

# A COMPARATIVE STUDY OF TERTIARY STUDENT'S ENTREPRENEURIAL INTENTION: INDONESIA AND TAIWAN

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## ABSTRACT

*This research is a comparative study on entrepreneurial intentions of tertiary students in Jakarta, Indonesia and Tainan, Taiwan. A total of 459 respondents were chosen, 306 (Jakarta) and 153 (Tainan) respectively. The research hypothesis was built on the variables of Theory of Planned Behavior: Attitude toward behavior, Perceived behavioral control, and Subjective norm that were directly related to entrepreneurial intention. The analysis was carried out by Structural Equation Modeling (SEM). The results of the two groups of respondents showed that attitude toward behaviour and perceived behavioural control significantly influence entrepreneurial intention, while subjective norm is insignificant. In general there is no difference between the two sample groups, but for students in Jakarta indicators such as to be your own boss, can be able to choose your own work tasks, have the power to make decisions, have authority and for me, being self-employed would be very easy, are considered important. Some discussions and research implications are also presented in this report.*

**Keywords:** Theory of Planned Behaviour, Attitude Toward The Behaviour, Perceived Behavioural Control, Subjective Norm, Entrepreneurial Intention.

## INTRODUCTION

Nowadays, the Indonesian government through several universities that are spread throughout the province continues to encourage the students to become entrepreneurs. In 2017, it is estimated that the number of entrepreneurs in Indonesia has increased by more than 2%, which is equal to 3.1% of the total population. Yet, this number is still less than the other countries in other Asian regions, such as Singapore (7%), Malaysia (5%), China (10%) and Japan (11%) (Budiman, 2017). This fact then induced the Indonesian government through the Ministry of Education and Culture and the Ministry of Research, technology and Higher Education to include entrepreneurship as part of the national education curriculum system in order to encourage the intention of entrepreneurship among the students since in early stage (Mulyani, 2011; Purwana et al., 2018).

In terms of entrepreneur growth, Indonesia lags far behind compared to the developed Asian countries, such as Taiwan, in this country, entrepreneurial enthusiasm and activity have been sown for a long time. For example, since 1954, small businesses that employ 1-9 people have grown rapidly and become an integral part of Taiwan's economy. Although it later stagnated in 1996 Meanwhile, medium-scale businesses that employed 10 - 49 people continued to grow gradually from 8.02% in 1954 to accelerate to reach 22.38% in 1996. These small and

medium-sized businesses (SMEs) that are driven by entrepreneurs, then control most of the economy in Taiwan (Rong-I Wu & Chung-Che Huang, 2003).

Creating entrepreneurship is certainly important to promote the development and economic growth of a nation (Ács et al., 2014; Doran et al., 2018). Entrepreneurs are often associated with the technological changes (Ács & Varga, 2005), so they can provide stimulus to the economy matters (Van Stel, Carree, & Thurik, 2005). In Malaysia, individual participation in entrepreneurial activities has increased the national economy and reduced unemployment rates (Hasril et al, 2017). Kautonen et al. (2015) also emphasized that entrepreneurial intention is a strong predictor of entrepreneurial behavior.

This research contrasted the intention of students' entrepreneurship in Jakarta-Indonesia, to one of the most developed countries in Asia, namely Taiwan. As we knew, the entrepreneurial activity that employs 1-9 people grows rapidly and becomes an integral part of Taiwan's economy. It was stagnant in the 1990s, but at the end, the small and medium-sized industry that is presided by the entrepreneurs is able to dominate most of the economy in Taiwan (Rong-I Wu & Chung-Che Huang, 2003). It is expected that this research can provide an added value to the entrepreneurial knowledge, related to the factors that influence students' intention to become entrepreneurs. Also can be input for relevant parties in supporting entrepreneurship education which is currently being encouraged by the Indonesian government.

## LITERATURE REVIEW

In the previous literatures, there are many theoretical approaches that are applied to predict the tendency to do or not do something. These theories were initially developed by researchers in the field of psychology and were used in various fields. Theories such as Technology Acceptance Model (TAM) developed by Davis (1989) and Theory of Reasoned Action (TRA) by Martin Fishbein and Icek Ajzen (1980) are commonly used in a variety of contexts to explain factors that are significantly and convincingly has encouraged someone to do something. This research utilizes the Theory of Planned Behavior (TPB) approach which is an extension of TRA, where suggests that intention can be predicted by three aspects, namely attitude towards behavior, subjective norms, and perceived behavioral control (Ajzen, 2005). TBB has been widely used for predict behavior in several fields such as the adoption of internet facilities, educational behavior, sexual behavior, eco-green behavior, tourism (Macovei, 2016; Synodinos & Bevan-Dye, 2014).

### TPB and Entrepreneurial Intention

In previous, many entrepreneurial empirical studies adopted TPB to read up entrepreneurship from a psychological perspective (Kolvereid & Isaksen, 2006; Rotefoss & Kolveried, 2005; Krueger et al., 2000; Souitaris et al., 2007). According to Kreuger et al. (2000), entrepreneurial activities can be predicted more accurately by learning the intention to become entrepreneurs. In TPB, in the context of entrepreneurship, attitude is the perception differences of personal desire to become an entrepreneur and an employee (work in a company). Therefore, the positive and high attitude coefficient of entrepreneurship shows that respondents prefer to become an entrepreneur rather than an employee (Kolvereid, 1996).

Subjective norms refer to perceptions on what is the important matter that is considered in their life as an entrepreneur, this aspect is evaluated by the power of motivation to comply (Krueger et al., 2000). Then, PBC (perceived behavioral control) reflects the perceived ability to

become an entrepreneur (Kolvereid, 1996). Meanwhile, intention is defined as a state of mind that affects a person's attention and action towards an entrepreneur, compared to working as an employee in a company (Bird, 1988). The previous studies found that TPB has predictive abilities that are consistent with entrepreneurial intentions (Autio et al., 2001; Engle et al., 2010; Kolvereid et al., 2007; Krueger et al., 2000; Moriano et al., 2011). In this research, the three variables namely attitude toward behavior, subjective norms, and perceived control behavior are also examined in influencing the entrepreneurial intention directly.

## METHODOLOGY

### Samples

Total of 458 respondents are involved in this research, which are 306 respondents from Jakarta-Indonesia and 153 respondents from Tainan-Taiwan. Most of them are in the age range of 18-20 years old, 73% and 48% respectively for Jakarta and Tainan. Female respondents dominated in Jakarta (75%) while male respondents dominated in Tainan (64%). The majority of Jakarta respondents are in grade 3 (33%) while respondents in grade 2 are dominated in Tainan (42%). All respondents were undergraduate students at the Faculty of Economics, Universitas Negeri Jakarta (UNJ)-Indonesia and the College of Business of Southern Taiwan University Science and Technology (COB STUST) in Tainan-Taiwan who voluntarily filled out questionnaires anonymously (paper and pencil based) directly in place. Some questionnaires were read out directly by the research team to facilitate the respondent in filling them out. The original questionnaire was written in English and then translated into each language (Hambleton, 1994). Data were collected between July to September 2018 and as many as 13 questionnaires cannot be processed because the majority of parts are blank. Respondents' profile can be seen in Table 1 below:

| Characteristics of Sample |               | Indonesia  |            | Taiwan     |            |
|---------------------------|---------------|------------|------------|------------|------------|
|                           |               | frequency  | Percent    | frequency  | Percent    |
| Ages                      | <18 years     | 21         | 7          | 18         | 12         |
|                           | 18 – 20 years | 224        | 73         | 73         | 48         |
|                           | 21 – 23 years | 57         | 18         | 51         | 33         |
|                           | > 23 years    | 4          | 2          | 11         | 7          |
|                           | <b>Total</b>  | <b>306</b> | <b>100</b> | <b>153</b> | <b>100</b> |
| Sex                       | Male          | 78         | 25         | 98         | 64         |
|                           | Female        | 228        | 75         | 55         | 36         |
|                           | <b>Total</b>  | <b>306</b> | <b>100</b> | <b>153</b> | <b>100</b> |
| Grade                     | Year 1        | 79         | 26         | 20         | 13         |
|                           | Year 2        | 34         | 11         | 64         | 42         |
|                           | Year 3        | 102        | 33         | 29         | 19         |

|  |              |            |            |            |            |
|--|--------------|------------|------------|------------|------------|
|  | Year 4       | 91         | 30         | 40         | 26         |
|  | <b>Total</b> | <b>306</b> | <b>100</b> | <b>153</b> | <b>100</b> |

## Measures

All the indicators in this questionnaire are adopted from Kolvereid (1996). 18 items are selected to measure the attitude towards behavior, 6 items are used to measure the perceived behavioral control and subjective norms, and 3 items are selected to measure the entrepreneurial intention. All items are applied using a seven-point Likert scale, all the questions are presented in Table 2.

## Data Analysis

This research applies the Structural Equation Modeling (SEM) approach, using the Partial Least Square (PLS) device version 2.0 M3, as a data analysis method. This data analysis was conducted in two stages, namely evaluation of validity and reliability and Testing of hypotheses (Latan & Ghazali, 2012).

## Validity and reliability

Evaluating the validity and reliability is conducted by viewing the loading factors from each indicator (Chin, 2001). The indicators that have a loading factor value  $> 0.70$  means that they have a high level of validity (Ghozali, 2014). Furthermore, reliability analysis is done by looking at the composite reliability value. A construct is declared reliable if the composite reliability value is  $>0.70$  (Nunnally & Bernstein, 1994; Latan & Ghazali, 2012). The corresponding measures can be seen in Table 2.

| Indicators                            | Loading factors |        | Composite reliability |        | Average variance extracted (AVE) |        |
|---------------------------------------|-----------------|--------|-----------------------|--------|----------------------------------|--------|
|                                       | Indonesia       | Taiwan | Indonesia             | Taiwan | Indonesia                        | Taiwan |
| <b>Attitude toward behavior (Att)</b> |                 |        | 0.953                 | 0.944  | 0.731                            | 0.771  |
| To have a challenging job             | 0.762           | 0.769  |                       |        |                                  |        |
| To have an exciting job               | 0.819           | 0.823  |                       |        |                                  |        |
| To have an interesting job            | 0.825           | 0.83   |                       |        |                                  |        |
| To have a motivating job              | 0.826           | 0.852  |                       |        |                                  |        |
| To be your own boss                   | 0.728           | -      |                       |        |                                  |        |

|   |       |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|
| Be able to choose your own work tasks   | 0.729 | -     |       |       |       |       |
| Have the power to make decisions  | 0.714 | -     |       |       |       |       |
| Have authority  | 0.714 | -     |       |       |       |       |
| Self-realization  | 0.809 | 0.758 |       |       |       |       |
| Realize one's dreams  | 0.808 | 0.824 |       |       |       |       |
| To create something   | 0.808 | 0.805 |       |       |       |       |
| To take advantage of your creative needs  | 0.8   | 0.792 |       |       |       |       |
| To participate in the whole process   | 0.794 | 0.809 |       |       |       |       |
| <b>Perceived behavioral control (Pbc)</b>   |       |       | 0.845 | 0.863 | 0.636 | 0.679 |
| For me, being self-employed would be very easy  | 0.728 | -     |       |       |       |       |
| If I wanted to, I could easily pursue a career as self-employed                           | 0.837 | 0.779 |       |       |       |       |
| As self-employed, how much control would I have over the situation?                       | 0.781 | 0.788 |       |       |       |       |
| If I become self-employed the chances of success would be                                 | 0.838 | 0.898 |       |       |       |       |
| <b>Subjective norms (Sn)</b>  |       |       | 0.874 | 0.92  | 0.776 | 0.793 |
| I believe that my closest family think that I should not pursue a career as self-employed | 0.852 | 0.813 |       |       |       |       |

|   |       |       |       |  |       |       |
|---|-------|-------|-------|--|-------|-------|
| I believe that my closest friends think that I should not pursue a career as self-employed                      | 0.894 | 0.94  |       |  |       |       |
| I believe that people who are important to me think that I should not pursue a career as self-employed          | 0.895 | 0.914 |       |  |       |       |
| <b>Entrepreneurial Intention (Int)</b>  |       |       | 0.912 |  | 0.609 | 0.652 |
| “How likely is it that you will pursue a career as self-employed?”  | 0.861 | 0.896 |       |  |       |       |
| “If you were to choose between running your own business and being employed by someone, what would you prefer?” | 0.85  | 0.86  |       |  |       |       |

The model will have a good discriminant validity if the square root AVE of each construct exceeds the correlation between the construct and other constructs in the mode, that is  $>0.50$  (Ghozali (2014). For sufficient discriminant validity, the square root of the average variance extracted for each variable on the diagonal should exceed the inter-construct correlations (Fornell & Larcker, 1981). The detail of those results can be found in Table 3.

| <b>TABLE 3</b>  |              |              |              |              |
|---|--------------|--------------|--------------|--------------|
| <b>DISCRIMINANT AND CONVERGENT VALIDITY OF THE CONSTRUCTS</b> |              |              |              |              |
| Indonesia   |              |              |              |              |
|   | <b>Att</b>   | <b>Int</b>   | <b>Pbc</b>   | <b>Sn</b>    |
| <b>Att</b>  | <b>0.78</b>  |              |              |              |
| <b>Int</b>  | 0.654        | <b>0.855</b> |              |              |
| <b>Pbc</b>  | 0.706        | 0.657        | <b>0.797</b> |              |
| <b>Sn</b>   | -0.223       | -0.223       | -0.16        | <b>0.881</b> |
| Taiwan  |              |              |              |              |
|   | <b>Att</b>   | <b>Int</b>   | <b>Pbc</b>   | <b>Sn</b>    |
| <b>Att</b>  | <b>0.807</b> |              |              |              |

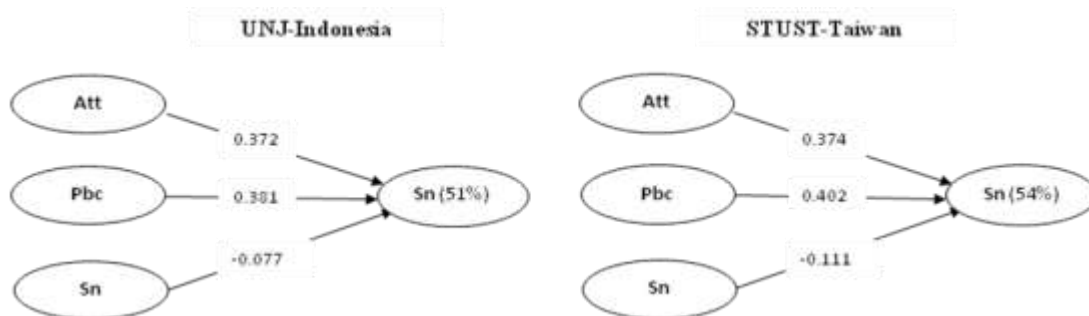
|            |        |              |              |              |
|------------|--------|--------------|--------------|--------------|
| <b>Int</b> | 0.655  | <b>0.878</b> |              |              |
| <b>Pbc</b> | 0.643  | 0.657        | <b>0.824</b> |              |
| <b>Sn</b>  | -0.207 | -0.244       | -0.137       | <b>0.891</b> |

The square root of average variance extracted for each variable on the diagonal should exceed the inter-construct correlations

In sum, over all of the values that are shown in the tables are fit into the criteria as suggested in the literature and show a good degree of reliability and validity in all constructs.

### Testing of Hypotheses

By applying structural equation model with PLS device version 2.0 M3, the model for both respondents group were examined. We found that the attitude toward behaviour and perceived behavioural control affect the entrepreneurial intentions, positively; while subjective norms have an insignificant affect on the intention for both group samples. In other words, the effect of all independent constructs on entrepreneurial intentions has no different result between two groups. Furthermore, the quality of PLS model can be determined by testing the R values of the endogenous variables (Hulland, 1999). The R<sup>2</sup> result shows 0.51 and 0.54 for FE UNJ-Indonesia and COB STUST-Taiwan, respectively. This indicates that the model explains 51% and 54% of the variance in entrepreneurial intentions for both groups of samples. The graphical presentation of the outcomes can be seen in Figure 1.



**FIGURE 1**  
**PLS RESULT OF R<sup>2</sup> IN BRACKETS AND ALL OF SIGNIFICANT PATH COEFFICIENTS (\*\* AT THE 0.01 LEVEL; \*\*\* AT THE 0.001 LEVEL)**

### DISCUSSION AND CONCLUSION

This study uses empirical data by contrasting undergraduate students in Jakarta-Indonesia and Tainan-Taiwan. The main goal is to compare what factors that influence the entrepreneurial intentions of students that are adopted from the Theory of Planned Behavior (Ajzen, 1991) in both countries. The results showed that the two groups did not have differences and two of the three independent variables namely Att and Pbc had a significant influence on entrepreneurial intentions. However, there were some indicators relating to At, namely to be your own boss, be able to choose your own work tasks, have the power to make decisions, have authority and Pbc, such as for me, being self-employed would be very easy that is very important to the students in Jakarta-Indonesia, and vice versa.

The value of  $R^2$  in each group also showed in almost the same amount, namely 51% and 54%, respectively. This value shows that Att and Pbc are able to influence Int both for Jakarta and Tainan students. Pbc has he stronger effect to the Int, compared to Att. Meanwhile, the Sn variable does not have a significant effect on Int in both groups, this finding reinforces previous research conducted by Krueger et al. (2000).

These findings are expected to provide an insight into several parties such as universities, governments, and companies to comprehend the factors that influence students' entrepreneurial intentions. The intention itself is a strong predictor of entrepreneurial behavior (Kautonen et al., 2015). The researches hope that in Indonesia, the entrepreneurship topics in higher education must be continued to be taught, not just in concepting and understanding the entrepreneurship but also support the entrepreneurial behavior (Indarti & Rostiani, 2008).

The respondents' age that are mostly 18-20 years old (73% and 48%) is called millennial generation (Thomas & Srinavisan, 2016), who should be the government's attention in supporting them with the relevant entrepreneurial programs. The reason is that the millennial generation has an intention to choose entrepreneurship as their future career (Satyalakshmi, 2017). Meanwhile, the companies can cooperate with these students to participate in work that is meaningful and challenging, so it can be mutually beneficial (Ng et al., 2010).

The conclusions of this research are by applying the TPB approach, the respondents from two countries in the Asian region with different economic conditions are influenced by two same variables, namely attitude toward behavior and perceived behavioral control. In contrast, the subjective norms are in line with the findings of Krueger et al. research (2000), which is insignificant to entrepreneurial intention. These significant variables can be used as an evaluation material for related parties in increasing the entrepreneurial intention of students in the future. In further research, it is recommended to explore other exogenous variables which in theory and reality have an influence on endogenous variables both mediating or moderating, including conducting further investigations why subjective norm variables do not have significance for intention.

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