



Predicting Entrepreneurial Intention among University Students Using Theory of Planned Behavior

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ABSTRACT

Investigating entrepreneurial intention using Theory of Planned Behavior has become a major stream of research in entrepreneurship literature. However, the number of studies conducted in Malaysia is still scarce. Therefore, in contributing toward this dearth in literature, this study investigated the relationship of entrepreneurial attitude, subjective norm, perceived behavior control, and entrepreneurial intention. Data was collected using questionnaires through a survey on 100 students of a local Malaysian university. Results of a regression analysis confirmed that attitude, subjective norm, and perceived behavior control are three significant predictors of entrepreneurial intention of university students. In addition to providing evidence to support the Theory of Planned Behavior, this study offered implication to stakeholders such as university educators and policy makers. Although many studies have investigated entrepreneurial intention, the number of studies conducted in Malaysia is still very little. Due to the significant role of context in explaining entrepreneurial intention, this study provided evidence of entrepreneurial intention within the context of university students in Malaysia.

Key Words: Entrepreneurship, Theory of Planned Behavior, University, Students

1. INTRODUCTION

Entrepreneurship activities play a significant role in economic and social development of a country, including Malaysia. They contribute to stronger economic growth, among others, by creating job opportunities, increasing productivity, and encouraging creativity (Iglesias-Sanchez *et al.*, 2016). The literature has consistently supported the positive effect of entrepreneurship activities to a nation (e.g., Mohamed & Jalal, 2017). For Malaysia, public initiatives on entrepreneurship are commenced as one strategy to reduce the economic gap between higher and lower income groups of society and the effort toward achieving this is continuing. The re-establishment of the Ministry of Entrepreneur Development in 2018 reflects the commitment of the Malaysian government toward entrepreneurship. As an effort to make the entrepreneurship sector flourish in Malaysia, the focus is not only given to active entrepreneurs, but future entrepreneurs too. Therefore, the framework of entrepreneurship development in Malaysia involves training and education, in addition to technology, marketing, financial, and regulatory supports. Nurturing future talent in entrepreneurship has become one of the main strategic approaches taken by government agencies to strengthen this sector, among

others, through the Malaysian Global Innovation and Creativity Center and Malaysian Ministry of Higher Education. The ministry, through the National Higher Education Strategic Plan, acknowledges the strategic importance of entrepreneurship education.

The high commitment made by the government toward entrepreneurship is not just unique to Malaysia, since almost all other countries have also followed suit. Therefore, a plethora of studies on entrepreneurship had been conducted and published, and one of the major thrusts of entrepreneurship literature is investigating entrepreneurship intention. This great attention given to the issue of entrepreneurship intention may be associated with a few justifications. Firstly, the intention-based model was used successfully by researchers in entrepreneurial studies (Wach & Wojciechowski, 2016). In other words, knowledge on the level of entrepreneurship intention would provide a valid assumption for the development of entrepreneurs in their future, although the debate on this is still going on. Secondly, study on entrepreneurship intention provides input to stakeholders such as educational and training institutions in evaluating the effectiveness of entrepreneurship programs in supporting the government agenda of establishing an entrepreneurial society. Study findings on entrepreneurial intention can allow institutions to take necessary action as an intervention strategy in increasing the number of future entrepreneurs. Thirdly, entrepreneurs can be trained. Even though there is great debate on whether entrepreneurs are born or trained, the literature confirmed that education can shape a person's interest in entrepreneurship (Wach & Wojciechowski, 2016), so understanding what makes a person become an entrepreneur can provide useful input for policy makers and training institutions in providing an effective framework for the training and development of entrepreneurs.

The literature on entrepreneurship intention has attracted attention of researchers from diverse disciplines, ranging from management, economics, marketing, psychology, social development (Jones et al., 2014), and education as well. The Theory of Planned Behavior (TPB) by Azjen (1991) has become one of the most referred theories for investigating entrepreneurial intention. The same is applied to this present study. Among the more prominent previous studies that investigated entrepreneurial intention using the TPB framework were Iglesias-Sanchez *et al.* (2016), Iqbal *et al.* (2012), Wach & Wojciechowski (2016), and Soria-Barreto et al. (2017). By conducting a study using the same theoretical background, further evaluation and comparison on the research findings would be meaningful, thus enabling this study to make meaningful theoretical contribution. This would allow a more valid comparison on findings of this study and previous studies. Although many studies had been conducted on this issue using the same theoretical background, the literature reported fairly inconclusive findings. This landscape has left a gap in the literature thus encouraging more studies on this to be conducted. It will not only add new findings to the literature but provide evidence on factors of entrepreneurship intention using samples from different regions and populations. In this study, samples were selected among university students from four different academic disciplines in Malaysia. It extends the literature due to the fact that the number of studies on entrepreneurship intention in Malaysia is still limited, thus calling for more research from different perspectives on this issue.

In addition to theoretical contribution, this study would also be significant to educators who are involved in training and nurturing future talents on entrepreneurship. The findings of this study would increase the understanding of educators involved in entrepreneurship education to focus on factors that are significant in increasing the intention of students in becoming successful entrepreneurs. The knowledge on relative importance of factors, furthermore, would help educators in crafting relevant and effective entrepreneurship curriculum and training.

2. PROBLEM STATEMENT AND RESEARCH OBJECTIVE

The participation of Malaysia in entrepreneurship is not as encouraging as compared to other countries, and this low level of entrepreneurship participation is also noticeable among graduates (Ngah, Rahman, & Buyong, 2016) and youth (Olugbola, 2017). In addition, most studies on entrepreneurial intention was carried out in developed economies (Soria-Barreto et al, 2017), leaving knowledge on entrepreneurial intention in developing economies not fully addressed. This situation deserves attention from researchers. Since the situation in Malaysia differs from other countries, thus applying findings of studies performed on other populations to the Malaysian context would require further careful evaluation. In the context of Institutional Economic Theory, the differences in entrepreneurial intention among different economic regions may differ due to different environments (Linan et al., 2011). In a study by Pruett et al. (2009), they confirmed that cultural differences have an impact on the intention to run a business.

Until today, Malaysia still lacks a comprehensive national study on entrepreneurial activities and education. This situation requires urgent attention from researchers in order to support the current development of entrepreneurial education in Malaysian universities. In recent years, the Malaysian higher education landscape has been moving consistently with what is happening around the globe, including Europe, where European higher education had considered entrepreneurship as a must, existing as a pertinent element in the academic program (Iglesias-Sanchez et al., 2016). This phenomenon is also consistent with educational institutions of other countries, as Iqbal et al. (2012) noted that many countries are now fostering entrepreneurship through education.

Literature on entrepreneurship in Malaysia is still mostly piecemeal in nature and not diverse, neither in theoretical background, methodology used, nor samples selected. For instance, Ngah et al. (2016) had limitedly studied entrepreneurial intention among business management students. The approach of narrowly focusing on business management students meant that the researcher was unable to establish a wider perspective on entrepreneurial intention. Investigating entrepreneurial intention among students from a diverse background may strengthen the understanding on entrepreneurial intention because Popescu *et al.* (2016) had confirmed the inclination of entrepreneurs differ between students from entrepreneurial discipline and general discipline. In line with this, Zhang and Cain (2017) encouraged future research to investigate entrepreneurial intention across different academic disciplines, thus this was the approach taken in this present study.

Although some researchers did perform studies on university students, the number of studies is still limited if compared to the number of student populations in universities in Malaysia. Nabi and Linan (2013) also concluded that the literature on factors of entrepreneurial intention is still scarce. Therefore, more study among university students is deemed necessary to provide evidence on entrepreneurial intention among students. In line with the problem statement, this study sought to answer the research question of how TPB may predict entrepreneurial intention of university students. To answer the research question, this study aimed to study the relationship between attitude towards entrepreneurship, subjective norm, and perceived behavior control, and entrepreneurial intention of university students.

3. ENTREPRENEURIAL INTENTION

Entrepreneurial intention is an important step before someone decides to be involved in entrepreneurship (Linan & Chen, 2009). This is the main justification on why studies on entrepreneurship intention had developed; otherwise, the study of entrepreneurial intention would become less meaningful. This is because most researchers performed studies on entrepreneurial intention by framing the research problem being related to low participation of people in entrepreneurship activities, but these studies were carried out with the assumption that entrepreneurial intention would later be translated into real action thus providing possible solutions to the problem of discouraged participation of individuals in entrepreneurship activities.

Entrepreneurs are individuals who create business, take advantage of opportunities that arise, and manage risks associated with the business to ensure the success of business by being sufficiently innovative enough to meet market expectations (Johnson, 2001). Therefore, becoming a successful entrepreneur is a planned decision made by people, with the knowledge on the benefits and risks associated with it. In addition, intention is a firm willingness of an individual to take action on something. In a nutshell, entrepreneurship intention can be defined as a strong will of a person to become an entrepreneur, exhibited by their actions towards it, such as discussing it with their close associates, planning for it, and taking early action for achieving it. This definition is embedded in other definitions of entrepreneurial intention offered by literature, such as Thompson (2009), who pointed out that entrepreneurial intention is a conscious intent to open a business in the future. However, entrepreneurial activities do not necessarily stop at registering and launching a business. It goes beyond that because entrepreneurship involves many activities to assure the sustainability of business. Therefore, to define entrepreneurial intention as the sole intention to merely launch a business, it only represents the initial stage of entrepreneurial activities.

The antecedents of entrepreneurial intention had been investigated from different perspectives and the literature on this can be categorized into two main streams, namely external factors and individual traits. Examples of external factors of entrepreneurial intention that had been investigated in the literature are economic context (Nabi & Linan, 2013) and entrepreneurial environment (Mohamed & Jalal, 2017). While Nabi and Linan (2013) provided evidence of the association between economic context and entrepreneurial intention of people in Europe, Mohamed and Jalal (2017) reported entrepreneurial knowledge and entrepreneurial environment having a relationship with entrepreneurial intention of students in their study. Although Nabi and Linan (2013) explored the economic context in predicting entrepreneurial intention, the study was based on Theory of Planned Behavior which stressed on the individual traits in predicting entrepreneurial intention. The succeeding paragraphs detail the components of Theory Planned Behavior in relation to entrepreneurial intention, namely personal attitude towards entrepreneurship, subjective norm, and perceived behavior control. It has been suggested that in investigating individual factors, a cognitive model which is Theory Planned Behavior, is a better explanation model than personality traits and demographics (Krueger *et al.*, 2000).

Firstly, personal attitude in this study refers to positive or negative attitude of a person in relation to starting a business or being involved in entrepreneurship. Evidence on the significant relationship between personal attitude and entrepreneurial intention had been revealed in previous studies such as by Iglesias-Sanchez *et al.* (2016), Iqbal *et al.* (2012), Palupi and

Santoso (2017), Soria-Barreto et al. (2017), and Wach and Wojciechowski (2016). These researchers reported that the more positive one's perception is on the benefits of being an entrepreneur, the higher his or her intention is towards getting involved in entrepreneurship.

Next, subjective norm refers to the level of support that one receives from people in their circle, like family members and friends, in taking certain actions, such as in becoming an entrepreneur. In a study using focus groups, respondents admitted that encouragement from family members and friends were among the motivating factors for them to be an entrepreneur (Marzuki et al., 2016). In addition, people in the learning environment like lecturers and fellow students are also critical in encouraging future entrepreneurs (Iqbal *et al.*, 2012). Soria-Barreto et al. (2017), and Palupi and Santoso (2017) confirmed that subjective norm has a positive relationship with entrepreneurial intention.

Meanwhile, perceived behavior control refers to one's ability in handling all the challenges related to a particular task, such as challenges of becoming a successful entrepreneur. According to Ngah et al. (2016), there is a strong relationship between confidence in performing entrepreneurial tasks and entrepreneurial intention. In other words, this indicates that an individual needs to be equipped with the necessary knowledge and skills on entrepreneurship so as to improve their confidence and capability in managing their business. Previous studies reported a significant relationship between perceived behavior control and entrepreneurial intention, such as Iglesias-Sanchez et al. (2016), Iqbal et al. (2012), Soria-Barreto et al. (2017), and Ngah et al. (2016).

Therefore, based on the Theory of Planned Behavior, it could be postulated that personal attitude, subjective norm, and perceived behavior control may lead to entrepreneurial intention. In other words, the entrepreneurial intention would be high in a person in the following situation: a person with right attitude towards entrepreneurship and being entrepreneurial, believe that people in his or her life and society at large have positive views on entrepreneurs and entrepreneurial activities, and a person who strongly believes that he or she has knowledge, skills, and resources needed to overcome all challenges and risks that may arise in managing a business. Based on the discussion narrated above, this study postulated three hypotheses, as follows:

H1: There is a relationship between attitude and entrepreneurial intention.

H2: There is a relationship between subjective norm and entrepreneurial intention.

H3: There is a relationship between perceived behavior control and entrepreneurial intention.

4. RESEARCH MODEL

The research model of this study is depicted in Figure 1. It shows the relationship between attitude, subjective norm, and perceived behavior control as independent variables and entrepreneurial intention as the dependent variable. The research model was developed based on Theory of Planned Behavior.

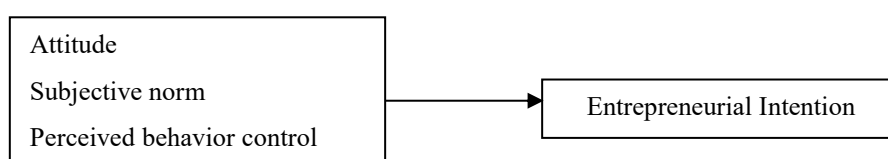


Figure 1: Research model

5. METHODOLOGY

This study collected data from students of four different academic programs, namely science, humanities, arts, and management. Based on the records, there were 288 registered students across these four disciplines. At 95% confidence level and 8% margin of error, the sample size was determined at 100. As a rule of thumb, a margin of error between 5% and 8% is acceptable for a survey. Since the questionnaires were distributed personally by the researcher to respondents, the possibility of getting unusable returned questionnaires was low, thus the number of distributed questionnaires was decided at 100 questionnaires. The research instrument used in this study was adapted from Mohd Rodhi (2016) and Soria-Barreto et al. (2017). Each item was measured by a five-point Likert scale. The number of items for each construct is as follows: attitude (7 items), subjective norm (5 items), perceived behavior control (6 items), and entrepreneurial intention (6 items). The score for each construct was calculated by averaging the score of all items related to it.

The selection of respondents was based on convenience sampling and the participation was on a voluntary basis. Table 1 reports the registered students and participating students in this study.

Table 1 Respondent Participation

Academic Program	Registered Students	Participated Students
Science	42	15
Humanities	113	39
Arts	35	12
Management	98	34
Total	288	100

Data Analysis and Findings

Table 2 reports the background of respondents. A total of 40% of respondents were male. The majority of respondents, which was 85%, were Malay. More than half of the respondents, at 51%, were students at the fourth and final year of their studies.

Table 2 Profile of Respondents

Particulars	Items	Frequency	Percentage
Gender	Male	40	40.0
	Female	60	60.0
Ethnicity	Malay	85	85.0
	Chinese	6	6.0
	Indian	6	6.0
	Others	3	3.0
	Others	3	3.0
Year of Study	1 st year	11	11.0
	2 nd year	16	16.0
	3 rd year	22	22.0
	4 th year and above	51	51.0

Table 3 reports the mean and standard deviation for all variables. Based on the mean score, it can be concluded that respondents in this study have high entrepreneurial intention (3.82/5.00), positive attitude toward entrepreneurship (3.89/5.00), received supportive feedback from other

people (3.79/5.00), and have a strong belief that they can successfully meet the demands of being an entrepreneur (3.79/5.00).

Table 3 Mean and Standard Deviation

Variable	Mean	Standard Deviation
Entrepreneurial Intention	3.82	0.70
Attitude	3.89	0.57
Subjective Norm	3.78	0.67
Perceived Behavior Control	3.79	0.55

Table 4 reports results of factor analysis used to validate and Cronbach alpha to confirm the reliability of the research instrument.

Table 4 Factor Analysis and Reliability Test

Constructs	Factor Loadings	Eigen Value	% of Variance Explained	KMO	Bartlett's Test of Sphericity (Chi square)	Cronbach alpha
Entrepreneurial intention	0.60-0.80	4.39	73.15	0.83	496.77	0.93
Attitude	0.55-0.82	3.55	50.71	0.74	360.20	0.82
Subjective norm	0.39-0.66	2.63	52.52	0.71	147.97	0.77
Perceived behavior control	0.37-0.73	3.33	55.50	0.76	248.36	0.82

Table 4 indicates that the instrument used in this study was valid and reliable. Factor loadings for all items associated with the constructs they represent were above the threshold of 0.30 (Hair et al., 1998). In other words, each item was unique to its represented construct and does not conflict with unrepresented constructs. All constructs also contain an acceptable combination of items, based on the value on Eigenvalues of above one (Hair et al., 1998). Furthermore, the value of KMO for all constructs surpassed the rule of thumb of 0.6, thus confirming the adequacy of data for factor analysis (Kaiser, 1970). The results of the reliability test indicated that all constructs were considered reliable based on the value of Cronbach alpha of above 0.70 (Nunnally & Bernstein, 1994).

6. HYPOTHESIS TESTING

The hypotheses were tested using regression analysis. Results of the regression analysis are given in Table 5. The adjusted R^2 indicated that the variance of entrepreneurial intention could be explained by three independent variables under study, at 47.7%. This was considered a reasonable value for a multiple regression model in social science. The model was significant at $p < 0.05$. All three hypotheses were also supported, as shown in Table 5, thus supporting the applicability of Theory Planned Behavior in explaining entrepreneurial intention among selected samples. The values of VIF (Variance Inflation Factor) were less than 10, thus indicating there was no serious multi-collinearity problem between the independent variables (Hair et al., 1998)

Table 5 Regression Analysis

Independent Variables	Dependent Variable = Entrepreneurial Intention			VIF	Results
	b	t	sig		
Attitude	.289	2.683	.009*	2.202	H1 = supported
Subjective Norm	.227	2.127	.036*	2.158	H2 = supported
Perceived Behavior Control	.286	2.904	.005*	1.838	H3 = supported
Adjusted R ² = 0.477; F statistics = 31.065; sig = 0.00; Durbin Watson = 1.938					

b = beta, *sig = $p < 0.05$

7. DISCUSSION AND IMPLICATIONS

This study was carried out to investigate the predictors of entrepreneurial intention. Entrepreneurial intention is a well-accepted approach in the literature in exploring the issue of participation of a society in entrepreneurial activities. As mentioned in the background and problem statement of this paper, the participation of Malaysians in entrepreneurial activities is still low, thus calling for more research to reveal and answer the question of what factors can influence a person to become an entrepreneur.

The first hypothesis of this study investigated the relationship between attitude towards entrepreneurship and entrepreneurial intention. This hypothesis was supported. Previous findings have reported similar findings, such as the study by Soria-Barreto et al. (2017), and Palupi and Santoso (2017). Being entrepreneurs has both benefits and risks. It offers entrepreneurs the freedom in venturing into new areas, applying new ideas, and exploring new possibilities and potentials of achieving high income. However, entrepreneurship has also been associated with risk, uncertainty, competition, and big challenges. All these contribute to shaping individual attitude towards entrepreneurship. The more positive a person's attitude is towards entrepreneurship, the higher the possibility that he or she will choose entrepreneurship as their career (Palupi & Santoso, 2017). Therefore, this finding encourages universities to foster more entrepreneurial activities among their students because these activities have been reported as having a positive impact on the student's attitude and perception towards entrepreneurship. As such Olugbola (2017) reported that training on entrepreneurship enables a person to develop capabilities of managing a business.

Meanwhile, the second hypothesis of this study was also supported. The results were consistent with the findings of Soria-Barreto et al. (2017), and Palupi and Santoso (2017). Thus, this would indicate that subjective norm play an important role in encouraging intention of students to become an entrepreneur. In other words, the decision of a person in venturing into entrepreneurship is proven to be influenced by how people around him or her perceive entrepreneurial activities. In the environment of higher education in Malaysia, most graduates generally still prefer to be a salaried worker rather than an entrepreneur. Therefore, the role of family, friends, and universities on this is critical. The higher the support provided to them, the higher their interest in becoming an entrepreneur (Palupi & Santoso, 2017). The encouragement for students to participate in entrepreneurship activities and acknowledging the achievements in entrepreneurial activities should be at par with their treatment toward achievement in academic or professional careers. Therefore, the practice of universities in rewarding excellent students in entrepreneurial activities is a right step to be continued.

The third hypothesis of this study was also supported, thus leading to the conclusion that perceived behavior control has a relationship with entrepreneurial intention. The same result

was previously reported by Soria-Barreto et al (2017). The demand of being an entrepreneur is different from the demand of being a paid worker, such as differences existing in terms of work hours, responsibilities, and risks. Some students may not be ready to take up the challenges of being an entrepreneur due to several factors, such as inadequate funds, lack of prior experience in doing business, lack of communication and negotiation skills, and incompetence in business skills. All these would lessen their confidence in their own capability of making the business a success, thus discouraging them from being interested in entrepreneurship (Palupi & Santoso, 2017). Based on the findings of this study, it could be concluded that a student who has higher confidence in handling business challenges, has a higher intention of becoming an entrepreneur. In order to equip students with critical knowledge and skills on entrepreneurship, training programs at universities should be more comprehensive and reflective. As such, in addition to the theoretical aspects, students should be given opportunities to have real experience of doing business by providing space and support on campus. Furthermore, the training should be reflective enough to provide students with real entrepreneurial experience, as close as possible, to reality in the marketplace, such as by providing attachment for students in successful business companies through apprenticeship programs.

8. LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

There are limitations attached to this study. Firstly, this study analyzed cross-sectional data. Although this methodology has been used and is well-accepted in the literature, its limitation of being unable to predict the causal relationship between variables must be acknowledged. In order to have a stronger conclusion on the relationship between determinants and entrepreneurial intention, multi-points of time in data collection may be a future avenue to be explored.

Secondly, this study developed a theoretical framework based upon the Theory of Planned Behavior, which is a well-covered theory in entrepreneurial literature. However, the factors that may influence intention of an individual in becoming an entrepreneur may involve other factors, such as those related to political, economic, social, and cultural systems, which is beyond the boundaries of the said theory. In the case of economic recession, an individual may not be interested or perhaps would delay the decision to become an entrepreneur due to risks and market uncertainty, limited access to resources, and higher costs of doing business. Therefore, future studies may incorporate Theory of Planned Behavior and other factors in studying entrepreneurial intention since literature on this has evolved in developing a more comprehensive predicting model of entrepreneurial intention.

9. CONCLUSION

This study revealed that attitude, subjective norm, and perceived behavior control are three significant predictors of entrepreneurial intention. In other words, the findings confirmed the Theory of Planned Behavior. However, the R^2 of 47.7% in the regression model indicated that there are other possible factors that may predict entrepreneurial intention of students, thus opening a new path for further research in the future. In addition to theoretical contributions, the findings of this study are also useful to educators in entrepreneurship for strategizing on which elements should be reinforced in entrepreneurship training. The implications of this study, as discussed in preceding sections, would contribute to the development of entrepreneurial education in Malaysia, as well as the higher involvement of future talents of Malaysian in entrepreneurship.

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