Entrepreneurial Intention (EI) among Undergraduate Students in International Islamic University Malaysia (IIUM): Empirical Evidence

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ABSTRACT

Recently, entrepreneurship receives most attention than ever before. The importance of inculcating entrepreneurship education among young and fresh graduates cannot be over-stressed. Similarly, studies show that student who participates in entrepreneurship program is more willing to start his own business than a student who does not undergo any of these programs. The recent financial crisis serves as lessons for employees and potential graduates that should no longer rely on big companies. The objective of this paper is to investigate the factors that determine entrepreneurship intentions among University students. The paper employed Theory of Planned Behavior (TPB), to examine the students’ intentions to start up small scale businesses. Based on the sample size of 222, it was found that power of behavioral control and personal attitude are the major determinants to start up. Other interesting findings revealed in the study were the mediating roles of personal attitude and power of behavioral control. The research utilizes Structural Equation Modeling (SEM) in the analysis and Amos software version 18 to test the hypotheses.

INTRODUCTION

Entrepreneurship defines in a narrow sense means to start a new independent business. If defined in a broad sense however, it means a work attitude that emphasizes innovativeness, initiative, and risk taking (Gelrender et al, 2006). This obviously would reduce the on job training cost to acquire skills for the workplace as well as facilitate job creations and economic growth.

Recently, entrepreneurship receives most attention than ever before. The importance of inculcating entrepreneurship education among young and fresh graduates cannot be over-stressed. Similarly, studies show that student who participates in entrepreneurship program is more willing to start his own business than a student who does not undergo any of these programs (Linan, 2008, Gelrender et al, 2006). The recent financial crisis serves as lessons for employees and potential graduates that should no longer rely on big companies or salaried employment. The objective of this paper is to investigate the factors that determine entrepreneurial intention among University students. The paper employed Theory of Planned Behavior (TPB), to examine the students’ intentions to start up small scale businesses.

Entrepreneurship is not synonymous to venture creation or small business management but with creativity and change. This stresses need for educational institution to inculcate the right attitude for students to realize their entrepreneurial capabilities and potentials. There are various academic and government programs aimed at improving entrepreneurial capabilities across the globe.

According to Gibb (1996) the rising interest to entrepreneurship is mainly due to their role in job creation and economic development, strategic adjustment/realignment and deregulation and privatization of national economies. However, the recent 2008-2009 volatility in the financial market that causes financial crisis has called for more resilience economic undertakings at all levels. In fact, since 1980s, Peters (1987) predicted that the “world turned upside down.” The ultimate result would be changed in the structure of job markets. Realizing the importance of entrepreneurship, government encourages teaching enterprise in schools, colleges and universities especially in the US, UK, and other Western countries (Kirby and Ibrahim, 2010).
Entrepreneurial intention is an important orientation of becoming an entrepreneur in a society. There are several models that have explained Entrepreneurial Intention in small scale businesses. However, most of these theories are tested in developed countries and few have focused in developing, and even fewer in Organization of Islamic Conference member countries (OIC) despite the need for entrepreneurial orientation for the Muslim youths in those countries. This is more pronounced in countries with high labor force concurrently facing high unemployment. This could be argued to be one of the causes of Arab spring among others.

The paper is organized into five main sections. Section two presents theoretical framework and the hypotheses to be tested. Section three explains the methodology for the empirical analysis. Section four presents the results and discussions and finally section five contains some concluding remarks.

**Theoretical Framework:**
Entrepreneurship literature has focused on business students; however, both business and non-business students face the same unprecedented development in the labor market due to recent economic and financial turmoil. This necessitates a shift in focus to provide alternative employment opportunities for all. The study finds it important to determine the students’ career choices and intentions so as to serve their educational needs (Peterman and Kennedy, 2003). Previous studies focused on some specific characteristics such as demographic, personality variables, and social context but the outcome was characterized with low explanatory power thus unable to provide guidelines for policy intervention (Gelrender et al., 2006, Katz, 1992, Linan, 2008).

Recent studies on entrepreneurial intention is dominated by two theories vis-à-vis Theory of Planned Behavior by Ajzen (1988, 1991) and the model proposed by Shapero and Sokol (1982). The later explain EI from perceived desirability, perceived feasibility and propensity to act. The former explain EI from attitudinal behavior of the person, subjective norms and perceived behavioral control. The two are overlapping each other but they are not the same.

Theory of Planned Behavior states that attitudes, perceived behavioral control and subjective norms determine intention, which in turn, determines behavior, (Ajzen 1991, Gelrender et al., 2006). The theory was an extension of Theory of Reasoned Action (TRA) developed Fishbein and Ajzen (1975) and attracts research in various human endeavors. The theory was applied in health, insurance, business start-up and in studying consumer behavior. However, the theory assumes behavior under volitional control. This assumption may not hold as many behaviors are, apart from internal factors, also determine by external forces and sometimes inhibits the behavior. This particular limitation necessitate modifications of TRA to what is known as TPB as applied in the current research.

Gelrender et al., (2006) provide detail explanations of entrepreneurial intentions among business students in four different universities. The study provides evidence for the usefulness of the TPB in explaining EI. The finding is also consistent with the previous result whereby the composite measures in the theory explain between 35 to 41 percent of the variance in Entrepreneurial Intention. Contrary to the previous studies, the authors found committal measures to explain attitude to be significant just as non-committal explain PBC. Factors such as subjective norms were unstable Gelrender et al., 2006). However, their study, as previous studies focuses in the developed world where there is advancement in entrepreneurial education.

Research evidences suggest the increasing relevance of graduate entrepreneurship toward national competitiveness as a dynamic resource for local and regional economic growth and development (Nabi et al., 2006, Gelrender et al., 2006, Millman, et al. 2010). For instance, the growth rate experienced by China made her to emerge as the fourth fastest growing economy in 2005. This was led by the small and medium enterprises as well as entrepreneurialism in the nation (Millman et.al, 2010).

In Malaysia, one of the leading OIC member countries and where International Islamic University Malaysia is located, SMEs contributed 32 percent of GDP in 2006 (Ampon, K. and Wafa, nd). The contribution could be even more if the graduating students are willing to participate in small scale businesses. Small entrepreneurial firms are responsible for half of all innovation and are credited with 95 percent of radical innovation that took place after WWII (Ampon, K. and Wafa, nd). This would not be possible without the enterprising culture and specially intention of the entrepreneurs. Obviously, this comes with awareness and education on entrepreneurship. In fact many universities nowadays establish research centres for entrepreneurial development to accelerate ventures and achieve overall economic growth and welfare of the society. However, entrepreneurs face some challenges such as limited managerial abilities and limited resources to start-up (Ampon and Wafa, nd).

**Variables and Hypothesis:**
This section reviews the variables to be tested in the model. Hypotheses were developed based on the Theory of Planned Behavior (TPB).
Entrepreneurial Intention in the Model:
This refers to the willingness to start up business and the outcome of which is the actual start up. It is the dependent variable in the model. Intentions represent a person’s motivation in the sense of his or her conscious plan or decision to exert effort to enact a behavior (Corner and Armitage, 1998, cited in Gelrender et al., 2006). Intentions are argued to work very much like belief. The strength of the intended action depends on the individual’s beliefs about the outcome of that action and his evaluation of those outcomes. Assessment will strengthen entrepreneur’s intention to invest/start-up if it is perceived to make the entrepreneur highly competitive (Chell, 2001, p.115). There are varying opinions on how to measure intention especially when dealing with undergraduate students that some students are undecided about career preferences and others suffer from goal instability. It is therefore recommended to use both committal measures such as probability that I will start business in 5 years and non-committal measures such as ‘do you think you will ever start a business’ (Gelrender et al., 2006).

Attitudinal variable in the model:
The dimensions covered in attitudinal variable include cost and benefit evaluation; attractiveness; resources; satisfactions; and preferences of the students (Gelrender et al., 2006, Paco., et al., 2011).

Hypothesis 1: Students who attach higher importance and positive preferences to start-up will more often have intentions to start-up.

Perceived Behavioral Control in the model:
PBC can be referred as the perception of the ease of difficulty of becoming an entrepreneur. Some of the indicators covered are the perceived easiness, preparedness; knowledge and relevant skills; as well as confidence in the positive outcome of the business.

Hypothesis 2: Students who rate themselves higher in terms of preparedness; perceived easiness; skills and resources will more often have intention to start a business.

Subjective Norms:
SN refers to the influence the society has on the individual and his actions. As in Paco et al., 2011 and Muhammad, 2012 the variable covers approval/disapproval of one’s own family; relatives; colleagues; and religious teachers on a business start-up. While some societies are highly entrepreneurial other are ranked low (Linan, 2008). This has implications for individuals and potential entrepreneurs.

Hypothesis 3: Students with more positive subjective norms toward business start-up will more often have intentions to start up a business.

Methodology:
3.1 Instrument, Sample size and sampling technique:
With reference to the previous study on entrepreneurship literature, self-administered questionnaire was designed and distributed among undergraduates’ students in International Islamic university Malaysia in the month of March, 2012, academic year 2011/2012. A sample of 222 respondents was used in the study. This is considered large enough for this kind of studies (Kline, 2005). According Kline (2005) also it was suggested that a minimum of 200 for a path model with 20 indicators should be used. Of these respondents (222), 118 were from Engineering Faculty and the rest from other faculties including Faculty of Economics and Management Sciences, Education; Islamic Revealed Knowledge and Human Sciences (IRKHS).This is convenience sample commonly used in entrepreneurship research (Linan, 2008).

The questionnaire was adopted and adapted from Paco et al. (2011). The instrument comprises two main sections as: the demographic variables and direct measures of Entrepreneurial Intention i.e. personal attitude; the subjective norms; and the perceived behavioral control.

3.2 Data Analysis Techniques:
The data was analysed using Statistical Package for Social Sciences (SPSS version 18.0) and Amos version 18.0.

The data was first analysed using the SPSS to examine the reliability and the validity of the data. Based on Confirmatory Factor analysis through Principal Component Analysis five factors of interest were identified (Adewale, 2011). This was followed by the descriptive analysis on the characteristics of the respondents. Most studies on behavioral intention use regression analysis to determine the predictive power of the model. However, the method does not allow full evaluation of the model measures in the explanation of behavioral intention (Paco., et al., 2011). Contrary to these authors the current study employs structural equation modeling. The SEM allows simultaneous examination of whether the model and the hypothetical constructs fit the data (Paco et al. 2011, Hoyler and Smith 1994). SEM has evolved into a mature methodology to investigate theory-derived structural/ causal hypotheses (Mueller, and Hancock, 2008, p. 488).
There are four stages to accomplish SEM analysis as (a) initial model conceptualization: this involves theorization or justification that gave rise to a particular model, (b) parameter identification and estimation: this involves hypothesizing the structural relationship expressed as population parameters that conveys both magnitude and sign of those relations, (c) data model fit evaluation: this involves assessing the data-model fit using various fit indices such as absolute indices that assess the overall discrepancy between observed and implied covariance matrices which suggest that fit improves as more parameters are added to the model and degree of freedom fall (e.g. Chi-square and Standardized root mean squared residual SMRC); Parsimonious indices that assess the overall discrepancy between observed and implied covariance matrices considering the complexity of the model and the contribution of an additional parameters (e.g. Root means square error of approximation RMSEA); and incremental indices that evaluate absolute or parsimonious fit relative to a baseline model (e.g. Comparative fit indices CFI) d) potential model modification that tries to correct misspecification of the model. These are essentials for any study using SEM (Mueller and Hancock, 2008, p. 490).

In terms of conducting the analysis of the result the research uses two-phase approach. That is measurement phase followed by a structural/causal relations phase as in the best practices rather than all in one SEM analysis (Mueller and Hancock, 2008, p. 495). The result of CFA in the first phase reveals a well-fitting constructs and the items are all loaded above 0.6 except 1 item around 0.43. The item was however, loaded above 0.5 in factor analysis, thus we decide to retain the item.

Table 1: KMO And Bartlett’s Test

<table>
<thead>
<tr>
<th>KMO and Bartlett's Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</td>
</tr>
<tr>
<td>Bartlett's Test of Sphericity</td>
</tr>
<tr>
<td>Approx. Chi-Square</td>
</tr>
<tr>
<td>Df</td>
</tr>
<tr>
<td>Sig.</td>
</tr>
</tbody>
</table>

The data obtained was subjected to data cleaning, sampling adequacy and test of normality using kurtosis. The KMO and Bartlett’s test of Sphericity were all acceptable and the cronbach alpha for the constructs were all above 0.7 indicating they are very strong and that shows reliability of the instrument (Nouris, 2006). The factor loadings also were very high and they are loaded distinctly different from each other which mean the constructs are not measuring the same thing. The overall explanatory power was 63 percent.

Table 2: Factor Analysis Test

<table>
<thead>
<tr>
<th>Construct</th>
<th>Alpha</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Intention (α = 0.924)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Attitude (α = 0.864)</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Subjective Norm (α =0.749)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Power of Behavioral Control (α = 0.865)</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ computation

Table 2 represents the result of the factor analysis. It shows the construct, the cronbach alpha as well as the number of items in the questionnaire. From the result, it shows that constructs and their measurements are highly reliable.

Table 3: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>117</td>
<td>52.7</td>
<td>Entrepreneurship Course</td>
<td>25</td>
<td>11.3</td>
</tr>
<tr>
<td>Female</td>
<td>105</td>
<td>47.3</td>
<td>Yes</td>
<td>197</td>
<td>88.7</td>
</tr>
<tr>
<td>Age</td>
<td>19</td>
<td>2.3</td>
<td>Leadership and management</td>
<td>211</td>
<td>95.0</td>
</tr>
<tr>
<td>19</td>
<td>127</td>
<td>55.4</td>
<td>Career Choice</td>
<td>11</td>
<td>5.0</td>
</tr>
<tr>
<td>20</td>
<td>53</td>
<td>23.9</td>
<td>Lawyer</td>
<td>11</td>
<td>5.0</td>
</tr>
<tr>
<td>21</td>
<td>36</td>
<td>17.0</td>
<td>Accountant</td>
<td>13</td>
<td>5.9</td>
</tr>
<tr>
<td>22</td>
<td>24</td>
<td>10.8</td>
<td>Finance/economist</td>
<td>24</td>
<td>10.8</td>
</tr>
<tr>
<td>Kulliyyah</td>
<td>26</td>
<td>11.7</td>
<td>Education</td>
<td>26</td>
<td>11.7</td>
</tr>
<tr>
<td>LLB</td>
<td>18</td>
<td>8.1</td>
<td>Engineer</td>
<td>99</td>
<td>44.6</td>
</tr>
<tr>
<td>KENMS</td>
<td>48</td>
<td>21.6</td>
<td>Entrepreneur</td>
<td>32</td>
<td>14.4</td>
</tr>
<tr>
<td>IRKHS</td>
<td>20</td>
<td>9.0</td>
<td>Others</td>
<td>17</td>
<td>7.7</td>
</tr>
<tr>
<td>Education</td>
<td>5</td>
<td>2.3</td>
<td>Intention to pursue MBA</td>
<td>5</td>
<td>2.3</td>
</tr>
</tbody>
</table>
The result from table 3 shows that 117 or 53% of the respondents were male and 105 or 47% female all of which are of the range of age between 19-24 years old. It also shows that the respondents cut across Kulliyah from Economics to Human science and to engineering. This may help to understanding if there are some existing differences based on the academic background of the respondents in terms of business start up. It should be noted that majority of the respondents are from engineering faculty (53%) followed by economics faculty with 21% and IRKHS with only 9%.

In terms of entrepereneruship course taken only 25 respondents or about 11% have mentioned that they took it as course. The rest are either not taken it yet or it does not exist for them depending on the faculty of the student. However, almost all of the students (95%) have taken leadership and management skills, a course design to harness the soft skills of the students in aspects of time/resource management, critical thingking, innovations, communications, leadership and ventures as well as stress/crisis management.

However, with regard to their chosen career, the result shows that only 32 respondents or about 14% were interested to be entrepreneurs. The rest are inclined toward their professions such as accountants, engineers and educationists. This may indicate their low awareness about entrepereneurship, because, an entreprener can emerge from any discipline. Thus there may be need to improve their skills to relate entrepreneurial activity within the spectrum of different disciplines rather than seen it as an alternative discipline that demands alot from them. Incorporation of entrepring culture could be done in the curriculum itself.

RESULTS AND DISCUSSIONS

The output of the model reveals an acceptable model. The table below shows the threshold and the obtained result. Initially, it was observed the results show logical direction in all the relationships. It can also be observed that all the results have met the minimum acceptance level. Following Mueller and Hackock (2008) CMINDF used instead of chi-square that is sensitive to sample size. The result of CMINDF was 2.09 quite below the 5 maximum cut off. The root mean square error RMSEA was expected to be 0.08 or below and the obtained RMSEA was 0.071. Other fit indices observed were Comparative fit indices CFI which reveals 0.92 value and TLI that has 0.91 values. Therefore, overall the model fits the data and the researcher proceeds with the estimation of hypothesis of the model.

<table>
<thead>
<tr>
<th>Fit Indices</th>
<th>Cut-off Value</th>
<th>Observed Value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN/DF</td>
<td>5</td>
<td>2.099</td>
<td>Accept the goodness of fit of the model</td>
</tr>
<tr>
<td>CFI</td>
<td>0.90</td>
<td>0.924</td>
<td>Accept the goodness of fit of the model</td>
</tr>
<tr>
<td>TLI</td>
<td>0.90</td>
<td>0.912</td>
<td>Accept the goodness of fit of the model</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.08</td>
<td>0.071</td>
<td>Accept the goodness of fit of the model</td>
</tr>
</tbody>
</table>

Table 4 represents the fit indices, their cut-off points as found in the literature, the value found in the research and finally the interpretation or decision rule based on the cutoff point and the research finding.

![Fig. 1: Model Tested](image)
Figure 1 represents the model that has been tested using structural equation modeling. Overall, the model fits the data. The path analysis as presented in table 5 reveals an interesting and consistent result with the previous findings on entrepreneurial intention.

4.1 Estimation of the results:
In this section, hypotheses developed in the research would be tested and some inferences would be drawn.

Table 5: Parameter Estimates

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pers._Attitude &lt;--- Subject_Norm</td>
<td>.724</td>
<td>.151</td>
<td>4.803</td>
<td>***</td>
</tr>
<tr>
<td>Power_Behcon &lt;--- Subject_Norm</td>
<td>-.017</td>
<td>.116</td>
<td>-.144</td>
<td>.885</td>
</tr>
<tr>
<td>Power_Behcon &lt;--- Pers._Attitude</td>
<td>.485</td>
<td>.096</td>
<td>5.033</td>
<td>***</td>
</tr>
<tr>
<td>Entrep_Inten &lt;--- Subject_Norm</td>
<td>-.066</td>
<td>.107</td>
<td>-.616</td>
<td>.538</td>
</tr>
<tr>
<td>Entrep_Inten &lt;--- Pers._Attitude</td>
<td>.566</td>
<td>.099</td>
<td>5.710</td>
<td>***</td>
</tr>
<tr>
<td>Entrep_Inten &lt;--- Power_Behcon</td>
<td>.652</td>
<td>.100</td>
<td>6.518</td>
<td>***</td>
</tr>
</tbody>
</table>

Table 5 shows the estimations of the path analysis. It shows that personal attitude and power of behavioral control have significant positive influence on the entrepreneurial intention among the students. Specifically the result shows that, power of behavioral control is the most significant predictor of entrepreneurial intention among the students. The parameter estimate was 0.652 while attitude was having 0.566. This reveals that the students perceived the environment/government as supportive and therefore government agencies and departments play an important role in influencing students’ entrepreneurial intention. This finding conforms to the previous studies on the perception of people toward the government (Yusoff, and Yaacob, 2010). This, however, shows overdependence on the government to start-up business since majority of the students is locals. This is despite the easiness of business start-up. According global report 2012, Malaysia is ranked 50 out of 183 countries and 18 in terms of business start-up and ease of doing business. In fact, recently the government set new targets to propel SMEs to become innovative, creative with value-addition production/services (Yusoff, and Yaacob, 2010).

On different note, subjective norms were found to be insignificant or were not having direct impact on the entrepreneurial intention. Again, according to Ajzen (2010), subjective norm is the most problematic predictor of intention. It depends on situations, environment and persons/attitude investigated. However, following the suggestions by the modification indices and theoretical reasoning, the research found that subjective norm predicts intention indirectly through attitude.

Interestingly, the research finds a new dimension i.e. the indirect influence of attitude via power of behavioral control. Although personal attitude is the second strong predictor, it also affects intention through the power of behavioral control. Perhaps this may be due the environmental influence whereby the attitude of the students is that ‘government used to, and should provide us what we may need now and then.’ In the case of IIUM, a new Entrepreneurship Development Centre (EDC) was set up in 2010. The Centre has been established in order to manage and coordinate activities related to entrepreneurship.

5. Concluding Remarks:
Entrepreneurial Intention concerns about the motivating factors that accelerates/inhibits a person to initiate and start up business. Survey from the literature reveals that individuals that have prior knowledge and skills are more likely to start up business or has higher probability of starting the business initiatives. This research investigates the entrepreneurial intention of IIUM undergraduates to start up business. Based on the Theory of Planned Behaviour, the study examines the factors that influence entrepreneurial intentions. TPB argues that individuals take their decisions to create a new enterprise based on three motivational factors vis-à-vis personal preference or attraction toward entrepreneurship, subjective norms and perceived behavioral control. The study finds that power of behavioral control and attitude are the most important predictors of EI. Therefore any policy intervention should focus on these variables to get effective outcome. Interestingly, the result shows the mediating role of power of behavioral control and indirect effect of attitude apart from direct influence. This may be due to the perception and strong influence of government in business undertakings in the country. Upon realizing the central role of entrepreneurship education in developing the entrepreneurial attitudes of both potential and nascent entrepreneurs, it is imperative to devout more resources to accelerate their growth. This should not be seen as the role of the person only but also institutions of higher learning, an initiative that has long started in the developed world and very little is being done in Muslims countries and communities.

However, this research has some limitations, since it focuses only in one of the institutions in Malaysia. Further research could include a number of institutions to compare various entrepreneurship programs and
initiatives. It can also investigate if there is any significant difference between/among those students who are the target of the research.

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