



THE INFLUENCE OF INDIVIDUAL, SOCIAL AND EDUCATIONAL FACTORS ON ENTREPRENEURIAL INTENTION OF UNIVERSITY STUDENTS IN CAMBODIA

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ABSTRACT

This study explored students' entrepreneurial intention (EI) and identified the factors influencing EI under individual, social and educational dimensions. Using a nationally representative survey conducted in 2021 with 834 university students, we found that many students had a strong EI. From the regression analysis, we can confirm that the development of personal positive attributes, namely, innovativeness, critical thinking, proactiveness and propensity for taking risks, is key to increasing the intention in the Cambodian context. The same can be said about family income and perceived appropriateness. Moreover, it can be established that all the factors in the entrepreneurship education (EE) dimensions are positively influencing the students' EI: startup-related program experience, business major; and perceived higher education support. Based on the study findings, we put forward three recommendations for the universities and other stakeholders, related to the provision and improvement of EE: (1) providing the courses and learning activities that develop the personal attributes; (2) strengthening/providing startup supporting programs at the universities; (3) integrating innovation-focused projects or competency-based education in pre-university level.

KEYWORDS

entrepreneurial intention,
entrepreneurship education,
personal attributes, university
students, Cambodia.

1. Introduction

Entrepreneurship has an important role to play in today's fast-changing society. It supports innovation, employment creation, and sustainable economic development (Schumpeter 1983; OECD 2010; Hussain, Bhuiyan, and Bakar 2014). Entrepreneurship is also important in helping young people to transition from school to work; it not only builds their innovative thinking and relevant business skills but also fosters youth-led job creation and growth of micro, small, and medium-sized enterprises (Felix and Marc 2021).

Promoting entrepreneurship among young people is not an option but a commitment of many national governments (Acs et al. 2016; Felix and Marc 2021; Ministry of Education, Youth and Sport [MoEYS] 2011). According to a synthesis study of 485 policy documents in a total of 65 countries, government initiatives promoting youth entrepreneurship mainly focus on increasing access to finance, providing entrepreneurship education and business training, and supporting formalization of new businesses (Felix and Marc 2021).

In Cambodia, programs centred around entrepreneurship education as well as supporting services and facilities have proliferated within many higher education institutions (HEIs) in recent years (Khieng, Mason, and Lim 2019). Simultaneously, development partners and the private sector have also made

significant contributions particularly focusing on providing young people with networking and capacity building opportunities in their programs (UNDP 2021). While entrepreneurship education and relevant supports, such as funding and networking opportunities, are receiving attention from the government and development partners, there continues to be limited data on whether these initiatives have helped increase young people's interest in becoming entrepreneurs in the Cambodian context.

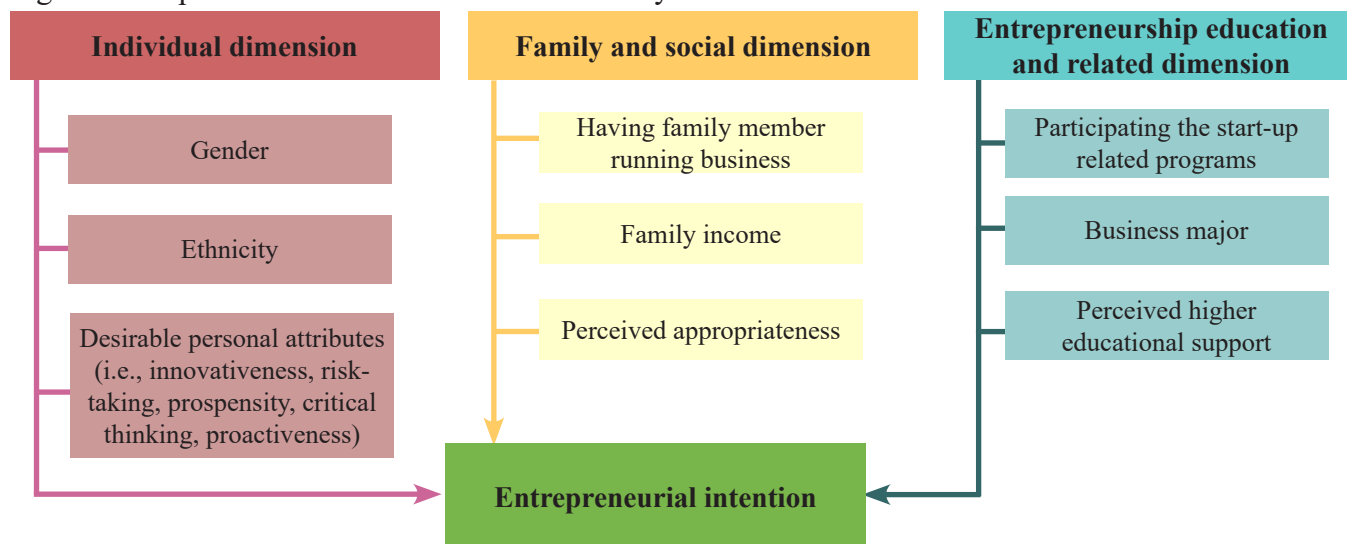
This study was designed to generate data to address this gap in knowledge. First, it assessed how interested university students in Cambodia were in becoming entrepreneurs by measuring their entrepreneurial intention (EI). Second, it identified factors that could influence the students' EI some of which centered on entrepreneurship education (EE) and higher education support. The findings of this study can, on the one hand, help policymakers and other stakeholders better gauge how entrepreneurial Cambodian university students are and, on the other, provide evidence for continuing and scaling such efforts. Based on the findings, this paper also provides actionable recommendations for providing and improving EE in Cambodia.

2. EI and Its Predicting Factors

EI is a desire to start one's own business in the future (Bird 1988). Many empirical studies used EI as a primary predictor of entrepreneurial behaviour because intention has been used extensively to explain people's reason behind their actions in various part including entrepreneurship (Gelderen et al. 2008; Bird 1988). This is supported by the Theory of Planned Behaviour that identifies intention as a primary predictor of people's planned actions or behaviour (Ajzen 1991). Although intention could not fully explain people's actual behaviours, a meta-analysis study of 422 studies over a ten year period by Sheeran (2002) found that intention can explain behaviours on an average of 53% of the time. This theory has been applied to entrepreneurship as well. While it remains doubtful to some whether intention can accurately predict entrepreneurial behaviour, EI is still considered to be of the key predictors of actual entrepreneurial actions (Krueger, Reilly, and Carsrud 2000; Verma, and Rao 2017; Ambad and Damit 2016).

EI could be influenced by numerous factors. To better understand the process of forming EI, empirical studies have analysed various factors ranging from individual aspects (e.g., personality traits, self-confidence, and need for independence [Ozaralli and Rivenburgh 2016; Sánchez 2011; Yıldırım, Çakır, and Aşkun 2016; Franke and Lüthje 2004; Singh, Verma, and Rao 2017; Ambad and Damit 2016]) to contextual aspects wherein there are institutional, cultural, and social factors (e.g., perceived educational support, perceived relational support, and perceived structural support [Ambad and Damit 2016; Franke and Lüthje 2004; Wijayati et al. 2021]). Moreover, demographical characteristics, such as gender and ethnicity, have also

Figure 1: Proposed framework for the current study



Source: Authors' synthesis

been scrutinized in many past studies (Bae et al. 2014; Yıldırım, Çakır, and Aşkun 2016; Wang and Wong 2004; Verver and Koning 2018).

After reviewing the literature, we included in this study nine variables that could influence EI in the Cambodian context. Those variables were then grouped into three dimensions: (1) individual dimension, (2) family and social dimension, and (3) Entrepreneurship Education (EE) and related dimension (illustrated in Figure 1).

The study's framework includes gender, ethnicity, and positive personal attributes on the individual dimension. Gender is chosen because, in Cambodia, most formal businesses are run by males even though there is an increasing number of women running their own businesses (World Bank 2022). Thus, female students might still be less interested in pursuing an entrepreneurial career since they are in the minority and might prefer being employed rather than founding their own firms (Yıldırım, Çakır, and Aşkun 2016). Ethnicity is included because Cambodian society is quite heterogeneous. Migration of people from other Asian countries, like China and Vietnam, has been noticeable throughout history. Many people of Chinese ethnicity received their Cambodian citizenship through birth or marriage, and they are generally more active in trading and business activities compared to other ethnicities (Verver and Koning 2018). Therefore, this study includes this variable to assess whether ethnicity has had any influence on the students' EI. The variable of personal attributes is a combination of four attributes, including innovativeness, risk-taking propensity, critical thinking, and proactiveness. These attributes have been found to be important for increasing students' EI and, more generally, helping students to be competitive in today's changing society (Ozaralli and Rivenburgh 2016, Alberta 2011). For example, critical thinking, one of the key 21st-century skills, helps individuals analyse and apply possible solutions in daily life (Alberta 2011) and it enhances their capacity to implement business strategies and run a successful business.

On the family and social dimension, this study considers three variables, including entrepreneurial family background, level of family income, and perceived appropriateness. The first variable is important because if parents or any other family members run a business, they can influence children's and young people's career choices as role models (Wang and Wong 2004). Also, it gives them the chance to accumulate the right skills and experience as well as the access to valuable social networks. Thus, it is plausible to say that an entrepreneurial family background can motivate one in pursuing an entrepreneurial career. The second variable, family income, is another influential factor since one's family wealth can potentially provide the financial support needed in founding or running one's own business both of which can be costly (Wang and Wong 2004). The last variable in this dimension is perceived appropriateness. This variable is a measurement of the extent to which individuals think that an entrepreneurial career is appropriate within their society (Adekiya and Ibrahim 2016). It is believed that a positive perception of an entrepreneurial career could influence some to pursue such a career in the future.

Lastly, this study considers three variables within the EE dimension: exposure to programs supporting startups and providing "hands-on" experience; majoring in business; and perceived higher education support. As mentioned earlier, universities and other stakeholders, such as development partners, have offered business-related programs in Cambodia that aim to improve young people's entrepreneurial knowledge and skills (Khieng, Mason, and Lim 2019; UNDP 2021). It is thus important to identify the relationship between participation in these programs and the students' EI (Ferrandiz, Fidel, and Conchado 2018). We hypothesize that students' participation in these programs is a predictor for having a stronger EI. The second variable within this dimension is majoring in business. We view the choice of enrolling in a business major as a form of self-investment wherein students invest in developing their knowledge and skills in running a business. In the process of receiving education, students majoring in business might gain more entrepreneurial knowledge and competencies than their peers doing other majors, and therefore, they may be more inspired to start an entrepreneurial career (Wijayati et al. 2021). Perceived higher education support is the last variable observed. It measures the extent to which students agreed that their universities had given enough support for starting

a business. By considering this variable, it is possible to check whether the investment in building a support system in universities helped increase students' interest in becoming entrepreneurs (Turker and Sonmez Selcuk 2009; Franke and Lüthje 2004). In short, the EE dimension and its factors are key in this study as they help assess whether entrepreneurship education and other support provided in universities in Cambodia were conducive to increasing students' interests in starting their own businesses.

3. Methods

This study employed a quantitative research design, and it collected data using a large-scale survey conducted with 834 university students.

The targeted sample was undergraduate students in their third and fourth years. We also selected some students in their fifth year of undergraduate study because some undergraduate degrees, like engineering, take five years to complete. It is important to note that those students in years three, four, and five were chosen for the study because they were about to enter the labor market and had to plan for their careers, which for some meant becoming entrepreneurs.

The sampling process was divided into two stages. The first stage involved a random selection of HEIs using systematic sampling with the probability proportional to the size of the total student enrolment. The sampling frame was based on the HEI list and enrolment statistics obtained from the Department of Higher Education under the MoEYS. In the second stage, we applied a simple random sampling to select students from the selected HEIs. The sampling frame was based on student enrolment lists in the 2020-2021 academic year and an online survey that asked students whether they were interested in participating in the study. The number of respondents per HEI was determined based on the enrolment size of each participating university.

Due to the COVID-19 pandemic and travel restrictions, the data was collected remotely. We used multiple applications and platforms such as KoBo Toolbox for digital data entry and Zoom video conference, Telegram, and telephone calls for interviews. Each online interview took approximately 40-50 minutes during which our team filled in questionnaires according to the responses, and the field work took roughly two months from early June to late July 2021. The total sample included 834 students from 19 public and private HEIs in Phnom Penh, Battambang, Prey Veng, Svay Rieng, Siem Reap, Takeo, and Kampong Speu.

The data were then cleaned and coded for regression analysis, and STATA 14, a statistical software package, was used for the analysis. Prior to the regression analysis, Cronbach Alpha tests were performed to assess some variables' the level of internal consistency, such as EI, personal attributes, perceived appropriateness, and perceived higher education support, that were measured with Likert scale questions. Most of the Alpha values were between 0.7 and 0.8, indicating acceptability. Further details on these instruments can be found in the Appendix.

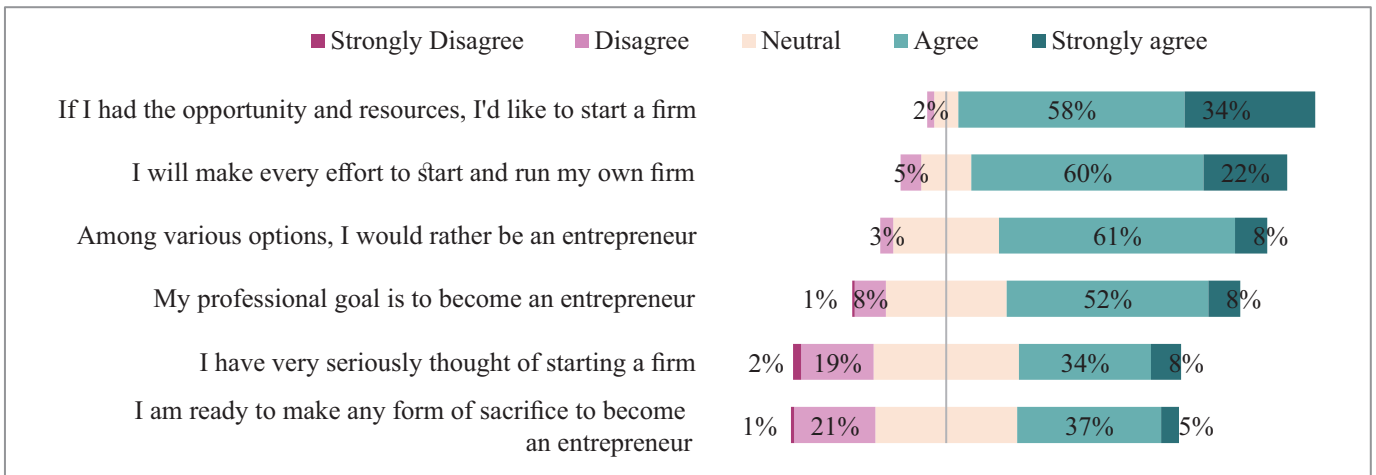
4. Findings

4.1. EI

Figure 1 shows the students' responses to six statements that measured their attitudes towards establishing and running their own businesses. The figure shows that most of the students had positive attitudes towards becoming an entrepreneur. For example, most of them agreed that, if they had the resources and opportunity, they would like to start their own firms. Similarly, they would put effort into establishing their business. That said, the majority remained neutral or disagreed with the statements "I am ready to make any form of sacrifice to become an entrepreneur" and "I have very seriously thought of starting a firm."

The students were asked about their career plans both immediately after graduation and five years after graduation. As shown in Figure 2, most of the respondents (72%) said they would like to be employed in either the private sector or the public sector while only 17% of students would like to become an employer or a business owner soon after graduation. Surprisingly, the proportion of those who wished to become

Figure 2: Self-reported EI in percent



Source: University student survey 2021

Figure 3: Career plan soon after degree completion and five years later in percent

Career Plan after Graduation in Percent	Directly after graduation	5-year after graduation
Employer or business owner of my parent	3%	2%
Employer or business owner of my own business	17%	61%
Employee / officer	72%	31%
Self-employed (not owning any business)	1%	2%
Further my education	5%	2%
I have not decided yet.	3%	3%

Source: University student survey 2021

business owners five years after graduation was significantly higher at 61%. This is possibly because fresh graduates usually have limited work experience and scarce resources for starting their own companies, and so working as employees allows them to gain experience, build useful connections, and save money before starting their own businesses.

4.2. Predicting factors

The descriptive results of the variables used for regression are presented in Table 1. The average score of EI of the sample students is 3.67, which indicates students are leaning towards becoming entrepreneurs. Regarding the factors within the individual dimension, the sample comprises more female students (55%) than male students (45%). The students who identified themselves as Cambodian Chinese (Cambodian with Chinese ancestry) constituted 31% of all participants, and the remaining 69% of participants identified themselves as Cambodian only, Cambodian Cham, Cambodian Vietnamese, and others. On average, students had a personal attribute score of 3.86. As stated above, the four personal attributes were identified as key to developing entrepreneurial behaviour, and a higher score indicates a higher degree of possession of such attributes.

As for the factors on the family and social dimension, about 60% of the sample respondents have immediate family member(s) (father, mother, or sibling) who operate a business. About 70% of the respondents reported that their family earned less than \$500 per month while families making \$500-\$1000 per month comprised 14% of the sample and 17% of respondents' families made more than \$1000 per month. The mean score of the perceived appropriateness was 3.86, and as stated above, perceived appropriateness is the extent to which the respondents thought that an entrepreneurial career was appropriate in Cambodian society in this case.

Regarding the factors on the EE dimension, among the 10 programs studied, students on average participated in approximately 2 programs. The students in business and related majors make up 53% of the sample, and the average score of perceived higher education support is 3.52.

Table 1: Descriptive table of dependent and independent variables

Variable	Measurement	Mean	Freq.	Percent
<i>Dependent Variable</i>				
EI	Composite score of 6 items (1 Strongly disagree to 5 Strongly agree)	3.67		
<i>Independent Variable</i>				
<u>Individual factors</u>				
Gender	1=Female		458	54.92
	0=Male		376	45.08
Ethnicity	1=Cambodian Chinese		255	30.58
	0=Others		579	69.42
Personal attributes	Composite score of 17 items from 4 different constructs (innovativeness, risk-taking propensity, proactiveness, and critical thinking)	3.86		
<u>Family and social factors</u>				
Having family member running business	1=Yes		506	60.67
	0=No		328	39.33
Family income	1= Less than \$500		573	68.71
	2=\$500-\$1000		118	14.15
	3= More than \$1000		143	17.15
Perceived appropriateness	Composite score of 5 items	3.86		
<u>EE and related factors</u>				
Startup-related program experience	Composite score of 10 questions asking experience in participating the programs (0=never participated/never heard of 1=participated)	1.94		
Business major	1=Doing major in business		445	53.36
	0=Doing other majors		389	46.64
Perceived higher education support	Composite score of 7 items	3.52		

Note: $n = 834$; Source: University student survey 2021

The analysis of the factors influencing the EI is shown in Table 2. The variables were entered sequentially following three steps with the statistical results explained below:

Model 1: Variables that are positively and significantly associated with the dependent variable, EI, are ethnicity ($\beta = 0.09$, $p < 0.05$) and personal attributes ($\beta = 0.63$, $p < 0.001$). The results indicate that students with a Cambodian Chinese background were more likely to have stronger EIs. Also, students with a higher personal attribute score? tended to have stronger intentions. For model power explanation, the inputting of personal factor variables alone provides an explanatory power of $R^2 = 0.16$.

Model 2: Controlling for the other variables, having family member(s) running a business ($\beta=0.07$ $p<0.05$), family income ($\beta= 0.03$, $p<0.05$), and perceived appropriateness ($\beta= 0.22$, $p<0.001$) are all statistically significant in predicting EI. Those who had family member(s) operating business, came from a family with higher income, and largely agreed that an entrepreneurial career was appropriate in Cambodia were more likely to have stronger interests in pursuing an entrepreneurial career. The inclusion of the three variables increased the R2 from 0.16 in Model 1 to 0.21 in Model 2. Notably, the level of significance for the personal dimension variables in Model 1 changed in Model 2. Ethnicity as a variable became less significant in predicting EI with the change of P value from less than 0.05 to less than 0.01. Having said that, the variable of personal attributes remained statistically significant, holding a P value lower than 0.001.

Table 2: Direct effects of predictor variables on EI

Variable	Model (1)	Model (2)	Model (3)
<i>Individual factors</i>			
Gender (Female)	-0.03 (0.03)	-0.04 (0.03)	-0.05 (0.03)
Ethnicity (Cambodian Chinese)	0.09** (0.04)	0.07* (0.04)	0.08** (0.04)
Personal attributes	0.63*** (0.05)	0.49*** (0.06)	0.36*** (0.05)
<i>Family and social factors</i>			
Having family member running business		0.07** (0.04)	0.04 (0.03)
Family income		0.03** (0.01)	0.03** (0.01)
Perceived appropriateness		0.22*** (0.04)	0.19*** (0.04)
<i>EE and related factors</i>			
Startup-related program experience			0.04*** (0.01)
Business major			0.12*** (0.03)
Perceived higher education support			0.20*** (0.03)
Constant	1.25*** (0.20)	0.83*** (0.21)	0.65*** (0.20)
Observations	834	834	834
R-squared	0.16	0.21	0.29

Standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Source: University student survey 2021

Model 3: Controlling for the other variables, experience in attending startup programs ($\beta= 0.04$, $p<0.001$), majoring in business ($\beta= 0.12$, $p<0.001$), and perceived higher education support ($\beta= 0.2$, $p<0.001$) are statistically significant in predicting EI. Simply put, the students who had more experience in startup programs or gained hands-on experience, were majoring in business, and thought more highly of the support offered by their universities had a stronger interest in an entrepreneurial career. Including these three variables increased the model's explanation power to 0.29. With the input of EE and related

experience variables, most of the entered variables in the previous models remained statistically significant, except for two variables (ethnicity and having family member(s) running their own business) of which the statistical significance changed. The former became statistically significant ($p < 0.05$) while the latter became statistically insignificant. To sum up, including all 9 variables of interest in relation to individual, family and social, and EE dimensions provided the highest model explanatory power (R^2) of 0.29.

5. Conclusion and recommendations

This study explored students' EI and identified the factors influencing EI. Using a nationally representative survey conducted in 2021 with 834 university students, we found that many students had a strong EI and planned to start their business within five years after graduation. Based on the regression analysis results, we can confirm that the development of the four positive personal attributes (innovativeness, risk-taking, proactiveness, and critical thinking) are key to increasing EI in the Cambodian context. Encouragingly, gender was not statistically significant in the analysis, thereby implying that one's gender has limited influence on one's intention. The study also identified family income and perceived appropriateness as two variables that significantly predicted EI in relation to the family and social dimension. Such findings imply that family financial support and positive perception of entrepreneurial careers in Cambodia greatly influenced students' intention to start their own companies. Moreover, it can be established that all of the factors in the EE dimensions positively influence students' EI, including attending startup-related programs, majoring in business, and perceived higher education support. These findings confirm the importance of providing of EE and related programs in raising individual motivation and in preparing students for future engagement.

Based on the above findings, the authors have three recommendations relating to the provision of EE. First, it is advisable that HEIs should continue to provide courses and learning activities that develop the four positive personal attributes that contribute to increasing EI. Those attributes are innovativeness, critical thinking, proactiveness and propensity for taking risks. Second, there is a need for providing and/or strengthening startup-supporting programs in universities since they help students act on their intention and foster innovation. Third, and finally, it is important to start building these competencies early on at lower levels of education since such attributes tend to take a long time to develop. One possible option is to use competency-based education in classrooms at secondary level. Another option is to include social innovation projects and other similar innovation-focused and competency-based educational programs.

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Appendix

Items	Mean	Std. Dev.	Min	Max	Alpha
1. Entrepreneurial Intention (Liñán and Chen 2009)	3.7	0.5	1.8	5	0.8
1.1. Among various options, I would rather be an entrepreneur	3.7	0.7	1	5	
1.2. My professional goal is to become an entrepreneur	3.6	0.8	1	5	
1.3. I am ready to make any form of sacrifice to become an entrepreneur	3.2	0.9	1	5	
1.4. I will make every effort to start and run my own firm	4.0	0.8	1	5	
1.5. I have very seriously thought of starting a firm	3.3	0.9	1	5	
1.6. If I had the opportunity and resources, I'd like to start a firm	4.2	0.6	2	5	
2. Innovativeness (Ozaralli and Rivenburgh 2016)	3.6	0.4	2.2	5	0.5
2.1. I often surprise people with my novel ideas.	3.3	0.7	1	5	
2.2. People often ask me for help in creative activities.	3.3	0.7	1	5	
2.3. I obtain more satisfaction from mastering a skill than coming up with a new idea.	3.6	0.8	1	5	
2.4. I prefer work that requires original thinking.	4.0	0.6	1	5	
2.5. I like to experiment with various ways of doing the same thing.	3.9	0.6	1	5	
3. Risk-Taking Propensity (Ozaralli and Rivenburgh 2016)	4.0	0.5	2	5	0.5
3.1. I'm quite cautious when I make plans and when I act on them	4.1	0.6	2	5	
3.2. If a task seems interesting, I'll choose to do it even if I'm not sure whether I'll manage it.	3.9	0.7	1	5	
3.3. Success makes me take higher risks.	4.0	0.6	2	5	
4. Proactiveness (Seibert, Kraimer, and Crant 2001)	3.9	0.4	2.5	5	0.7
4.1. I am constantly on the lookout for new ways to improve my life.	4.1	0.6	2	5	

4.2. Nothing is more exciting than seeing my ideas turn into reality.	4.4	0.6	1	5	
4.3. If I see something I don't like, I fix it.	4.1	0.5	2	5	
4.4. I am always looking for better ways to do things.	4.0	0.5	2	5	
4.5. If I believe in an idea, no obstacle will prevent me from making it happen.	3.7	0.8	1	5	
4.6. I can spot a good opportunity long before others can.	3.2	0.6	1	5	
5. Critical Thinking (Alberta 2011)	3.9	0.4	2.3	5	0.5
5.1. To build my knowledge, I reflect on my own thinking and am open to new ideas.	4.3	0.5	3	5	
5.2. I can see the strengths and weaknesses of my own point of view and in the points of view of others.	3.6	0.7	1	5	
5.3. I believe in my ability to solve problems and make good decisions	3.9	0.6	1	5	
6. Perceived Appropriateness (Adekiya and Ibrahim 2016)	3.9	0.5	2.2	5	0.7
6.1. A career in entrepreneurship is an acceptable career in this society	4.0	0.6	2	5	
6.2. Starting one own business is considered as appropriate by many in this society	3.9	0.6	2	5	
6.3. In this environment, entrepreneurs are looked up to as role models	3.7	0.8	1	5	
6.4. In this society, becoming self-employed is more cherished than getting white collar job	3.7	0.9	1	5	
6.5. I believe I can make my parents, friend and spouse happy by choosing to be self-employed after graduation	4.0	0.7	1	5	
7. Perceived Higher Education Support (Franke and Lüthje 2004)	3.5	0.5	1.3	5	0.8
7.1. The courses that I attended at my university increase my understanding on how to set up a new business	3.7	0.8	1	5	
7.2. The courses that I attended at your university increase my motivation to set up a new business	3.6	0.8	1	5	
7.3. The courses that I attended at my university enhance my ability to identify business opportunity	3.8	0.7	1	5	
7.4. ICT usage in university encourages me to develop creative ideas for being an entrepreneur	3.5	0.7	1	5	
7.5. Availability of ICT tools at the university (e.g., Desktop computer, Laptop, Tablet, Printer, USB (memory) stick, E-book reader (e.g., Amazon Kindle) increases chances for me to become an entrepreneur	3.3	0.8	1	5	
7.6. Access to the Internet at the university increases chances for me to become an entrepreneur	3.3	0.8	1	5	
7.7. My university climate is good for those who want to become an entrepreneur.	3.4	0.8	1	5	
8. Personal Attributes (combined innovativeness, risk-taking propensity, proactiveness and critical thinking)	3.9	0.3	2.4	4.9	0.8