

THE IMPACT OF STUDENTS' ACADEMIC MAJOR AND ATTITUDES ON ENTREPRENEURIAL INTENTION AMONG UNIVERSITY STUDENTS

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ABSTRACT

Entrepreneurship has been recognised as being of fundamental importance for new business ventures in Malaysia. Thus, the Critical Agenda Project (National Higher Education Plan 2007-2010) is designed to address the transformation of the higher education system in developing entrepreneurship among graduate students. This exploratory study examines the influence of students' academic majors and importance of attitudes on entrepreneurial intention (EI). A total sample of 523 undergraduates was taken and they were required to answer questionnaires which consist of demographic, open-ended questions, and Likert-scale questions. The study is based on a model adapted from previous researchers and empirically tested on University Malaysia Sabah undergraduates who took the "Fundamental of Entrepreneurial Acculturation" which is a core university course. Therefore, the result of this entrepreneurship study may have a better understanding on undergraduates' intention towards entrepreneur.

Keywords: Entrepreneurial Intent; attitude; academic major; new business venture

1.0 Introduction

In the 21st century, Malaysia is faced with many challenges to become a developed nation that is both competitive and resilient. The idea of developing and fostering entrepreneurship among the nation is not new to our country. Entrepreneur is defined as an individual who starts his own business (Robert L. et al, 2008). In the US economy, entrepreneurs employ approximately 50 percent of all private sector workers and have 60 percent to 80 percent new jobs annually over the last several decades.

Entrepreneurship is identified as a key to reduce poverty and promote an equitable society. To this end, government aims to initiate an effort to transform the national education system at all levels, from pre-school through higher education. The National Higher Education Strategic Plan (2007-2010) has designed an action plan to promote and support the ideas of entrepreneurship as an attractive alternative to support employment among undergraduates in Malaysia. Moreover, an increasing rate of unemployment among new graduates is due to several factors such as some graduates are unable to demonstrate excellence across all attributes upon graduation and mismatched between market requirements and supply of graduates from the Ministry of Higher Education Institutions (HEIs).

This paper is structured into four main parts and a conclusion. Firstly, the introduction is followed by the studies of previous research on entrepreneurial intent. Secondly, a research model of the entrepreneurial intent is adopted from various research models and findings. Thirdly, the subsequent part is followed by the research methodology used and discussion of the results. Finally, the limitations and future research for the university are included in the conclusion in order for the educators and policy makers to review the action plan taken in fostering the entrepreneurship among the undergraduates.

2.0 Literature Review

According to Ucbasaran et al., (2001), there is no single theory of entrepreneurship and research conducted in the field has touched on several themes: the theory, types of entrepreneurs, the entrepreneurial process, organizational forms, the external environment, and outcomes. Shock et al., (2003) defined entrepreneurship is about entrepreneurial individuals interacting with their environment, thus discovering, evaluating and exploiting opportunities. Meanwhile, Bygrace (1989b) defined entrepreneurship as process of becoming and the change involved usually takes place in quantum leaps in a holistic process in which existing stability disappears. Gibb (1993) suggested that entrepreneurship is a set of behaviors, skills and attributes that someone may exhibit. The

Douglas (1991) also pointed out the relationship between the intention to start one's own business and individual's attitudes toward income, independence, risk, and work effort shown significant result. Consistent to the result explain an individual with a more positive attitude toward independence (autonomy) and risk are identified by a higher willingness to become entrepreneur (Douglas, 1991). Henderson and Robertson (2000) stated that the primary reasons for young respondents to consider setting up their own businesses are "being one's own boss" and "to make money". However, Douglas (1999); and Douglas and Shepherd (2002) revealed that attitude toward income (money) does not contribute significantly to the entrepreneurial intention.

Schwarz *et al* (2009) have developed a model from a survey conducted among Austrian universities students, and found a consistent results that individuals with positive general attitudes toward change and money, and attitude toward entrepreneurship may be more likely to want to be entrepreneur but general attitude toward competitiveness did not predict the entrepreneurial intention significantly. Previous study done by Rajman (2001) suggested that latent entrepreneur (individuals who often think of starting a business but do not do so for various reasons) were more willing to assume risk, prone to thrive on challenges, and they preferred business ownership than wage or salary employment. As discussed earlier by Schwarz *et al.*, (2009), attitudes have been proven to explain approximately 50 percent of the variance in intentions (Autio *et al.*, 1997).

In Robinson *et al.*, (1991) study, there is a difference between general attitudes of an individual and specific attitudes toward entrepreneurship. Robinson *et al.*, (1991) found that three general attitudinal dispositions have an effect on the students' interest to become an entrepreneur, i.e. attitudes toward change, money and competitiveness. This was supported by Shane *et al.*, (2003), that individuals possessing positive attitudes toward change are characterized primarily by the propensity to view as attractive rather than threatening towards situations that are ambiguous, changing rapidly, or unpredictable. According to Lim and Teo (2003), attitude toward money can be defined as individual who view high incomes as a symbol of success (achievement) and as means to attain autonomy, freedom and power. This concluded that individuals with a positive attitude toward money may be more likely to want to be self-employed. Another ultimate individual disposition is attitude toward competitiveness-pertains to the willingness to win (Schwarz *et al.*, 2009). A favorable attitude to towards competitiveness is thus viewed as a factor influencing entrepreneurial motivation positively (Autio *et al.*, 1997).

3.0 Methodology

3.1 Model and Hypotheses

This research model (Figure 1) was developed from various researchers in entrepreneurial intent studies. The purpose of this research is to determine the impacts of academic major and attitude factors that influence the propensity among university students to start up their own business in the future. The dependent variable is entrepreneurial intention among university students. This was supported by previous studies that have used entrepreneurial intention as the dependent variable in predicting the future entrepreneurial behavior (Schwarz *et al.*, 2009; Van Gelderen *et al.*, 2008; Turker and Selcuk, 2009; Wu and Wu, 2008; Krueger *et al.*, 2000; Chiew *et al.*, 2010; Tam *et al.*, 2011).

Academic major (faculty) plays an important role in forming entrepreneurial intention among the students. Previous study by Wu L. (2008) found that academic major is an important factor influence entrepreneurial intention identified by his studies of university students in China. Thus, it is hypothesis H1 in this study that there is a significant influence between students from a different academic major (faculty) towards entrepreneurial intention

H1: There is a significant influence between students from a different academic major (faculty) towards entrepreneurial intention

Many researchers found that attitude toward entrepreneurship is the most significant determinant for entrepreneurial intention (Schwarz *et al.*, 2009; Autio *et al.*, 2001;). According to Lüthje and Franke (2003), attitude towards entrepreneurship was the most important determinant for the intention to become self-employed and this attitude is influenced by personality (i.e. risk-taking propensity and internal locus of control) of the

questionnaires before the talk began. However, out of the 600 questionnaires distributed only 522 were returned which represented a response rate of 87 per cent. The rejected questionnaires mainly came from respondents who did not complete the questionnaire. Thus, their questionnaires were discarded.

3.3 Measurement

The questionnaires are divided into three sections. The first section comprises questions aim to gather the demographic characteristics of respondents, such as respondents' gender, age, race, marital status, school, level of education in University Malaysia Sabah, and origin. The second section of the questionnaires request respondents to rank their interest and possibility of becoming an entrepreneur in the future. The final section consists of items related to students perceived university environment and perceived educational support.

In section 2 and 3, all questionnaires items are measured using the five points Likert-scale basis. It comprises of five point Likert-scale with the levels 1 = "completely uninterested" to 5 = "strongly interested", 1 = "very improbably" to 5 = "very probably" and 1 = "strongly disagree" to 5 = "strongly agree", depending to the questions.

Accessing entrepreneurial intention questionnaires are adopted from the questionnaires used in the study by Autio *et al.* (1997) and Schwarz *et al.* (2009), and the said scale used to access attitudes and academic major factors and is slightly modified from the original scale by Jaafar and Abdul Aziz (2008) and Turker and Selcuk (2009).

obtained data are then analysed by using the Statistical Package for Social Sciences (SPSS) version 17 for Windows. The descriptive statistics such as frequency and mean are used to analyze the respondents of University Malaysia Sabah. Cronbach's alpha is used to test the items within their standardised ranges. Furthermore, multiple regression analysis is used to validate the correlation between attitudes and entrepreneurial intention among university students. This is also to test the relationship between studies majors and entrepreneurial intent. In this research, the five -point Likert scale was used to measure entrepreneurial intent. The questions consist of "How interested are you in setting up your own business? ; and " How likely it is that you are going to start your own business within the next 2 or 5 years?". This score measurement is adopted from previous researchers such as DeNoble *et al.*, (1999) and Krueger *et al.*, (2000).

4.0 Results and Discussion

4.1 Frequency and Descriptive Data

The descriptive statistics of the respondents are summarized in Table 1. Out of 523 usable questionnaires, 72.7% are female respondents, whereas the male respondents consist of 27.3%. Analysis of studies major revealed that 36.9% were from Business and Economics, 21.0% from Social Sciences, 20.5% from Psychology and Social Work, 18.0% from Education and Social Development and 2.6% from other faculties. Malay recorded the highest race majority with 38.4%, Chinese (26.2%), Kadazan/Dusun (11.1%), Indian (3.1%) followed by other races (21.2%). The first and second year students is represented about 35.6% and 62.7% respectively from the total sampling.

		Frequency	Percent (%)
Gender	Male	143	27.3
	Female	380	72.7
Major Study	Business and Economics	193	36.9
	Social Sciences	110	21.0
	Psychology & Social Work	107	20.5
	Education & Social Development	94	18.0
	Other	19	2.6
Races	Malay	201	38.4
	Chinese	137	26.2
	Kadazan/Dusun	58	11.1
	Indian	16	3.1
	Other	111	21.2
Level of Education	First Year	186	35.6
	Second Year	328	62.7

money. One of the question item from GAP have to been dropped due to the lowest value range for the Cronbach's Alphas results. Therefore, the general attitude toward competition is maintained as single item variable. However, a scale must be reliable to be valid and possess practical utility (Peterson, 1994) and unreliable scale will cause random error (type II error), so the 'true' correlations are masked (Nunnally, 1978). According to Schmidt and Hunter, (1977) if correlations are found, the reliability problem is not important.

Cronbach's Alphas for EI, ATE, GAC and GAM were 0.686, 0.588, 0.670, 0.612 and 0.633. However, the values for the all variables are slightly lower within dimensions ranging from 0.588 to 0.686, indicating that the scales had acceptable internal consistency exceeding the minimum alpha of 0.6 (Hair et al. 1998) except ATE. The constructs are deemed to have inadequate reliability. Thus, factor analysis was conducted to confirm further the reliability of the variables. The factor loadings results of all items are above the required threshold of 0.60, which indicating that the measures are acceptable. Scale means are 3.64 (SD = 0.70) for EI, 3.35 (SD = 0.76) for ATE, 3.07 (SD = 0.84) for GAC, 3.87 (SD = 0.75) for GAM, 3.87 (SD = 0.75) for GAP, and 0.3709 (SD = 0.48) for Faculty. The means, standard deviations and alphas are comparable to those obtained in the previous studies. (Refer Table 4 for details).

Variables	Factor Loadings	Items drop	Cronbach's Alpha	Mean
How interested are you to set up your own business?EI	0.79	-	0.686	3.64
How likely is it that you will set up a business during the next 2 years?EI	0.76			
How likely is it that you will set up a business during the next 5 years?EI	0.81			
I'd rather be my own boss than have a secure job(ATE)	0.62	-	0.588	3.35
I'd rather found a new company than be the manager of an existing one(ATE)	0.72			
I find working in stable and routinized environments boring(GAC)	0.78	-	0.670	3.07
I need constant change to remain stimulated, even if this would mean higher uncertainty(GAC)	0.74			
If you have a high income, that is a sign that you have success in your life(GAM)	0.72	-	0.633	3.87
It is important for me to make a lot of money(GAM)	0.83			
I work harder in situations where my performance is compared against that of others(GAP)	0.68	1	-	3.56

Table 4: Reliability Analysis Results

4.3 Regression

A multiple regression analysis is used to test the impact or influences of different faculty generally between business students and non-business students. We have recode the academic major old variables into new variables namely faculty to differentiate it into 1 (one) = business and economics and 0 (zero) = Non- business major such as social sciences, psychology & social work, education & social development and others (refer to Table 5). The purpose to recode the old variables into new variables is to differentiating between business and non-business major among the students.

Faculty	No. of Students	% Percentage
Business	329	62.9%
Non-Business	194	37.1%
Total	523	100%

Table 5: Frequence Table for Business and Non-Business Faculty

5.0 Limitations and Future Research

These findings show that student's academic major and general attitudes can predict the entrepreneurial intention factors, excluding the general attitude toward change factor among university students. The analysis of the present study confirms many previous findings in the literature. Although these studies demonstrate the antecedents of school major academic and attitude among the students are positively related to the entrepreneurial intent, there are few limitations to this research. First, the study is only limited to four different attitudes to development the correlation between attitudes and entrepreneurial intention among student. Future study may explore more attitudes (perception of personal attractiveness on the entrepreneurship) that is likely to influence the entrepreneurial intention among students.

Further, the attitude toward competition is measured by a one instead of two items based from the questionnaires. Although the correlation between attitude toward competition and entrepreneurial intention is significant, the measurement could be improved by adding new measures. Besides, the Cronbach's alpha results of the other attitudes were less satisfactory and the alpha result could be improved further also by adding new measures. As much as this research measure up its objectives, the samples are limited to the art studies of group sampling only. The research should compare relatively to the number of students with science background. Nevertheless, since this research is exploratory and research in this area is indecisive, it is still opened to other opportunity for future research. By adding the science major academic students, and testing this model more extensively, future research could be more generalizable.

6.0 Conclusions and Implications of the Study

In conclusion, this finding has highlighted the important of academic major and attitudes on the entrepreneurial intentions among the students which can give some insights to the related practioners, higher education institutions and policy makers from this study. The educators and public policy can imply various planning and development that can raise attitudes which will positively enhance entrepreneurial intention among students. Moreover, higher educational institutions have to integrate the change of mindset, skills and abilities about entrepreneurship in their general academic education in order to nurture university students' entrepreneurial intention. This is because the general attitudinal factors are different among students in terms of races, family background, family role model and educational background. Secondly, entrepreneurship education should emphasize entrepreneurial skills as well as inspiring students' interest in entrepreneurship. The extension of this model also adds value by disclosing the importance of redefining the variables that compose the educational background of the students in this research.

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