

Entrepreneurial Education and University Environment toward Students Entrepreneurial Intention

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Abstract:- This study aims to analyze the role of entrepreneurial education, university environment, on student intention for entrepreneurship. The analysis was conducted using an extended and modified Theory of Planned Behavior (TPB) model by including entrepreneurship education and the university environment as external factors that influence the basic variables in the TPB. Data were obtained through a questionnaire of 287 students at the Sumbawa University of Technology who were taking or have taken entrepreneurship courses. The data were then analyzed using the partial least square method. The results shows that entrepreneurial education and university environment affect entrepreneurial intention indirectly through perceived behavioral control and attitude towards entrepreneurial behavior respectively. Meanwhile, gender has a significant direct effect on entrepreneurial intention, where men have a stronger intention to become entrepreneurs.

Keywords:- Entrepreneurial Intention, Entrepreneurial Education, University Environment, Theory of Planned Behavior.

I. INTRODUCTION

Entrepreneurship has an important and special role for an economy. Entrepreneurs create jobs, contribute to productivity growth, produce and commercialize innovations, which generally provide a positive role for the economy (van Praag & Versloot, 2007). In the endogenous economic growth theory, innovations require the role of both researchers who produce inventions and the entrepreneurs who implement them (Michelacci, 2002). Further, Michelacci (2002) argued that in the competition for limited resource allocation between entrepreneurs and research, it would be better to allocate more to entrepreneurial development rather than research. Due to the low rate of return from research and development activities caused by a lack of entrepreneurial skills.

Entrepreneurship is an activity that requires planning and is strongly influenced by intention, so that entrepreneurial behavior can be accurately predicted through attitude toward behavior, and not merely determined by general attitudes, beliefs, personalities, or geographical elements (Krueger & Carsrud, 1993). In many studies on entrepreneurial intention, the Theory of Planned Behavior (TPB) method, which originated from psychology, is used to

predict entrepreneurial intention. This theory states that individual behavior is determined by intention. And that intention is determined by attitude towards behavior (ATB), subjective norm (SN), and perceived behavioral control (PBC) (Ajzen, 1991a).

Individual attitude towards behavior is an individual evaluation of the advantages and disadvantages to conduct a certain behavior including consideration of the positive and negative consequences of a behavior. Subjective norm is perceptions of social pressure to do or not do a behavior. This is related to how much influence the surrounding environment (friends, family, etc.) provides an assessment of the behavior of an individual. While perceived behavioral control is how external factors can affect the ease or difficulty for someone to do a certain behavior.

In general, the more favorable the attitude towards a certain behavior and the more positive subjective norms of a behavior, and the greater the perceived behavioral control, then the stronger individual intention to perform such behavior (Ajzen, 1991b). In empirical research in social psychology, TPB has been widely used and is able to predict relationship between intention and behavior consistently. On average, attitude can explain more than 50% of variation in intention, and intention explains about 30% of variation in behavior (Ajzen, 1991b).

Liñán & Fayolle (2015) state that research on entrepreneurial intention (EI) is the result of the integration of two disciplines: First, Theory of Planned Behavior which is one of the most commonly used theories in the field of social psychology; Second, an entrepreneurship theory from economics (Liñán & Fayolle, 2015). Krueger & Carsrud's research is believed to be the initiator in converging the two disciplines and making TPB a social psychological theory that has proven to be applicable in the field of entrepreneurship (Krueger & Carsrud, 1993).

Krueger & Carsrud's argument for using TPB in research on entrepreneurial behavior is that understanding intention is very useful for understanding a planned behavior that rarely happens, such as opening a business or entrepreneurship (Krueger & Carsrud, 1993). Entrepreneurial activities are clearly planned activities, so they require a firm intention to do so. The compatibility of the TPB model with entrepreneurial intention is also confirmed by Boyd & Vozikis' research (Boyd & Vozikis, 1994). In addition, the use of the TPB model will provide a

coherent, parsimonious, highly generalizable, and strong theoretical framework for understanding and predicting a behavior (Krueger, Reilly, & Carsrud, 2000).

Soria-Barreto, Honores-Marin, Gutiérrez-Zepeda, & Gutiérrez-Rodríguez (2017) analyzed EI through an extended TPB method. Some additions to the model are entrepreneurial education and university environment. The results of his research showed that entrepreneurial education strengthens entrepreneurial intention through perceived behavioral control, while university environment influences entrepreneurial intention through attitude towards entrepreneurship.

Moreover, the basic model of TPB has been developed to understand other external variables that determine entrepreneurial intention through its three main determinant variables. One variable that is widely used is entrepreneurial education. The relationship between entrepreneurial education and entrepreneurial intention is an important topic in the study of entrepreneurial intention (Liñán & Fayolle, 2015). Some studies in this category are Luthje & Franke (Luthje & Franke, 2003), Souitaris, Zerbinati, & Al-Laham (Souitaris et al., 2007), and Fayolle & Klandt (Fayolle & Klandt, 2006).

Luthje & Franke found that entrepreneurial education has an impact on students' intention to be entrepreneurs, although it cannot be explained how much influence that education has on student entrepreneurship levels or whether the education can make students effective entrepreneurs. (Luthje & Franke, 2003). Meanwhile Souitaris, Zerbinati, & Al-Laham tested the impact of the entrepreneurship program on attitude and intention towards student entrepreneurship in the fields of science and engineering. The results of his research showed that entrepreneurial education programs increase attitude towards entrepreneurship and generally increase intention to become entrepreneurs (Souitaris et al., 2007). Other researchers Fayolle & Klandt, argued that entrepreneurship can be taught and studied (Fayolle & Klandt, 2006). However, in order to create successful entrepreneurs, they encourage to assess, rebuild, and update the curriculum and methods used in entrepreneurial learning to respond to changes in the economic, political, and social aspect.

Entrepreneurial intention has been empirically to be influenced by regional, cultural, or institutional environment (Liñán & Fayolle, 2015). Kristiansen & Indarti found that the level of student EI in Indonesia was higher than students in Norway (Kristiansen & Indarti, 2004). The low EI among Norwegian students is partly due to the low of social status and remuneration obtained by becoming entrepreneurs (Minniti & Lévesque, 2008) compared to being ordinary workers. Similar research was also conducted on students in Spain and Puerto Rico (Veciana, Aponte, & Urbano, 2005), and Ireland and the US (De Pillis & Reardon, 2007). Meanwhile Soria-Barreto et al. specifically found that the institutional environment, in this case higher institutions, affects entrepreneurial intention through forming attitude towards entrepreneurship (Soria-Barreto et al., 2017). It

means university environment is one of the external factors that affect entrepreneurial intention through the main variables in TPB.

In addition, in the EI literature, research on the effect of personal variables on entrepreneurial intention is the largest number (Liñán & Fayolle, 2015). Personal variables are related to personal characteristics, demographics, and previous entrepreneurship experiences. The three most studied variables are gender, psychological and personal background. Several studies have shown that men have greater intention than women through more positive attitude (Strobl, Kronenberg, & Peters, 2012) and perception of ease which are more positive (Dabic, Daim, Bayraktaroglu, Novak, & Basic, 2012). While other opinion stated that the role models have greater impact on women self-efficacy than men (BarNir, Watson, & Hutchins, 2011).

II. HYPOTHESIS

Based on previous background and literature review, we can make some hypotheses for this research:

- Entrepreneurial education has an indirect effect on entrepreneurial intention through perceived behavioral control;
- University environment has an indirect effect on entrepreneurial intention through attitude towards entrepreneurial behavior;
- Previous entrepreneurial exposures have an indirect effect on entrepreneurial intention through subjective norm;
- Gender moderates the effect of subjective norms on entrepreneurial intention.

III. METHOD

This research used an extended TPB model developed by Soria-Barreto et al. (2017) which consists of these variables:

- Entrepreneurial Intention (EI), is a dependent variable constructed through 6 indicator statements adopted from an instrument designed by Liñán & Chen (2009).
- Attitude towards Entrepreneurial Behavior (ATE), measured through 7 statements that explain individual attitude under different conditions. Indicator statements are adopted from an instrument designed by Liñán & Chen (2009).
- Subjective Norm (SN), independent variables measured through 3 statements which were also adopted from the instrument designed by Liñán & Chen (2009).
- Perceived Behavioral Control (PBC), measured through 5 statements adopted from Liñán & Chen (2009).
- Gender, a dummy variable, where 0 for women and 1 for men.
- Prior Entrepreneurial Exposure (PEE), measured in 2 ways: relationship with entrepreneurs and work experience. The indicator statements are adopted from the Soria-Barreto et al. (2017).

- Entrepreneurial Education (EE), as measured through 6 statements adopted from an instrument designed by the Keat, Selvarajah, & Meyer (2011).
- University Environment (UE), measured through 12 statements adopted from Keat et al. (2011).

The relationship between those variables can be constructed in Fig. 1.

The data was obtained through a questionnaire that was randomly distributed based on cluster (Cluster Random

Sampling) to 287 respondents from 1027 active Sumbawa University of Technology students in the Even Semester 2018/2019 who had or were currently taking Entrepreneurship or Technopreneurship course. The sample size is calculated based on the Slovin formula, while the cluster is based on student academic background: social sciences (Faculty of Economics and Business) and engineering (Faculty of Engineering, Faculty of Biotechnology, and Faculty of Agricultural Technology).

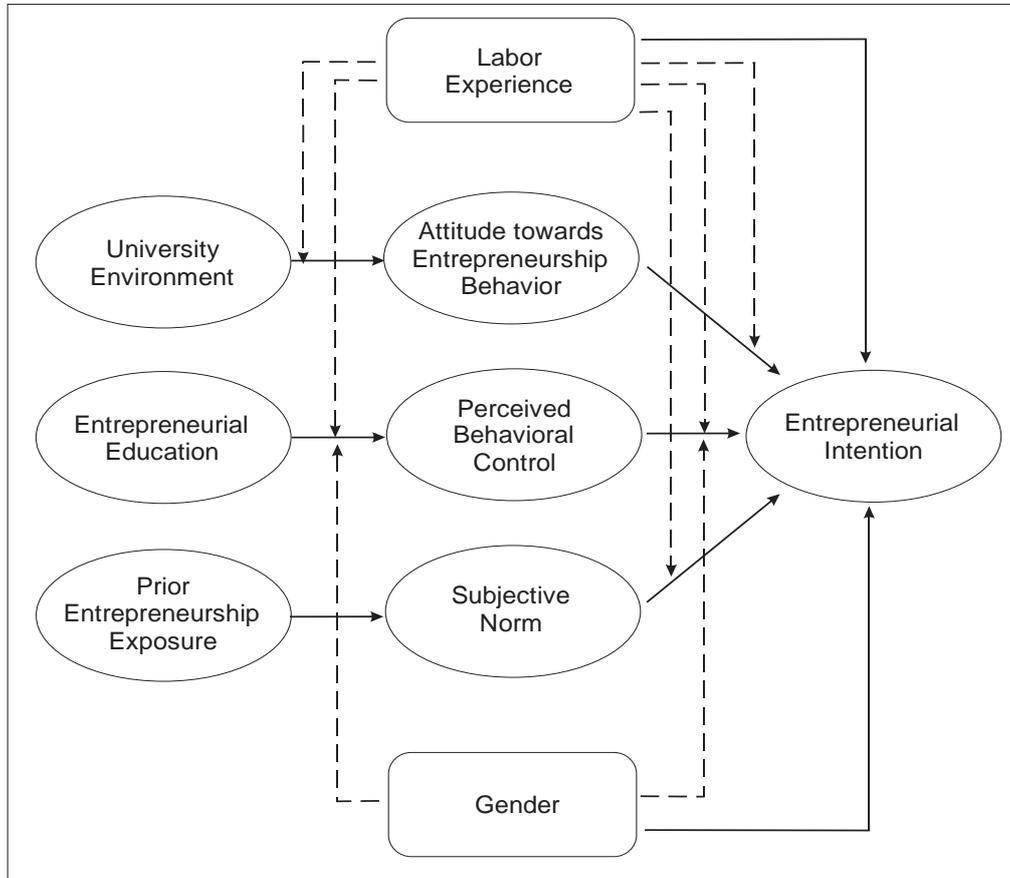


Fig 1:- TPB Model

The data obtained were then analyzed using Structural Equation Modeling (SEM) with the Partial Least Square (PLS) method. The use of SEM method makes it possible to analyze the relationship between latent variables (constructs that cannot be observed) with indicators (variables that can be observed). In this case the variables that have been explained before need to be measured by a number of statements that construct these variables.

IV. RESULT

A. Outer Model

The Outer Model or Measurement Model is an assessment of the reliability and validity of research

variables. There are three criteria to assess the outer model: cross loading, discriminant validity and composite reliability. The results from the outer model shows the results of reliability and validity test for each variable. The results of discriminate validity in the model can be seen in the value of cross loading as in Table 1.

Table 1 shows that indicators EI.1, EI.2, EI.3, EI.4, and EI.5 have a correlation to construct EI that is equal to 0.892, 0.849, 0.905, 0.905 and 0.856, these values higher than its correlation with the constructs of EE, PEE, Gender, UE, SN, LE, PBC and ATE. Likewise, the correlation of each other construct with its indicators are higher than the correlation of indicators with other constructs.

Indicator	Construct									Finding
	EE	PEE	Gender	UE	SN	LE	PBC	ATE	EI	
ATE.1	0.433	-0.061	0.015	0.508	0.508	0.075	0.598	0.738	0.540	Valid
ATE.2	0.625	-0.135	0.003	0.633	0.650	0.100	0.642	0.894	0.761	Valid
ATE.3	0.615	-0.133	-0.012	0.682	0.628	0.071	0.621	0.884	0.740	Valid
ATE.4	0.611	-0.145	0.000	0.631	0.631	0.128	0.620	0.920	0.755	Valid
ATE.5	0.616	-0.148	-0.039	0.644	0.642	0.110	0.666	0.902	0.745	Valid
ATE.6	0.628	-0.062	-0.022	0.673	0.605	0.074	0.607	0.891	0.751	Valid
ATE.7	0.560	-0.064	-0.020	0.655	0.545	0.041	0.621	0.860	0.657	Valid
EE.1	0.923	-0.059	-0.108	0.738	0.539	0.035	0.588	0.595	0.549	Valid
EE.2	0.934	-0.052	-0.120	0.767	0.579	0.015	0.628	0.653	0.596	Valid
EE.3	0.920	-0.099	-0.124	0.730	0.550	0.005	0.577	0.611	0.565	Valid
EE.4	0.916	-0.064	-0.158	0.713	0.549	0.004	0.603	0.595	0.553	Valid
EE.5	0.915	-0.088	-0.131	0.709	0.563	0.043	0.573	0.646	0.612	Valid
EE.6	0.910	-0.099	-0.093	0.707	0.574	0.024	0.612	0.620	0.588	Valid
EI.1	0.570	-0.101	0.045	0.616	0.641	0.120	0.621	0.811	0.892	Valid
EI.2	0.551	-0.041	-0.024	0.514	0.613	0.068	0.601	0.649	0.849	Valid
EI.3	0.545	-0.106	0.037	0.543	0.617	0.095	0.672	0.769	0.905	Valid
EI.4	0.548	-0.143	0.070	0.536	0.683	0.105	0.648	0.692	0.905	Valid
EI.5	0.554	-0.109	0.067	0.526	0.645	0.063	0.687	0.663	0.856	Valid
Gender	-0.133	-0.138	1.000	-0.145	-0.077	0.202	0.002	-0.013	0.046	Valid
LE	0.023	-0.048	0.202	0.051	0.071	1.000	0.076	0.099	0.103	Valid
PBC.1	0.483	-0.058	0.009	0.506	0.555	0.005	0.817	0.558	0.561	Valid
PBC.2	0.607	-0.089	0.018	0.617	0.617	0.065	0.871	0.613	0.625	Valid
PBC.3	0.575	-0.121	0.033	0.566	0.568	0.119	0.861	0.628	0.657	Valid
PBC.4	0.544	-0.084	0.010	0.575	0.550	0.046	0.884	0.598	0.632	Valid
PBC.5	0.552	-0.092	-0.064	0.596	0.615	0.078	0.829	0.649	0.639	Valid
PEE.1	-0.104	0.900	-0.110	-0.084	-0.137	-0.060	-0.124	-0.143	-0.125	Valid
PEE.2	0.017	0.691	-0.047	0.013	-0.033	-0.002	-0.010	-0.031	-0.002	Valid
PEE.3	-0.055	0.772	-0.149	-0.030	-0.085	-0.026	-0.054	-0.074	-0.080	Valid
PEE.4	-0.021	0.514	-0.073	0.052	-0.037	-0.018	-0.065	-0.047	-0.067	Valid
SN.1	0.529	-0.151	-0.071	0.606	0.873	0.045	0.619	0.606	0.647	Valid
SN.2	0.565	-0.099	-0.067	0.586	0.938	0.083	0.625	0.648	0.666	Valid
SN.3	0.572	-0.090	-0.071	0.593	0.928	0.065	0.624	0.641	0.675	Valid
UE.1	0.647	-0.034	-0.089	0.833	0.516	0.070	0.614	0.635	0.534	Valid
UE.10	0.609	-0.067	-0.126	0.803	0.530	0.037	0.548	0.638	0.473	Valid
UE.11	0.694	-0.030	-0.142	0.836	0.554	0.069	0.591	0.655	0.585	Valid
UE.12	0.644	-0.039	-0.067	0.820	0.576	0.094	0.577	0.700	0.593	Valid
UE.2	0.663	-0.031	-0.037	0.853	0.543	0.097	0.523	0.656	0.519	Valid
UE.3	0.716	-0.041	-0.080	0.861	0.554	0.067	0.569	0.654	0.555	Valid
UE.4	0.684	-0.057	-0.182	0.837	0.553	-0.019	0.562	0.548	0.492	Valid
UE.5	0.612	-0.034	-0.181	0.787	0.489	0.003	0.520	0.464	0.411	Valid
UE.6	0.646	-0.068	-0.151	0.848	0.543	0.014	0.550	0.550	0.509	Valid
UE.7	0.658	-0.085	-0.103	0.867	0.552	0.036	0.557	0.586	0.513	Valid
UE.8	0.677	-0.044	-0.216	0.839	0.548	-0.025	0.558	0.562	0.473	Valid
UE.9	0.705	0.011	-0.135	0.874	0.580	0.026	0.583	0.597	0.551	Valid

Table 1:- Discriminant Validity

Table 2 shows the value of AVE for EE, PEE, Gender, UE, SN, LE, PBC, ATE and EI are more than 0.50, therefore all constructs in this study are statistically valid and meet discriminant validity criteria. We also conducted reliability test by looking at the Composite Reliability and Cronbach's Alpha values of the indicators that measure the construct. A construct has a high reliability if the value of Cronbach's Alpha and Composite Reliability is more than 0.70 (Ghazali, 2014). From Table 2, we find that all constructs are reliable.

Constructs	Cronbach's Alpha (Criteria > 0,70)	Composite Reliability (Criteria > 0,70)	Reliability	Average Variance Extracted (AVE) (Criteria > 0,50)	Validity
Entrepreneurial Education	0.963	0.970	Reliable	0.846	Valid
Prior Entrepreneurial Exposure	0.733	0.817	Reliable	0.537	Valid
Gender	1.000	1.000	Reliable	1.000	Valid
University Environment	0.962	0.966	Reliable	0.703	Valid
Entrepreneurial Intention	0.928	0.946	Reliable	0.778	Valid
Subjective Norm	0.901	0.938	Reliable	0.835	Valid
Labor Experience	1.000	1.000	Reliable	1.000	Valid
Perceived Behavioral Control	0.906	0.930	Reliable	0.727	Valid
Attitude towards Entrepreneurship Behavior	0.947	0.957	Reliable	0.760	Valid

Table 2:- Average Variance Extracted (Ave), Composite Reliability Dan Cronbach Alpha

B. Inner Model

Inner model or structural model test was taken to measure the relationship between each variable, significance value, and R-square of the EI model. Resampling bootstrap was used to test the hypotheses. In table 3, we can see the result of TPB model in this research. In model 1, ATE, PBC, and SN are statistically significant affect EI with 99% confidence interval. While in other models show that UE has direct effect on ATE, EE has direct effect on PBC, and PEE has no direct effect on SN.

	Model 1	Model 2	Model 3	Model 4
	EI	ATE	PBC	SN
Main Effect				
Attitude towards Entrepreneurship Behavior	0,501***			
Perceived Behavioral Control	0,210***			
Subjective Norm	0,238***			
University Environment		0,727***		
Entrepreneurial Education			0,656***	
Prior Entrepreneurial Exposure				-0.084
Interactive Effect				
Attitude towards Entrepreneurship Behavior*Gender	-0.062			
Perceived Behavioral Control*Gender	0.016			
Prior Entrepreneurial Exposure*Gender		-0.021		
Entrepreneurial Education*Gender			-0.023	
University Environment*Gender				0.103
Attitude towards Entrepreneurship Behavior*Labor Experience	-0.007			
Perceived Behavioral Control*Labor Experience	0.003			
Subjective Norm*Labor Experience	0.001			
University Environment*Labor Experience		-0.044		
Entrepreneurial Education*Labor Experience			-0.018	
Prior Entrepreneurial Exposure*Labor Experience				0.048
Gender	0,068**	0,087**	0.082	-0.109
Labor Experience	0.012	0.048	0.046	0.093
Sobel Test Subjective Norm	-0.586			
Sobel Test Perceived Behavioral Control	3,709***			
Sobel Test Attitude towards Entrepreneurship Behavior	7,312***			
Adjusted R Square	0.733	0.534	0.423	0.024

*** p<0.01, ** p<0,05

Table 3:- Regression Results

In table 3, we also see the result of Sobel Test to observe the mediator effect of variable SN, PBC, and ATE. The result shows that PBC and ATE as mediator for their respective variables are statistically significant in 99% confidence interval, while SN has no mediator effect. This explains that UE has indirect effect to EI through ATE. Likewise, EE indirectly affects EI through PBC. Then we calculate Q-square predictive relevance to validate and test the goodness of fit of the model. The result of Q-square is below:

$$\begin{aligned}
 Q^2 &= 1 - (1 - R1^2) (1 - R2^2) (1 - R3^2) (1 - R4^2) \\
 &= 1 - (1 - 0.024) (1 - 0.423) (1 - 0.534) (1 - 0.733) \\
 &= 0.930 \text{ (93\%)}
 \end{aligned}$$

Q-square equal to 93% means that the model has high level of goodness fit and that 93% of the variability in entrepreneurial intention can be explained by the variability of the variables in the model. While, 7% from other variables not in the model.

Table 4. sums the regression results for direct effect between variables. We find that almost variables have direct effect to their respective variables, except for two relationship. First, PEE to SN; and second, LE to EI. Gender has direct effect on entrepreneurial intention with coefficient 0.068, means that men have higher intention to be entrepreneurs than women. While Table 5 shows the summary of moderation effect of gender and LE on EI. We find that gender and labor experience have no moderation effect.

Relationship	Finding
Attitude towards Entrepreneurship Behavior => Entrpreneurial Intention	Accepted
Perceived Behavioral Control => Entrpreneurial Intention	Accepted
Subjective Norm => Entrpreneurial Intention	Accepted
University Environment => Attitude towards Entrepreneurship Behavior	Accepted
Entrepreneurial Education => Perceived Behavioral Control	Accepted
Gender => Entrpreneurial Intention	Accepted
Prior Entrepreneurial Exposure => Subjective Norm	Rejected
Labor Experience => Entrpreneurial Intention	Rejected

Table 4:- Result of Direct Effect

Moderator	Hyputhesis	Relationship	Finding
Gender	ME.1	Attitude towards Entrepreneurship Behavior => Entrpreneurial Intention	Rejected
Gender	ME.2	Perceived Behavioral Control => Entrpreneurial Intention	Rejected
Gender	ME.3	University Environment => Attitude towards Entrepreneurship Behavior	Rejected
Gender	ME.4	Entrepreneurial Education => Perceived Behavioral Control	Rejected
Gender	ME.5	Prior Entrepreneurial Exposure => Subjective Norm	Rejected
Labor Experience	ME.6	Attitude towards Entrepreneurship Behavior => Entrpreneurial Intention	Rejected
Labor Experience	ME.7	Perceived Behavioral Control => Entrpreneurial Intention	Rejected
Labor Experience	ME.8	Subjective Norm => Entrpreneurial Intention	Rejected
Labor Experience	ME.9	University Environment => Attitude towards Entrepreneurship Behavior	Rejected
Labor Experience	ME.10	Entrepreneurial Education => Perceived Behavioral Control	Rejected
Labor Experience	ME.11	Prior Entrepreneurial Exposure => Subjective Norm	Rejected

Table 5:- Result of Direct Effect

V. DISCUSSION

From our result, we found that Ajzen model is applicable in explaining EI as variable ATE, SN, and PBC have a direct effect on EI (Ajzen, 1991a). However, our result cannot explain that gender and LE have moderation effect on EI. Thus, there is no significant difference in gender (male or female) or labor in moderating the effect of the three variables on EI.

We find that the first hypothesis is accepted since EE has an indirect effect on EI through PBC. This proves that entrepreneurial education provided by a university through entrepreneurship or technopreneurship courses can increase entrepreneurial intention of students. Entrepreneurship education affect the perceived behavior control of students as it enhances the ability of students to develop a business idea, to start a firm, as well as it equips students with knowledge on the necessary practical detail and key success for starting a firm. With higher PBC, students’ intention to open business or firm increases. This result is consistent with Souitaris et al., (2007) and Soria-Barreto et al., (2017).

Our second hypothesis, that university environment indirectly affects EI through ATE, is accepted. University environment includes university infrastructure, resources, policies, programs, examples, and activities to encourage entrepreneurship. Such university environment has increased students' confidence that being an entrepreneur is one of the career choices they can choose, an entrepreneur will open up new jobs for the community, and entrepreneurship is the basis of wealth creation and give

more advantages. This attitude towards entrepreneurship behavior increases the intention of students to become entrepreneurs. Soria-Barreto et al., (2017) also found that UE affects EI through ATE.

Another variable that we believed has indirect affect EI is PEE through SN as stated in the third hypothesis. This hypothesis is supported by Soria-Barreto et al., (2017). However, our research shows a different result, as PEE has no indirect effect on EI through SN. From variable PEE, we measure the level of students’ exposure to entrepreneurship through their parents, brothers, or other relatives’ experience in owning a business. It then should create a role model for students to entrepreneur that can increase students’ subjective norm. But, this is not the case from our data, the role model students have in their live cannot increase their intention to be entrepreneurs. Thus, we can reject the third hypothesis.

Our last observation is related to the moderation effect of gender and labor experience to EI. The result shows that we could not verified the role of those two variables in moderating the effect of other variables to EI. Interestingly, while gender has no moderation effect and we can reject the fourth hypothesis, it has direct effect to EI. More specifically, we interpret that men have stronger intention to be entrepreneur than women. This is because women have lower confidence in managing a business (Wilson, Kickul, & Marlino, 2007). BarNir et al., (2011) find that women consider their environment more difficult and they are likely to have lower personal control over entrepreneurial-related activities compared to men.

VI. CONCLUSION

In the development of higher education nowadays, there is a phenomena to encourage entrepreneurship to become a major element in the educational process. So when graduated from a university, graduates are expected to not only try to find a job, but also motivated to start and run a business and provide jobs for other people. In national context, the government and the private sector provide plenty of capital and opportunities for students to realize their business ideas. This shows how much the desire to develop an entrepreneurial intention since higher education and then is expected to drive the economy in the future.

This study aims to examine whether entrepreneurial education, university environment, and personal aspects have a role for the growth of entrepreneurial intention among university students. Specifically, this study seeks to analyze whether these factors affect entrepreneurial intention through basic variables in the TPB model: ATE, SN, and PBC.

The results shows that ATE, SN, and PBC directly affects EI. Meanwhile, EE and UE affect EI indirectly through PBC and ATE respectively. Another result of the research is that men have a stronger intention to become entrepreneurs than women.

With this results, it is increasingly emphasized the importance of entrepreneurial education and university environment in higher education in order to support entrepreneurship and create more new young entrepreneurs. Entrepreneurial education in universities must be continuously improved to equip students with the knowledge, skills and abilities to identify opportunities and manage a business. Meanwhile, universities need to continue to improve the environment of universities through pro-entrepreneurial policies, adequate infrastructure, best practices of successful entrepreneurs, student activities related to entrepreneurship, creative space and collaboration, capital provision and business incubation.

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REFERENCES

- [1]. Ajzen, I. (1991a). 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](https://doi.org/10.1016/0749-5978(91)90020-T)
- [2]. Ajzen, I. (1991b). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- [3]. BarNir, A., Watson, W. E., & Hutchins, H. M. (2011). Mediation and Moderated Mediation in the Relationship Among Role Models, Self-Efficacy, Entrepreneurial Career Intention, and Gender. *Journal of Applied Social Psychology*. <https://doi.org/10.1111/j.1559-1816.2010.00713.x>
- [4]. Boyd, N. G., & Vozikis, G. S. (1994). The Influence of Self-Efficacy on the Development of Entrepreneurial Intentions and Actions. *Entrepreneurship Theory and Practice*. <https://doi.org/10.1177/104225879401800404>
- [5]. Dabic, M., Daim, T., Bayraktaroglu, E., Novak, I., & Basic, M. (2012). Exploring gender differences in attitudes of university students towards entrepreneurship. *International Journal of Gender and Entrepreneurship*. <https://doi.org/10.1108/17566261211264172>
- [6]. De Pillis, E., & Reardon, K. K. (2007). The influence of personality traits and persuasive messages on entrepreneurial intention: A cross-cultural comparison. *Career Development International*. <https://doi.org/10.1108/13620430710756762>
- [7]. Fayolle, A., & Klandt, H. (2006). International entrepreneurship education: Issues and newness. In *International Entrepreneurship Education: Issues and Newness*.
- [8]. Keat, O. Y., Selvarajah, C., & Meyer, D. (2011). Inclination towards entrepreneurship among university students: An empirical study of Malaysian university students. *International Journal of Business and Social Science*. <https://doi.org/10.1016/j.egypro.2012.02.331>
- [9]. KRISTIANSSEN, S., & INDARTI, N. (2004). ENTREPRENEURIAL INTENTION AMONG INDONESIAN AND NORWEGIAN STUDENTS. *Journal of Enterprising Culture*. <https://doi.org/10.1142/S021849580400004X>
- [10]. Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, 5(4), 315–330. <https://doi.org/10.1080/08985629300000020>
- [11]. Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- [12]. Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship: Theory and Practice*. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- [13]. Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*. <https://doi.org/10.1007/s11365-015-0356-5>
- [14]. Luthje, C., & Franke, N. (2003). The Making of an entrepreneur: testing a model of entrepreneurial intention among engineering students at MIT. *R&D Management*.
- [15]. Michelacci, C. (2002). Low Returns in R&D Due to the Lack of Entrepreneurial Skills*. *The Economic Journal*, 113(484), 207–225. <https://doi.org/doi:10.1111/1468-0297.00095>

- [16]. Minniti, M., & Lévesque, M. (2008). Recent developments in the economics of entrepreneurship. *Journal of Business Venturing*, 23(6), 603–612. <https://doi.org/10.1016/J.JBUSVENT.2008.01.001>
- [17]. Soria-Barreto, K., Honores-Marin, G., Gutiérrez-Zepeda, P., & Gutiérrez-Rodríguez, J. (2017). Prior Exposure and Educational Environment towards Entrepreneurial Intention. *Journal of Technology Management & Innovation*. <https://doi.org/10.4067/S0718-27242017000200006>
- [18]. Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*. <https://doi.org/10.1016/j.jbusvent.2006.05.002>
- [19]. Strobl, A., Kronenberg, C., & Peters, M. (2012). Entrepreneurial attitudes and intentions: assessing gender specific differences. *International Journal of Entrepreneurship and Small Business*. <https://doi.org/10.1504/IJESB.2012.046475>
- [20]. van Praag, C. M., & Versloot, P. H. (2007). What is the value of entrepreneurship? A review of recent research. *Small Business Economics*, 29(4), 351–382. <https://doi.org/10.1007/s11187-007-9074-x>
- [21]. Veciana, J. M., Aponte, M., & Urbano, D. (2005). University Students' Attitudes Towards Entrepreneurship: A Two Countries Comparison. *The International Entrepreneurship and Management Journal*. <https://doi.org/10.1007/s11365-005-1127-5>
- [22]. Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education. *Entrepreneurship Theory and Practice*, 31(3), 387–406. <https://doi.org/10.1111/j.1540-6520.2007.00179.x>