)); ([Ferreira et al., 2012](#)), and studies conducted by LOC Engineering students have no effect on Entrepreneurship intention ([Tessema Gerba, 2012](#)). While research conducted by ([Tessema Gerba, 2012](#)) locus of control has a significant effect on entrepreneurship intention for business students. In addition, Locus of control is positively related to entrepreneurship intention ([Sesen, 2013](#)).

Internal locus of control is individual self-control on decisions, while external locus of control is indicated by external factors that affect an individual such as destiny, luck and other factors ([Darmanto & Yuliari, 2018](#)). People who have an internal locus of control can have entrepreneurial intentions and choose to become entrepreneurs ([Karabulut, 2016](#)). Therefore, ([Aslam & Hasnu, 2016](#)) internal locus of control is very important to decide to start a business. On the other hand, individuals with strong external controls tend to have the perception that their decision, including their entrepreneurship intention, is affected by external factors such as luck, opportunity, fate or others ([Samydevan et al., 2015](#)). Individuals with a high internal locus of control believe that their achievement is the result of their actions, such as hard work ([Pilllis & Reardon, 2007](#)).

The purpose of this study is to look at differences in entrepreneurial intentions between business and engineering students. It aims to provide motivation to the students to promote and entrepreneurship issues. In addition, it is an input for the development of the entrepreneurship course.

LITERATURE REVIEW

Personal traits consist of the need for achievement, locus of control, self-efficacy. Understanding the need for achievement according to ([Ashar et al., 2014](#)) is one's focus on achievement. Need for achievement results from demographic characteristics and environmental factors ([Indarti & Krinstiansen, 2018](#)). This variable indicates whether a person has a tendency to do business or not and shows that the need for achievement has a positive effect on entrepreneurship intention ([Remeikiene et al., 2013](#)). Someone who has a high need for achievement values personal responsibility solves problems without the help of others likes to take risks and has a strong desire for decision making processes or decisions ([Sesen, 2013](#)); ([Indarti & Krinstiansen, 2018](#)).

According to ([Indarti & Krinstiansen, 2018](#)) explained that the higher the need for achievement, the higher the level of entrepreneurship intention, while research shows that the need for achievement of Norwegian students has no effect on entrepreneurship intention. However, the results of research conducted by intention ([Samydevan et al., 2015](#)), explained that the need for achievement has a positive effect on entrepreneurship intention.

Locus of control

Locus of control is an individual control on work and belief in individual success ([Darmanto & Yuliari, 2018](#)). Locus of control can be demonstrated by a sense of individual control over results, rewards, successes or failures ([Yukongd, I. & Lopa, 2017](#)). Locus of control is a psychological characteristic associated with an individual's ability to control life events ([Rokhman & Ahamed, 2015](#)). Locus of control is associated with success in running a business. People who have strong self-control will manifest their quality of life depending on their behavior such as in education or business, attitudes in hard work and comprehensive decision making.

The higher the internal locus of control of students, the higher the entrepreneurial intention and locus of control have a significant impact on entrepreneurial intentions ([Rokhman & Ahamed, 2015](#)). Locus of control has a positive effect on entrepreneurship intention ([Yukongd et al., 2017](#)), ([Karabulut, 2016](#)), ([Sesen, 2013](#)), locus of control has a significant effect on entrepreneurship intention for business students, whereas for students of locus of control engineering does not affect on entrepreneurship intention ([Tessema Gerba, 2012](#)). Other research results show that Locus of control does not affect entrepreneurship intention ([Thaief & Musdalifah, 2015](#)), ([Luca, et al., 2012](#)), ([Ferreira et al, 2012](#)).

Self-efficacy

The formation of motivation is indicated by the influence in individual choices in activity goals, persistence and performance ([Samydevan et al., 2015](#)). Someone who has a strong perception of self-efficacy will influence acting, the knowledge possessed and the skills used instrumental ([Indarti & Krinstiansen, 2018](#)). According to ([Aslam & Hasnu, 2016](#)) Self-efficacy is the ability of a person to assess the activities undertaken, in other words, the belief in the ability possessed.

Self-efficacy is strengthened by external factors namely family, parents, family and community, meaning that this self-efficacy is not only influenced by my internal factors such as personal nature. Self-efficacy is the strongest factor in influencing someone to start a business ([Sesen, 2013](#)). Self-efficacy has a positive effect on entrepreneurial intention ([Minuto, 2018](#)); ([Bharanti, 2016](#)). Self-efficacy is positively correlated to entrepreneurial intentions ([Indarti & Krinstiansen, 2018](#)), ([Aslam & Hasnu, 2016](#)), ([Rachmawan et al., 2015](#)).

Instrumental readiness

According to (Tessema Gerba, 2012), instrumental readiness consists of access to capital, access to information and social networking). This variable is most significant in influencing entrepreneurial intentions (Indarti & Krinstiansen, 2018), whereas according to (Darmanto & Yuliari, 2018) Instrumental readiness does not have a positive effect on entrepreneurial intentions.

One important and undoubted factor in starting a new business is access to capital and the availability of information for business continuity (Kristiansen & Indarti, 2004). One other important thing in starting a business is financial capital (Sesen, 2013). The results of studies conducted by (Kristiansen & Indarti, 2004) indicate that the availability of information has a significant positive effect on student entrepreneurial intentions to be able to obtain good and competitive resources, social networking is needed, because this social network has an important role in the business (Sesen, 2013). The intention of entrepreneurship is significantly influenced by social networks (Kristiansen & Indarti, 2004).

Entrepreneurship intention

Personal factors (personality traits) mostly influence (Remeikiene et al., 2013). Apart from that personal traits also have a positive impact on entrepreneurial intentions (Bae et al., 2014). (Fini et al., 2012) suggest that states of mind that lead to attention will reflect entrepreneurial intentions, in addition to one's actions that lead to entrepreneurial behavior. According to (Thompson, 2009) entrepreneurial intentions are one's beliefs in establishing a new business that is consciously planned and will be implemented in the future. Someone who builds a new business is an act of cognitive representation of entrepreneurial intentions (Ashar et al., 2014).

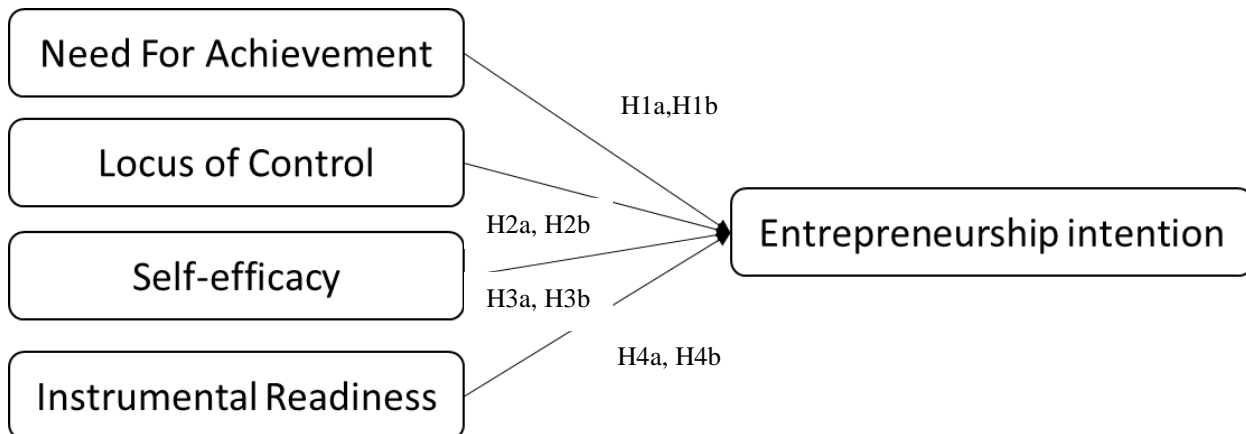


Figure 1: Research Model

Hypothesis 1a (H1ao): There is no effect of the Need for achievement (Nach) on entrepreneurial intentions on business students.

Hypothesis 1a (H1a1): There is an effect of the Need for achievement (Nach) to on the entrepreneurial intentions of business students

Hypothesis 1b (H1bo): There is no effect of the Need for achievement (Nach) on entrepreneurial intentions on engineering students.

Hypothesis 1b (H1b1): There is an effect of the Need for achievement (Nach) on the entrepreneurial intentions of engineering students.

Hypothesis 2a (H2ao): There is no effect of Locus of Control on entrepreneurship intention on the business students.

Hypothesis 2a (H2a1): There is an effect of Locus of Control on entrepreneurship intention of business students.

Hypothesis 2b (H2ao): There is no effect of Locus of Control on entrepreneurship intention on business on engineering students.

Hypothesis 2b (H2a1): There is an effect of Locus of Control on the entrepreneurship intention of engineering students.

Hypothesis 3a (H3ao): There is no effect of Self-efficacy on entrepreneurship intention on the business students.

Hypothesis 3a (H3a1): There is an effect of Self-efficacy on entrepreneurship intention of business students.

Hypothesis 3b (H3ao): There is no effect of Self-efficacy on entrepreneurship intention on engineering student.

Hypothesis 3b (H3a1): There is an effect of Self-efficacy on the entrepreneurship intention of engineering students.

Hypothesis 4a (H4ao): There is no effect instrumental readiness on entrepreneurship intention on business students.

Hypothesis 4a (H4a1): There is an effect instrumental readiness on entrepreneurship intention of business students.

Hypothesis 4b (H4a0): There is no effect instrumental readiness on entrepreneurship intention on engineering students.

Hypothesis 4b (H4a1): There is an effect instrumental readiness on entrepreneurship intention of engineering students.

METHODOLOGY

This entrepreneurial intention as a dependent variable is measured using a 5-point Likert scale that starts with strongly disagree (1) to strongly agree (5) (Sekaran & Bougie, 2016). The questionnaire in this study used a questionnaire designed by (Kristiansen & Indarti, 2004). The sample design used in this study was business students and engineering in Surabaya, Indonesia.

The sample size in this study was 92 students consisting of 56 businesses and 36 engineering students. The sampling technique uses purposive sampling. The sampling criteria chosen were business and engineering students. In purposive sampling or judgment sampling. The sample was chosen with the existence of certain criteria used by researchers (Sekaran & Bougie, 2016). Data collection from respondents using an online questionnaire. Data analysis uses multiple regressions. The tool used for data analysis is the SPSS (Statistical Package for the Social Sciences) IBM Version 20.0 software.

RESULTS/FINDINGS

Table 1: t-test dan significant

Variables	Business Student		Engineering student	
	T	Significant	t	Significant
Need for achievement	3.334	.002	0.037	0.971
Locus of Control	2.977	.004	1.448	0.157
Self-efficacy	-.661	.512	0.127	0.899
Instrument Readiness	3.335	.002	1.877	0.070

Source: attachment

the need for achievement is a significant predictor of entrepreneurial intentions. Based on Table 1 and the results of data calculations using the SPSS program it is known that the need for achievement in engineering students from statistical results does not have a significant contribution with a significance value of 0.037. In the next hypothesis, the locus of control is a significant value of 2.977 for the business student, but for engineering students, the result is not significant on 1.448.

Table 1 show below the t-scores of business and engineering students, respectively -661 and 0.127. Based on the results of statistical analysis that self-efficacy does not affect the entrepreneurship intention for business and engineering students. Based on table 1 and the results of data calculations using the SPSS program it is known that the instrument readiness of business students has a significance value of 3,335.

Table 2: F test

Student	F Test	Significant
Business	16.395	0.000 (Significant)
Engineering	2.411	0.070 (Not significant)

Source: attachment

Based on table 2 shows the Need for achievement, Locus of control, Self-efficacy and Instrument readiness for business students jointly influence entrepreneurship intention, while engineering students have different results that are not significant.

DISCUSSION / ANALYSIS

The effect of the need for achievement on entrepreneurship intention is significant. This result is in accordance with research conducted by (Indarti & Krinstiansen, 2018) of Norwegian students. However, the statistical results on the Business Student where the significance value is 3,334, these results are in accordance with research results from (Remeikiene et al., 2013); (Thaief & Musdalifah, 2015); (Samydevan et al., 2015). This result can be interpreted as the need for achievement in engineering students is not a factor to become an entrepreneur, while the Business Student's need for achievement becomes an important factor in entrepreneurship intentions.

The effect of locus of control on entrepreneurship intention is significant for a business students. This result related to the study (Rokhman & Ahamed, 2015); (Yukongd et al., 2017), (Karabulut, 2016), (Sesen, 2013). In another result, the effect locus of control on entrepreneurship intention is not significant for an engineering student. This result related to result from (Tessema Gerba, 2012), (Thaief & Musdalifah, 2015), (Luca, et al., 2012), (Ferreira et al, 2012).

The effect of self-efficacy on entrepreneurship intention is not significant for both of the student. These results do not support the results of research conducted by (Minuto, 2018); (Bharanti, 2016); (Indarti & Krinstiansen, 2018), (Aslam & Hasnu, 2016), (Rachmawan et al., 2015). The interpretation of the results of this analysis is that self-efficacy is not a predictor for business and engineering students.

the effect of instrument readiness on entrepreneurship intention is significant for a business student. These results support the results of research conducted by (Indarti & Krinstiansen, 2018). The interpretation of these results is that this variable is a strong predictor of business students in entrepreneurial intentions. Different results were shown by engineering students who had an insignificant value of 1,877 which supported the research conducted by (Darmanto & Yuliari, 2018). These results can be interpreted under Instrument readiness is not a predictor of engineering students on entrepreneurial intentions.

The all variable together (Need for achievement, Locus of control, Self-efficacy and Instrument readiness) to entrepreneurship intention is significant for both students. This can be seen from the F test (table 2) which explains that all variables together affect the intention of entrepreneurship.

Table 3: Hypothesis Summary

Hypothesis	Business Student	Engineering student
Need for achievement → entrepreneurship intention	Significant	Not Significant
Locus of control → entrepreneurship intention	Significant	Not Significant
Self-efficacy → entrepreneurship intention	Not Significant	Not Significant
Instrument readiness → entrepreneurship intention	Significant	Not Significant
Need for achievement, Locus of control, Self-efficacy and Instrument readiness → entrepreneurship intention	Significant	Not Significant

CONCLUSION

the four variables, namely the need for achievement, self-efficacy, locus of control, and instrument readiness, do not directly affect the intentions of engineering students. While entrepreneurship intentions for business students directly affect only 3 variables need for achievement, Locus of control and instrument readiness while the other two variables do not affect directly. This difference in results is influenced by the sample size that is owned by each sample.

Table 4: R-Square

Student	R Square
Business	0.558
Engineering	0.232

The results of the R-square calculation between business and engineering students are different. This can be seen in business students having a value of 0.558 or 55.8% while the engineering student is 0.232 or 23.2%. These variables can be explained by the value of R square and other factors are explained outside the variable. Based on the R square value it indicates that the regression model in business students has a greater value compared to engineering students so that this can better explain entrepreneurial intentions for business students.

LIMITATION AND STUDY FORWARD

The sample in this research only covers regions or campuses in Surabaya and the sample size is quite small, therefore, the sample size should be enlarged and the scope of the research expanded.

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AUTHORS CONTRIBUTION

I do this research myself with the help of lecturers who distribute questionnaires to students.

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Attachment output from, SPSS

Business student

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.747 ^a	.558	.524	.39032	.558	16.395	4	52	.000	2.322

a. Predictors: (Constant), IR_B, LOC_B, NFA_B, SE_B

b. Dependent Variable: EI_B

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.991	4	2.498	16.395
	Residual	7.922	52	.152	.000 ^b
	Total	17.914	56		

a. Dependent Variable: EI_B

b. Predictors: (Constant), IR_B, LOC_B, NFA_B, SE_B

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	-.055	.476		-.115	.909	-1.010	.901		
NFA_B	.365	.109	.368	3.334	.002	.145	.584	.698	1.432
LOC_B	.298	.100	.284	2.977	.004	.097	.500	.936	1.069
SE_B	-.062	.094	-.087	-.661	.512	-.252	.127	.487	2.053
IR_B	.385	.115	.463	3.335	.002	.153	.616	.441	2.265

a. Dependent Variable: EI_B

Engineering student

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.481 ^a	.232	.135	.51506	.232	2.411	4	32	.070	1.203

a. Predictors: (Constant), IR_E, NFA_E, LOC_E, SE_E

b. Dependent Variable: EI_E

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.558	4	.639	2.411
	Residual	8.489	32	.265	.070 ^b
	Total	11.047	36		

a. Dependent Variable: EI_E

b. Predictors: (Constant), IR_E, NFA_E, LOC_E, SE_E

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Tolerance	VIF



	(Constant)	1.713	.846		2.025	.051	-.010	3.437		
	NFA_E	.006	.164	.006	.037	.971	-.328	.340	.943	1.060
1	LOC_E	.184	.127	.233	1.448	.157	-.075	.442	.931	1.074
	SE_E	.021	.168	.030	.127	.899	-.321	.364	.420	2.382
	IR_E	.326	.174	.449	1.877	.070	-.028	.680	.420	2.382
a. Dependent Variable: EI_E										