The Effect of Entrepreneurship Education and Task Technology Fit on Entrepreneurship Intention Using the Theory of Planned Behaviour

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**Abstract.** Entrepreneurship has been proven in various researches in the world to help improve the welfare of society by creating jobs. Many universities in the world have adopted entrepreneurship in their curriculum designs in the form of entrepreneurship education. Besides, the technology fit task variable is also important in increasing student entrepreneurship intention. Therefore, research on entrepreneurship intention (EI) and the factors that influence it among students is very relevant. This study aims to find empirical evidence of the effect of entrepreneurship education (EE) and task technology fit (TTF) on entrepreneurship intention (EI) by using the theory of planned behavior (TPB) model. The research sample was 213 undergraduate students at one of the private universities in Yogyakarta selected by the Slovin method. Data were collected through a questionnaire shared with the student by MS Form. Regression analysis tools were used to test the research hypothesis. The results proved that H1, H2, H4, and H5 have a positive effect on EI with different significant results. This study has contributed to filling the knowledge gap that TTF and EE can be integrated into the TPB model.

**Keywords: entrepreneurship education, task technology fit, entrepreneurship intention, the theory of planned behavior**

1. Introduction

In recent years, entrepreneurship plays an important as a driver of global economies [1] and wealth creation to people, communities, and societies [2] such as job creation, increasing income, and ownership [3] and a contributing factor in advancing economic growth [4] through entrepreneurship education [5].

Theory of Planned Behavior (TPB) Ajzen's has been widely used by researchers in the field of entrepreneurial research for entrepreneurship for more than 30 years. There are three antecedent variables in this theory which are factors that have an impact on entrepreneurship intention (EI). The three variables are attitude toward entrepreneurship, subjective norms, and perceived behavioral control. However, based on the literature study many kinds of research had shown different results. The differences results arise from: pros and cons results of the effect of three antecedent variables on EI and b) using incompletely (not holistically) the antecedent TPB model.

Furthermore, in the era of industrial revolution 4.0, the entrepreneurial educational (EE) challenge is how to integrate the role of information technology into the EE process. Thus it is expected that the use of appropriate information technology able to increase students' interest in entrepreneurship. However, there is still little research linking task technology fit (TTF) and EE into TPB in the entrepreneurial field. In today's digital era, entrepreneurial activities cannot be separated from the compatibility of tasks with technology to facilitate streamline business processes. Information technology is one of the 12 pillars that form the foundation for calculating the Global Entrepreneurship Index (GEI). In 2019, Indonesia was ranked 94th in the world out of 134 countries continuously surveyed according to GEI. GEI focuses on three things, namely attitude, entrepreneurial abilities, and aspiration [6]. Referring to the results of this survey, it shows that the attitudes, abilities, and aspirations of entrepreneurial Indonesian society are still relatively low, including students as a group of nascent entrepreneurs. The three existing focuses on GEI can be taught and improved through higher education institutions. The right combination of entrepreneurship education and the use and utilization of technology adapted to entrepreneurial tasks/technology fit tasks can increase student EI, which in turn can lead students to entrepreneurial behavior.

Therefore, research on entrepreneurship intention and what factors influence it among students is important to fill the knowledge gap in the entrepreneurial area by using the Theory of Planned Behavior. Thus, this paper aims to confirm the robustness of the effect of the three TPB antecedent variables on IE and fill in the knowledge gap of the effect of EE and TTF variables on IE in the TPB model.

* 1. *Hypotheses development*

Concerning attitude toward entrepreneurship [7] states that individuals have a level of tendency both positively and negatively to become entrepreneurs. The more positive the individual's perception of entrepreneurship, the higher the individual's tendency to have high entrepreneurship intention. Thus, a "high" or strongly positive attitude towards becoming an entrepreneur is believed to predict that an individual is more inclined to start his / her own business rather than becoming an organizational employee" [8].

H1: attitude toward entrepreneurship have an impact on students' entrepreneurship intention

The subjective norm for entrepreneurship refers to become an entrepreneur, individual entrepreneurship intention is influenced by family, friends, or the environment that supports entrepreneurial activities. Believed norms related to entrepreneurship that is owned by the family, friends, or their environment, support students in fostering a tendency towards entrepreneurial interest. Students who receive support from their families, lecturers, and friends to become entrepreneurs have high hopes for their business fields so that they can think and act motivated to be more creative and innovative [9]. Thus the hypothesis is as follows

H2: subjective norms have an impact on students' entrepreneurship intention

PBC in entrepreneurship refers to behavior people's perception of how easier or difficult to start a business, and how much to control it [10]. Control beliefs refer to the presence or absence of resources and opportunities that determine either the behavioral intention or the behavior itself [7].

H3: perceived behavioral control have an impact on students' entrepreneurship intention

[11] cite Wu and Wu (2008) showed that educational level, academic major, and academic achievement influenced personal attitude and had an impact on EI. Also, some researchers proved that entrepreneurship education had an indirect effect on EI through ATE because ATE can predict entrepreneurship intention and subsequently will encourage individual behavior [3]. Correspondingly with [12] [13]; [14], this suggests that EE has an impact on students' entrepreneurial intentions.

H4: entrepreneurship education have an impact on students' entrepreneurship intention

[15] combined TTF variables with TPB to test their effect on the intention to adopt cloud-based retail application (CBMA) used on 348 Malaysian textile cyberpreneurers. The results of the study proved that the combination of TTF and TPB was able to describe the adoption intention of textile cyberpreneurs. Furthermore, the result had proved that both task-related and human behavior factors play significant roles in influencing textile cyberpreneurs' intention to adopt CBMA.

H5: task technology fit have an impact on students' entrepreneurship intention

The relationship between the dependent and independent variables in this research is shown in figure 1.



**Figure 1**. The research model

1. Method

*2.1 Design, procedure, and data collection*

This research design is in the form of quantitative research. The procedure for a sampling of respondents using a questionnaire as a data collection tool. The Slovin technique with the formula n = N ÷ (1 + Ne2) is used to determine the number of samples to be respondents. Based on Slovin calculations, there were 386 students as nascent entrepreneurship taken from one of the favorite national private universities in Yogyakarta with a population of 11,000 students (e = 5%).

Furthermore, from 386 respondents only 218 students participated in filling out the questionnaire (response rate of 56.47%) which consisted of 147 male students and 66 female students. Respondents participated in filling out questionnaires through the MS Form via the link bit.ly/36ksf6u which were distributed in online classes at 6 faculties that have classes in entrepreneurship courses or those related to entrepreneurship. Questionnaires were distributed for the last two weeks in September 2020. Furthermore, only 213 data were analyzed further because there were 4 redundant data and 1 invalid data.

*2.2 Dimension of variables and scaling*

The six research variables consisted of 52 statements measured using five Likert scales. The EI variable has two dimensions, namely immediate term intention and future intention [16]. Then the ATE variable has the dimensions of autonomy, self-realization, economic opportunity, challenge, authority, and participation in the whole process [14]. While the SN dimensions are family members, friends, and the local business community [14]. Next, the PBC variable has an internal control dimension, powerful other, and chance [17]. Then, there are three dimensions of EE, namely cognitive component, attitude component, and behavioral component [17]. Finally, TTF has the dimensions of fit with tasks, necessary to do a task and meet tasks need.

* 1. *Data test and analysis*

The results of the validity and reliability test of each variable using SPSS 17.0 software are displayed in the following table 1. The six variables are valid because they have an MSA value> 0.6% and are reliable because they have a Cronbach alpha value> 0.6 although for PBC variables the value is 47.6%

**Table 1.** Validity and Reliability Test

|  |  |  |
| --- | --- | --- |
|  | validity test (KMO and Barlett’s Test) | reliability test (Cronbach Alpha) |
| EI | 88.4 % | 90.3% |
| ATE | 60.1 % | 66.4% |
| SN | 74.1 % | 92.3% |
| PBC | 74.0% | 47.6% |
| EE | 95.5% | 95.9% |
| TTF | 72.6% | 88.0% |

Hypothesis testing uses multiple regression analysis with the following formula:

Y = b0 + b1X1 + b2X2 + b2X2 + b3X3 + b4X4 + b5X5 + e

dependent variable, Y = (EI);

Independent variables, X1 = ATE; X2 = SN; X3 = PBC; X4 = EE; X5 = TTF;

b0 = constant;

and b1,2,3,4,5 = beta

|  |
| --- |
| 1. Results and Discussion

Referring to table 2, the research model fitted with an indication that the R square value of 66.5% while the remaining 33.5% is a variable outside the research model. The results of the regression test using SPSS version 17.0 proved that H1 and H4 are accepted with a significance level of 0.000 (p-value <0.01). Meanwhile, H2 is accepted with a significance level of 0.043 (p-value <0.05), and H5 accepted with a significance level of 0.87 (p-value <0.1). Only H3 was not accepted. |
| **Table 2.** The result of multiple regression |
| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | .510 | .232 |  | 2.204 | .029 |
| ATE | .302 | .047 | .311 | 6.440 | .000\*\*\* |
| SN | .058 | .029 | .098 | 2.036 | .043\*\* |
| PBC | -.052 | .064 | -.035 | -.807 | .420 |
| EE | .609 | .060 | .584 | 10.192 | .000\*\*\* |
| TTF | -.027 | .016 | -.076 | -1.719 | .087\* |
| a. Dependent Variable: EI, R2 = 66.5% |

Note: \*\*\* p value < 0.000; \*\* p value < 0.005; \* p value < 0.10

Based on table 2, the strongest factors affecting the entrepreneurship intention of nascent entrepreneurs are ATE and EE. The higher one's attitude towards entrepreneurship which is reflected in the five dimensions, namely autonomy, self-realization, economic opportunity, challenge, authority, and participation, the higher the student's interest in entrepreneurship. This is in line with the research results from [14] and [18].

The EE variable in this study also has a strong effect on EI. This confirms the research [14] which states that EE is an important tool to accelerate student entrepreneurial activities. Many methods can be used for teaching in entrepreneurship/business classes. This is in line with the thinking and results of studies [19].

SN factor as one of the antecedent variables of TPB to EI has a moderate effect. This means that the influence of family, friends, and the surrounding environment related to EI is less strong even if they have parents who have a family business. This confirms the research [14] but does not confirm the research [20].

The TTF variable affects even though it is weak on EI. Owned information technology, fit with tasks, is indispensable to complete tasks, and following tasks related to entrepreneurial activities.

Of the three antecedent variables of the TPB its effect on EI, only PBC does not affect. It is suspected that the cause is because the points of the questionnaire statements are not understood by the respondents. Moreover, filling in this questionnaire during the Covid 19 pandemic has made respondents feel uncertain about self-control. As a result, most respondents answered these statements by choosing neutral. The results did not confirm the study [20].

1. Conclusion

This study failed to support the robustness of the TPB in the field of entrepreneurial research. This is because only two of the three antecedent variables affect EI, namely ATE and SN. Meanwhile, the PBS variable does not affect EI in this TPB model. Two other variables added to the TPB model are EE and TTF which have strong (p-value <0.000) and weak (p-value <0.1), respectively.

Even so, this research has limitations, namely, first, there is the possibility of the respondents' leniency bias because the respondents filled out questionnaire items based on their own self-perception. Second, the results of this study cannot be generalized to the results of universities in general because respondents only from one university. Finally, the reliability test results, especially for the PBC variable, gave a score of <0.6 even though the validity level was relatively good (> 0.6).

The implication of this study is to fill the knowledge gap of the influence of the EE and TTF variables on EI by using the TPB. Besides, the results of this study are useful for mapping the high EI of students so that it can be used by lecturers and decision-makers in higher education settings.

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