Understanding the Entrepreneurial Intention among University Students in Malaysia with a Moderating Effect of Education Major

Kah Boon Lim[1], Sook Fern Yeo[1,2], Wei Chuan Er[1]

[1]Faculty of Business, Multimedia University, Malaysia
[2]Department of Business Administration, Daffodil International University, Dhaka 1207, Bangladesh.
**Corresponding Author: yeo.sook.fern@mmu.edu.my*

Abstract

In this continuously emerging economy, the unemployment rate is a worrying issue in Malaysia. Research suggested that the encouragement of undergraduates to become an entrepreneur could help resolve this issue. The purpose of this study is to investigate how perceived behavioural control, subjective norm, attitude, and entrepreneur motivation affects undergraduates' intention to become an entrepreneur in Malaysia. This study has prepared a set of questionnaires for a sample of 243 targeted respondents. SPSS and Smart PLS were used to assess the model. This study also examines the moderating effect of an education major on the relationship of the four independent variables with the entrepreneurial intention among undergraduates in Malaysia. For the direct effects, the analysis result shows that perceived behavioural control, subjective norm, and attitude have a significant relationship with the entrepreneurial intention among undergraduates in Malaysia. Furthermore, the analysis result revealed that an education major significantly moderates the effects of both attitudes and perceived behavioural control on entrepreneurial intention among Malaysian undergraduates. The findings of this study assist the government and other relevant institutions in understanding the significant factors which must be considered to cultivate entrepreneurial intention among Malaysian undergraduates.

Keywords: attitude, education major, entrepreneurial intention, motivation, perceived behavioural control, subjective norm

1.0 Introduction

Entrepreneurship has become an important element for a country due to the rapid change of technological advances, developing economies, and increasing global competition (Ozaralli & Rivenburgh,

2016). Hisrich et al. (2002) stated that “Entrepreneurship is the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, social risks and receiving the resulting rewards of monetary and personal satisfaction and independence.” The expansion of entrepreneurship would irritate the economy of Malaysia and it would help to increase employment growth (Ariff & Abubakar, 2003). One of the instruments presented by the government is to support bolster education programmes (Ismail et al., 2009). The government has to move from a production-based economy to a knowledge-based economy if Malaysia wants to keep step with an increasingly competitive globalised economy (Institute of Strategic and International Studies, 2002).

Besides that, the newest Entrepreneurship in Malaysia (2011) stated that the Total early-stage Entrepreneurial Activity rate (TEA) in Malaysia has increased from 0.56% in 2009 to 4.96% in 2010. According to Bank Negara Malaysia (2018), the unemployment rate in Malaysia is continuing to increase from 2.9% in 2014 to 3.4% in 2017. The continuous increase in the unemployment rate in Malaysia will affect the GDP of Malaysia.

Furthermore, income inequality and poverty are two serious issues that are still happening in Malaysia (Islam et al., 2017). The government of Malaysia has launched a programme named the New Economic Model (NEM) with the aim to increase the income from at least US$15,000 to US$20,000 per capita by 2020. The hope of this programme is to enable all communities to fully benefit from the country’s wealth and meet present needs without compromising future generations (Model, 2009). Hence, the main objective of this research is to investigate the factors that affect entrepreneurial intention among undergraduates in Malaysia. Ertuna and Gurel (2011) and Solesvik (2013) found that individuals who were exposed to enterprise education programmes during their university years had higher entrepreneurial motivation than those who were not. This finding expanded on the idea that the participation of engineering students in enterprise development programmes may pique young people's interest in a career path that involves self-employment. Therefore, this study aims to study the moderating effect of an education major on entrepreneurial intention among university students in Malaysia.

2.0 Literature Review

2.1 Entrepreneurial Intention

Entrepreneurial intention is the potentiality or tendency of starting a new business (Uddin & Bose, 2012; De Pillis & Reardon, 2007). To create a new business and become an entrepreneur is a conscious and careful decision (Wilson, 2007) that needs time and planning. Thus, entrepreneurial intention can be defined as awareness and belief by people who plan to create a new business project in the future (Bird, 1988). Entrepreneurial intention has been widely investigated in the previous decades due to its importance to the advancement of many countries (Graham & McKenzie, 1995). Douglas and Fitzsimmons (2008) described entrepreneurial intention as the activity of a person's dispositions toward the results of that activities and an individual's self-efficacy.

Some studies also explored the cognitive aspects of entrepreneurial intention (Misoska et al., 2016). Some authors stated that becoming an entrepreneur is a planned behaviour and intentional, as such, the entrepreneurial intention is the best predictor of behaviour (Audet, 2004.; Tkachev & Kolvereid, 1999).

2.2 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) is used to explain and predict human behaviour in specific circumstances (Solesvik, 2013). This theoretical framework is used for anticipating behavioural intention, individual attitudes, perceived behaviour control, and subjective norms (Ajzen & Fishbein, 1980). According to Ajzen (1991), the TPB stated that behaviour is the intention to do a given behaviour. The intention is a straight antecedent of performing the behaviour. A stronger intention will come out with a better success of behaviour forecast. The intention is accepted to catch the motivational variables that impact conduct, which indicate how hard an individual will attempt and willing to plan to exert in a performance (Ajzen, 1991). Jones et al. (2013) concluded that the intention can be measured using three constructs namely subjective norm, attitudes, and perceived behavioural control (Jones et al., 2013). In the background of entrepreneurial, the subjective norms are defined as an individual's "reference group" (such as family and friends) that can affect an individual to decide whether want to become an entrepreneur or make some decision that is related to entrepreneurial (Ozaralli & Rivenburgh,

2016). Besides that, this study also stated that attitude is the degree to which an individual has positive or negative thinking about being an entrepreneur, and perceived behavioural control is an individual's self-assurance in performing as an entrepreneur and can control the entrepreneurial activity (Ajzen, 1991).

The TPB started as the Theory of Reasoned Action (TRA) in 1980. TRA is a theory used to explain any behaviour in different application contexts (Ajzen & Fishbein, 1980). TRA discussed that a person's actual behaviour can be identified by the attitude and subjective norms towards the behaviour (Ajzen, 1991). TRA only covered two variables that affect an individual's behaviour while TPB has an additional variable of perceived behavioural control (Ajzen, 1991). In conclusion, subjective norms, attitudes, and perceived behavioural control can guide the development of a behavioural intention, which also helps in the performance of the behaviour (Mohammed et al., 2017).

2.3 Perceived Behavioural Control

Ajzen (1991) described perceived behavioural control as the opportunities and resources offered to an individual to manage his behavioural achievement. Perceived behavioural control is one of the factors in the TPB. Intentions are supposed to render an individual ready to pursue a behaviour, although perceived behavioural control considers the practical imperatives and constraints that may exist (Boyd & Vozikis, 1994). Krueger (1993) advised that perceived feasibility is a significant precursor to the creation of entrepreneurial intentions.

H1: There is a significant relationship between perceived behavioural control and entrepreneurial intention among undergraduates in Malaysia.

2.4 Subjective Norms

Subjective norms are a person's perception of the views of social reference groups on whether the individual should engage in a particular behaviour (Maresch et al., 2016). Different investigations have requested the position of three essential reference groups namely nearest family members, companions, and other imperative individuals concerning the entrepreneurial profession of the respondent (Kolvereid & Isaksen, 2006). "The social norm measure is a function of the

perceived normative beliefs of significant others, such as family, friends, and co-workers, weighted by the individual's motive to comply with each normative belief" (Elfving et al., 2009).

H2: There is a significant relationship between subjective norms and entrepreneurial intention among undergraduates in Malaysia.

2.5 Attitude

An individual's valuation of the personal attractiveness of creating a new business is known as an attitude or perceived desirability (Weerakoon & Gunatissa, 2014). Attitude refers to how much the individual holds a negative or positive personal assessment about being an entrepreneur (Ajzen, 1991). Liñán and Chen (2009) stated that "It includes not only affective (I like it, it is attractive), but also evaluative considerations (it has advantages)". Conceptualisation of this concept has been finalised with various methodologies, for example, asking respondents to answer a survey or questionnaire or creating indexes (Weerakoon & Gunatissa, 2014). For example, "How appealing is the idea of one day starting your own business?" (Audet, 2004) and "How favourable is being an entrepreneur?" (Giagtzi et al., 2013).

H3: There is a significant relationship between attitude and entrepreneurial intention among undergraduates in Malaysia.

2.6 Entrepreneurship Motivations

People who have highly entrepreneurial motivation are probably becoming an entrepreneur (Shane et al., 2003). Solesvik (2013) found three models that can be used to explore people's entrepreneurial motivation. These three models are the cognitive model, economic-based model, and process model. The cognitive model concluded that motivation can be conceptualised as the product of expectancy, instrumentality, and valency (Segal et al., 2005). The economic-based model suggested the role of risk in creating entrepreneurial motivations (Solesvik, 2013). The process model reflected the impact of higher levels of predictable rewards from entrepreneurial activity versus salaries (Van Praag & Cramer, 2001).

Besides that, from the article, Mcclelland et al. (2005) introduced the "pull" theory and the "push" theory to explain entrepreneurial motivation. The "pull" theory is about people who were concerned with

entrepreneurial activities looking for self-fulfilment, wealth, independence, and other desirable consequences (Segal et al., 2005). Orhan and Scott (2001) stated that people who want to become entrepreneurs are due to the "pull" factors rather than the "push" factors.

H4: There is a significant relationship between entrepreneurship motivation and entrepreneurial intention among undergraduates in Malaysia.

2.7 Education Major

Several studies have combined the education major into their research model to explore entrepreneurial intention (Karhunen & Ledyaeva, 2010; Kuckertz & Wagner, 2010; Liñán & Chen, 2009; Tkachev & Kolvereid, 1999). Taking an education program in a business major has shown a significant variable that explains entrepreneurial intention (Solesvik, 2013). Some studies have also mentioned that students majoring in businesses reported an advanced level of entrepreneurial intention (Karhunen & Ledyaeva, 2010; Tkachev & Kolvereid, 1999).

Entrepreneurship education has been speedily growing internationally since entrepreneurship is an element of the economics of a country (Martínez et al., 2010). From the article, Nabi and Liñán (2011) have mentioned that better education and entrepreneurship education will help to encourage entrepreneurial activity among undergraduates. Jaafar and Aziz (2008) mentioned that "individuals attending entrepreneurship courses have a higher tendency to start their businesses at some point in their career than those attending other courses." Besides that, Albert et al. (1991) also found that 25% of students who completed an entrepreneurship education program have started their businesses.

H5: Education major moderates the relationship between perceived behavioural control and the entrepreneurial intention among Malaysian undergraduates.

H6: Education major moderates the relationship between subjective norms and the entrepreneurial intention among Malaysian undergraduates.

H7: Education major moderates the relationship between attitude control and entrepreneurial intention among Malaysian undergraduates.

H8: Education major moderates the relationship between entrepreneurship motivation and the entrepreneurial intention among Malaysian undergraduates.

3.0 Methodology

The data for this study were collected using the convenience sampling method. The minimum required sample size based on G*Power calculation is 138 respondents. However, 243 targeted respondents from public and private higher education institutes in Melaka, Johor, and Selangor completed a set of self-administered questionnaires for data collection purposes. The four independent variables of this study are perceived behavioural control, subjective norms, attitude, and entrepreneurship motivation while the dependent variable is entrepreneurial intention. Education major acts as the moderating variable in this study. The education major variable is measured on a nominal scale. All questionnaire items of these variables are measured based on the five-point Likert scale (1=strongly disagree to 5=strongly agree). The questionnaire items of all the variables were adopted from Solesvik (2013) to ensure content validity. The collected data were inserted into SPSS version 25 followed by using Partial Least Square Structural Equation Modelling (PLS-SEM 3.2.7) to assess the hypothesis.

4.0 Results and Discussion

This study included 243 participants with 55.97% of them being female and 44.03% being male. The respondents are divided into four age groups, which are 18 to 19 years old, 20 to 21 years old, 22 to 23 years old, and 24 to 25 years old. Majority of the respondents were in the age between 20 to 21 years old. There were more Chinese respondents (86.83%) compared to Malay respondents (6.17%) and Indian respondents (7%). Majority of the respondents who answered this survey are majoring in Business (51.85%) followed by Law (17.28%). While 2.47% of the respondents are majoring in other courses. A summary of the respondents' profiles is presented in Table 1.

Table 1 : Summary of The Respondents' Profiles

Demographic Profile	Frequency	Percentage (%)
Gender		
Male	107	44.03
Female	136	55.97
Age		
18 – 19	90	37.04
20 – 21	102	41.98
22 – 23	49	20.16
24 – 25	2	0.82
Ethnicity		
Malay	15	6.17
Chinese	211	86.83
Indian	17	7.00
Education Major		
Law	42	17.28
Business	126	51.85
IT	28	11.52
Engineering	16	6.59
Accounting	25	10.29
Others	6	2.47

Two models, which are the measurement model that relates indicator items to their relevant latent constructs and the structural model which relates diverse latent constructs to each other, were utilised in PLS analysis (Hair et al., 2013). Hair et al. (2013) suggested performing a two-step analysis. In the first stage, the validity and reliability of the measurement model will be examined. Then, the analysis is followed by an examination of the structural model to study the research hypotheses. The summary findings of the measurement model assessment against the criteria of internal consistency, indicator reliability, and convergent validity with the values of composite reliability (CR), outer loadings, and AVE are summarised in Table 2. Our results show that all of the item loadings are in the range of 0.613 to 0.904. According to Hair et al. (2014), the constructs' validity is convergent when the factor loading of the items is greater than 0.5. This indicates that all item loadings of this study fulfilled the minimum requirement. The convergent validity of the variables was examined by the CR and AVE values. For this study, the value of the CR for all variables is above 0.7 and the AVE value is above 0.5. This result

indicates that the convergent validity of all variables has been fulfilled. Table 3 illustrates the result of the square root of the AVE value for each construct that has exceeded its correlation with other constructs. According to Fornell and Larcker (1981), this result concludes that our model is sufficient to support discriminant validity at the construct level. All Heterotrait-Monotrait (HTMT) criteria values were lower than 0.85 as shown in Table 4. In summary, discriminant validity was verified and proved (Kline, 2015). The VIF values range from 1.273 to 2.738. Hence, the multicollinearity problem was not substantial in this study. According to Hair et al. (2010), multicollinearity occurs if the variables show a VIF of 10 or higher.

Table 2 : PLS Result of Convergent Validity Measures

Constructs	**Question Items**	**Loadings**	**AVE**	**CR**
Perceived Behavioural Control	PBC1	0.735	0.546	0.857
	PBC2	0.763		
	PBC3	0.691		
	PBC4	0.728		
	PBC5	0.773		
Subjective Norms	SN1	0.877	0.790	0.918
	SN2	0.904		
	SN3	0.885		
Attitude	Att1	0.757	0.673	0.911
	Att2	0.866		
	Att3	0.754		
	Att4	0.876		
	Att5	0.840		
Entrepreneurship Motivation	EM1	0.775	0.676	0.912
	EM2	0.871		
	EM3	0.839		
	EM4	0.772		
	EM5	0.847		
Entrepreneurial Intention	EI1	0.727	0.484	0.823
	EI2	0.767		
	EI3	0.725		
	EI4	0.636		
	EI5	0.613		

Table 3 : Result of Fornell Lacker Criterion for Discriminant Validity

	Attitude	**Entrepreneurial Intention**	**Entrepreneurship Motivation**	**Perceived Behavioural Control**	**Subjective Norms**
Attitude	0.820				
Entrepreneurial Intention	0.635	0.696			
Entrepreneurship Motivation	0.601	0.539	0.822		
Perceived Behavioural Control	0.591	0.530	0.527	0.739	
Subjective Norms	0.580	0.632	0.379	0.507	0.889

*The diagonal values are the square root of AVE

Table 4 : Result of Heterotrait-Monotrait Ratio (HTMT) for Discriminant Validity

	Attitude	**Entrepreneurial Intention**	**Entrepreneurship Motivation**	**Perceived Behavioural Control**	**Subjective Norms**
Attitude					
Entrepreneurial Intention	0.771				
Entrepreneurship Motivation	0.684	0.665			
Perceived Behavioural Control	0.707	0.690	0.633		
Subjective Norms	0.661	0.783	0.432	0.608	

Next, the structural model was measured through Smart-PLS bootstrapping. The structural model was evaluated by R^2, beta, and the corresponding t-values (Hair et al., 2014). The bootstrapping process was applied to obtain the direct and moderating effect within the variables (Hair et al., 2014; Soto-Acosta et al., 2016). The R^2 value of this model is 0.576. This indicates that 57.6% of the total variation of entrepreneurial intention can be explained by the independent variables.

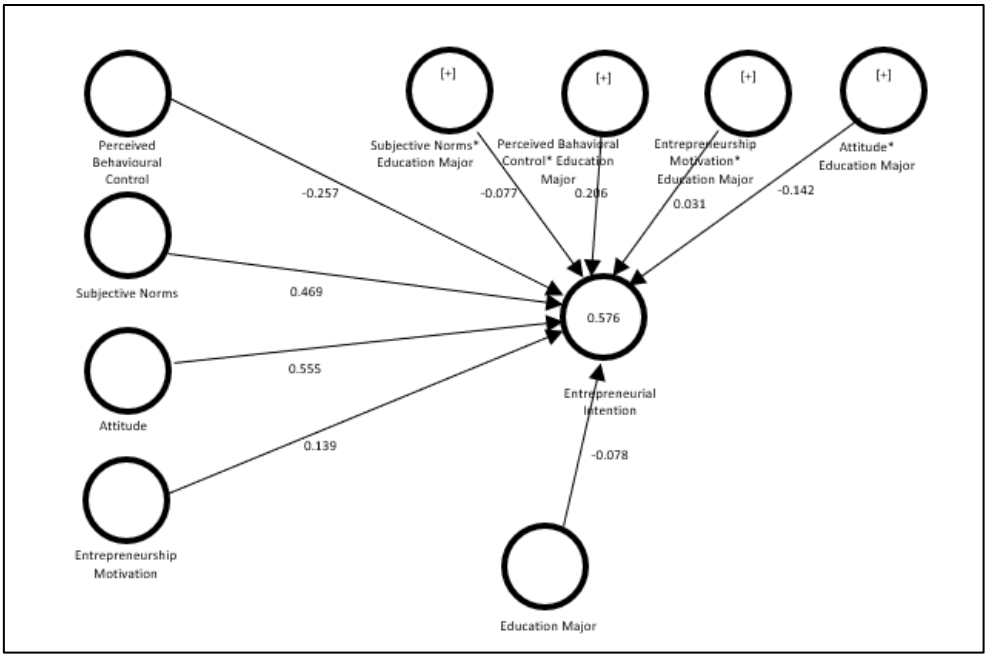

Figure 1 : Structural Model

The bootstrapping analysis result for both the direct and indirect effects is summarised in Table 5. For the direct effects result, attitude, perceived behavioural control, and subjective norms are significantly related to entrepreneurial intention at a minimum of 5% significance level. Hence, we can conclude that H1, H2, and H3 are supported. However, entrepreneurship motivation does not significantly support entrepreneurial intention. For the result of indirect effect, an education major significantly moderates the relationship between perceived behavioural control and entrepreneurial intention, and this supports the H5. Besides that, an education major also significantly moderates the relationship between attitude and entrepreneurial intention, which supports H7.

Table 5 : Hypothesis Testing Results

Effect	Relationship	Std Beta	Std Error	T-value	Decision
Direct	H1: Perceived Behavioural Control -> Entrepreneurial Intention	-0.257	0.130	1.984*	Supported
	H2: Subjective Norms -> Entrepreneurial Intention	0.469	0.106	4.409**	Supported
	H3: Attitude -> Entrepreneurial Intention	0.555	0.140	3.963**	Supported
	H4: Entrepreneurship Motivation -> Entrepreneurial Intention	0.139	0.164	0.850	Not supported
Moderating	H5: Perceived Behavioural Control*Education Major -> Entrepreneurial Intention	0.206	0.064	3.205**	Supported
	H6: Subjective Norms* Education Major -> Entrepreneurial Intention	-0.077	0.047	1.634	Not supported
	H7: Attitude*Education Major -> Entrepreneurial Intention	-0.142	0.064	2.224*	Supported
	H8: Entrepreneurship Motivation*Education Major -> Entrepreneurial Intention	0.031	0.068	0.460	Not supported

**p<0.01, *p<0.05, Bootstrapping (n=5000)

Our data analysis showed that perceived behavioural control has a significant relationship to the entrepreneurial intention among undergraduates in Malaysia. This result is parallel to the study conducted by Mohammed et al. (2017) whereby the study also mentioned that perceived behavioural control helps to improve the prediction of behaviour. The second hypothesis investigates the relationship between subjective norms and entrepreneurial intention

among university students in Malaysia. This finding was supported by Karimi et al., (2012) and Kolvereid and Isaksen (2006). The previous researcher has stated that subjective norms were significantly associated with entrepreneurial intention. Our result also showed that there is a significant relationship between attitude and entrepreneurial intention among undergraduates in Malaysia. This result is consistent with previous research findings. Mohammed et al., (2017) and Dinc and Budic (2016) also have shown that there is a significant relationship between attitude and entrepreneurial intention. However, our result showed that entrepreneurship motivation has no significant relationship with entrepreneurial intention and hence H4 is rejected. For the moderating effect of the education major, our result indicated that an education major has a moderating role in the relationship of perceived behavioural control and attitude towards entrepreneurial intention. On the contrary, an education major does not have moderating effects on subjective norms and entrepreneurship motivation towards entrepreneurial intention among university students in Malaysia.

5.0 Conclusion

This study aims to determine the factors that affect entrepreneurial intention among undergraduates in Malaysia. Government bodies and relevant organisations should aware of students' concerns and develop a programme that would directly benefit students in the future. Furthermore, the subjective norm is one of the significant factors that will influence the entrepreneurial intention among undergraduates in Malaysia. Thus, this subjective norm has the confident role of the family in starting a business (Utami, 2017). Besides that, the findings of this research showed attitude and perceived behavioural control affect the entrepreneurial intention among undergraduates in Malaysia. Students who have good overall insights into the concept of entrepreneurship will have the entrepreneurial intention or might start their own business. Therefore, media, government or other relevant institutions should promote entrepreneurship frequently among students to increase their intention. Our result revealed that entrepreneurship motivation does not have a significant relationship withs entrepreneur intention, and education majors also do not have moderating effects on this variable towards entrepreneur intention. We believe that this may be due to the background of our respondents since non-business background students covered around 48.15% of the total respondents. Solesvik

(2013) mentioned that enterprise education programmes could stimulate entrepreneurial motivation. This type of programmes should be offered to non-business students as part of their programme curriculum. Therefore, we suggest that the university may consider including the enterprise education programmes for all programme majors as this might evoke early interest in self-employment career paths among the youth.

Despite the inspiring results, this study also has several limitations. First, this study only focuses on three states in Malaysia. Therefore, it is suggested to expand this study to other states. Second, education major was measured on a nominal scale in this study. In the future, we propose that this variable should be measured using a dichotomous scale in different study approaches.

Lastly, this study has contributed to the literature related to entrepreneurship motivations and intention. This study has investigated the moderating effect of an education major with the extended insights from the TPB. Furthermore, this study also considered the perceived entrepreneurship motivation profiles of university students in Malaysia.

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Appendix

Variable	Item	References
Perceived Behavioral Control	PBC1: If I want to, I could easily become an entrepreneur. PBC2: As an entrepreneur I would have sufficient control over my business. PBC 3: There are very few circumstances outside my control that may prevent me from becoming an entrepreneur (excluded). PBC 4: It is entirely up to me whether or not I become an entrepreneur. PBC5: Having confidence in the ability to manage the business.	Solesvik (2013); Utami (2017)
Subjective Norms	SN1: My closest family members think that I should pursue a career as an entrepreneur. SN2: My closest friends think that I should pursue a career as an entrepreneur. SN3: People that are important to me think that I should pursue a career as an entrepreneur.	Solesvik (2013)
Attitude	Att1: Being an entrepreneur implies more advantages than disadvantages to me. Att2: A career as an entrepreneur is attractive for me. Att3: If I had the opportunity and resources, I would love	Solesvik (2013)

Variable	Item	References
	to start a business. Att4: Being an entrepreneur would give me great satisfaction. Att5: Among various options, I would rather be an entrepreneur.	
Entrepreneurship Motivation	EM1: Most people consider investing in their own small or medium sized enterprise and its management a desirable career choice. EM2: Most people start their own business, because they want to be free and independent. EM3: Most people start their own business, because they have good ideas and want to realize them. EM4: Most people start their own business to be better off financially. EM5: Most people start their own business, because they want to be successful.	Solesvik (2013)
Entrepreneurial Intention	EI1: I am ready to do anything to be an entrepreneur. EI2: My professional goal is to become an entrepreneur. EI3: I am determined to create a business venture in the future. EI4: I have very seriously thought about starting a firm. EI5: I intend to start a firm within five years of graduation.	Solesvik (2013)