

The Entrepreneurial Potential among Undergraduate Students

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Abstract

Entrepreneurship plays a vital role in the economic development of any country and it can be linked to economic growth of any nations. The research aimed to identify formal education's role and self-concept among undergraduate students and its influence towards their entrepreneurial potential. In accomplish the purpose, an online questionnaire was administered to 456 students of Bogor Agricultural University, Indonesia. The collected data was analyzed by multiple regression model. The results revealed that self-concept was positively influence the entrepreneurial potential. The universities can strengthen student self-concept by instilling the values of entrepreneurship and training to shape a good self-concept.

Key words: Entrepreneurial potential, formal education role, self-concept.

Potensi Wirausaha antara Mahasiswa Sarjana

Abstrak

Kewirausahaan memainkan peran penting dalam pembangunan ekonomi suatu negara dan dapat dikaitkan dengan pertumbuhan ekonomi dari negara-negara manapun. Penelitian ini bertujuan untuk mengidentifikasi peran pendidikan formal dan konsep diri di kalangan mahasiswa sarjana dan pengaruhnya terhadap potensi kewirausahaan mereka. Dalam mencapai tujuan tersebut, kuesioner online diberikan kepada 456 mahasiswa dari Universitas Pertanian Bogor, Indonesia. Data yang terkumpul dianalisis dengan model regresi berganda. Hasil penelitian menunjukkan bahwa konsep diri positif mempengaruhi potensi kewirausahaan. Universitas dapat memperkuat diri siswa-konsep dengan menanamkan nilai-nilai kewirausahaan dan pelatihan untuk membentuk konsep diri yang baik.

Kata kunci: Potensi Wirausaha, peran pendidikan formal, konsep diri.



INTRODUCTION

Entrepreneurship plays a vital role in the economic development of any countries and it can be linked to economic growth of any nations. As a developing country, Indonesia is expected to have a large number of entrepreneurs, because the greater the number of entrepreneurs in a country, the more develop and stable economy of the country. Increasing the number of entrepreneurs is also positively correlated with the increase in employment and an increase in the level of social welfare. Thus, the number of entrepreneurs is a reflection of a country's economic progress. The number of entrepreneurs in Indonesia is only about 1.65 percent of the population, though the ideal amount to be achieved is 2 percent (Ministry of Cooperatives and Small and Medium Enterprise of Indonesia, 2015).

Nowadays, higher education plays an important role on producing an increasing number of graduates in many countries that seeks to promote self or small business employment as a realistic career option (Nabi and Holden, 2008). A study by Indarti and Rostiani (2008) indicated that educational background becomes a key factor that influence entrepreneurial intention among Indonesian students. Some studies indicated that the propensity of entrepreneurship is associated with some personal characteristics that can be affected by a formal program of education (Gorman, Hanlon and King, 1997; Bechard and Toulouse, 1998). Several studies had confirmed that the college had positive role in the development of students' entrepreneurial intentions and behavior (Hannon, 2005; Lüthje and Franke, 2003). It has a strategic function to increase the number of entrepreneurs by entering the values of entrepreneurship in the learning process. Vesper (1990) suggested that university entrepreneurship educators could facilitate the entrepreneurial process by creating awareness among collegiate students.

Bogor Agricultural University is one of the universities in Indonesia that concerned to form entrepreneurship through academic and student affairs. In general, students are equipped and facilitated to become entrepreneurs through a variety of academic programs such as introductory courses and students affair programs such as entrepreneurship training, mentoring and entrepreneurial competition. These

are the reasons why entrepreneurship on the student, particularly in higher education is needed to be studied and developed.

Although entrepreneurship education has been adopted as one of the key instruments to increase the entrepreneurial attitudes of potential entrepreneurs, the influential factors that determine the individual's decision to start up a venture are not explicit enough. However, the explaining capacity of personal traits or demographic characteristics is still reasonable. Personality trait is a component of self-image that is a part of self-concept (Roger, 1959; McLeod, 2008). Personality trait has been widely reviewed as a factor that influence on entrepreneurial potential. Timmons, Jeffry and Spinelli (1999) had mentioned that personality traits are closely related to entrepreneurial potential and may differentiate entrepreneurs from non-entrepreneurs. Meanwhile, the influence of self-concept on entrepreneurship potential has not been widely researched.

Based on the results of these studies, it can be drawn that the role of formal education and self-concept are important variables that could be expected to affect the potential of entrepreneurship in students. Therefore, we need a study to examine the influence of formal education and self-concept to the potential of entrepreneurship in students. This study can bring a potential contribution for university to make policies and arrange the strategies to develop entrepreneurial potential of students. The purpose of present study is to investigate the role of formal education, self-concept, and entrepreneurship potential among students. Furthermore, we hypothesize that formal education role and self-concept may influence the entrepreneurship potential.

LITERATURE REVIEW

Entrepreneurship

Gartner (1988) defined entrepreneurship as creation of new organizations. According to Gartner (1989), there were two lines of thought about the meaning of entrepreneurship. One that focuses its definition on themes related to the characteristic of entrepreneurship, i.e. entrepreneur, innovation, growth, risk, uniqueness, etc. The other discusses issues related to the results of entrepreneurship

in terms of value creation. Begley and Boyd (1986) defined the entrepreneur as a person who founded his own company.

Entrepreneurial potential

Entrepreneurial potential is the ability and strength to making an effort on business (Satrya and Suwandana, 2015). Zimmere and Scarborough (2002) states that business success comes from the opportunity to use their potential fully. Santos and Caetano (2011) stated that entrepreneurship potential consists of four dimensions, they are entrepreneurial motivations, psychological competencies, social competencies, and management competencies. Entrepreneurial competencies are comprised of the entrepreneur's motives, traits, self-image, attitudes, behaviors, skills, and knowledge (Brophy and Kiely, 2002). Gerry, Marques and Nogueira (2008) examined the potential of entrepreneurship in the Portuguese University graduate. Results of the study revealed that gender, risk factors and academic training affected on potential entrepreneurs. Entrepreneurial potential examined was entrepreneurial skills relates to the ability of time management, human resources management, the ability to recognize and solve problems, set goals and find ways as well as management to achieve the goal.

Formal Education

Education can prepare for new venture initiation by transferring knowledge and developing relevant skills that improve the self-efficacy and effectiveness of the potential entrepreneur (Gorman et al., 1997). Several countries are emphasizing on entrepreneurship as a solution to growing unemployment among university graduate young individual. High school program along with universities have started to offer entrepreneurship courses to their students with the aim to increases their entrepreneurial awareness and skills. Meanwhile, the results of studies Schwarz, Wdowiak, Almer-Jarz, and Breitenecker (2009). in Austria University students showed that both general and specific attitude is the predictor of attitudes towards competitiveness. The study conducted by Jiménez et al. (2015) showed that tertiary education increases formal entrepreneurship as a consequence of the higher self-confidence, lower perceived risk and enhanced human capital. Turker and Sonmez (2009) research showed that the education and support of structural factors will affect the Turkish university

student entrepreneurship intentions.

Entrepreneurship education generally refers to programs that promote entrepreneurship awareness for career purposes and provide skill training for business creation and development (Vesper, 1990; Bechard and Toulouse, 1998). Several studies had examined the link between formal education and entrepreneurship potential. The findings of the research by Dickson, George, Solomon and Weaver (2008) suggested that there was a positive link between entrepreneurship education, choice of becoming an entrepreneurship as well as entrepreneurial success. Albert, Fournier, and Marion (1991) found that 25 percent of higher education students who completed an entrepreneurship support program ended up starting their own businesses. The comparative study by Saini and Bhatia (1996) revealed that entrepreneurs who took a training on entrepreneurship showed higher performance levels in sales and job creation compared with those who did not get a training at all.

However, attending a course on entrepreneurship will not necessarily guarantee an entrepreneurial orientation, provide entrepreneurial abilities or result in students choosing entrepreneurship as a career (CO, Groenewald, Mitchell, Nayager, Van Zyl, Visser, and Emanuel, 2006). The formal education role in the study was how much the role of formal education is perceived by the students to prepare to become an entrepreneur; to develop the attitudes, interests and skills of entrepreneurs and the role of entrepreneurs in society.

Self-concept

The term self-concept is a general term used to refer to how someone thinks about, evaluates or perceives themselves (McLeod, 2008). Rogers (1959) believes that the self-concept has three different components: (1) the view you have of yourself (self-image); (2) how much value you place on yourself (self esteem); and (3) what you wish you were really like (ideal self). Personality trait, as a part of self image, has been widely examined to see how it related to the entrepreneurship potential. Timmons et al. (1999) have mentioned more than twenty personality traits that are closely related with entrepreneurial potential and that may differentiate entrepreneurs from non-entrepreneurs. Kruege



and Brazeal (1994) revealed that the personality is predictive factor of entrepreneurial potential. Several research findings from different countries also demonstrated that personality traits influenced the venture creation propensity of individuals (Utsch and Rauch, 2000; Mueller and Thomas, 2001; Nga and Shanmuganathan, 2010). However, self-concept has not been widely studied as well as personality traits. The self-concept of the study is viewed as students' perception about themselves regarding the ability or character possessed an important basis for being an entrepreneur, such as the ability to be a pioneer, self-reliance, competition, strong desire, ability to plan, adapt, accept input and build a team.

RESEARCH METHOD

This study used cross-sectional design and survey method. The study was conducted at Bogor Agricultural University since May to June 2015. The convenience sampling technique was administered and 456 students with complete data were involved in the study. The data was collected through online self-report questionnaire. Variables were examined in this study is the role of formal education, self-concept and the entrepreneurship potential, which adapted from an entrepreneurship survey conducted by the Gallup Organization in the EU and beyond (2010). In addition, demographic characteristics such as gender, age and semester were also investigated.

The research instrument was tested for validity and reliability. The role of formal education that examined with the 4 items had reliability of 0.873 and validity between 0.830 and 0.845. Self-concept as measured by 9 questions had reliability of 0.902 and validity between 0.635 and 0.755. Meanwhile, entrepreneurship potential, as measured by 24 items

had reliability of 0.971 and validity between 0.617 and 0.823. Variable role of education was measured using a Likert scale namely 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. Variable self-concept and the potential for entrepreneurship were measured by the scale of semantic differential (0-5), where 0 = statement was inappropriate to the students, while 5 = statement was very appropriate. The data had been obtained was processed through a scoring process, cleaning and data analysis. Analysis of the test data used was descriptive, crosstabs and inferential test consisting of a comparison test, correlation and regression.

RESULT AND DISCUSSION

Students' Characteristics

The number of respondents involved in the study was 456 students. Results showed that the percentage of female (67.1%) was greater than the male (32.9%). This result is suitable with the proportion of undergraduate students of Bogor Agricultural University, which the number of women is greater than men. Results indicated that the age of the students ranged between 18 and 24 years, which the largest proportion (29.8%) was 20 years. Based on gender, the largest proportion of men (28.0%) and women (30.7%) was also 20 years old. Meanwhile, semester ranged between second to eighth semesters. The largest proportion of students (38.8%) was taking courses in the sixth semester.

Formal Education Role

Results in Table 1 indicated that the role of formal education perceived by the students was quite high with the average index of 75.80. Independent sample t-test results showed that the average score per item questions was not significantly different between men and women (p-value > 0.05). This illustrates that

Table 1 The average score and independent sample t-test of formal education role items

No	Statements	Average score per item questions#			Independent sample t-test
		Men	Women	Total	
1.	My formal education helped me to develop my sense of initiative and a sort of entrepreneurial attitude	3.35	3.28	3.31	0.242
2.	My formal education help me to better understand the role of entrepreneurs in society	3.32	3.28	3.30	0.529
3.	My formal education made me interested to become entrepreneur	3.19	3.23	3.22	0.553
4.	My formal education gave me skills and know-how that enable me to run a business	3.29	3.26	3.27	0.649
	Index of formal education role	76.33	75.54	75.80	0.648

scale of likert option 1= Strongly Disagree; 2= Disagree; 3= Agree; 4=Strongly Agree

formal education helped them to develop an attitude of initiative and entrepreneurial attitude, to better understand the role of entrepreneurs in society, to be interested in becoming an entrepreneur, and to provide the skills and business knowledge.

The total score of the role of formal education was categorized into three groups namely low (score < 60), moderate (score 60-80), and high (score > 80). The results showed that half of the students (50.4%) fall into the high category of formal education role. It means that formal education is considered to provide benefits and provision for entrepreneurship. If we analyze based on gender, the largest percentage of men (54.7%) are in high category, while the largest percentage of women (48.7%) were in the moderate category. It means that men were more likely to assume formal educations were beneficial for entrepreneurship than women. However, these differences was not significant ($p > 0.05$).

Self-concept

Results of Independent sample t-test showed in Table 2 indicated that self-concept between men and women was significantly different ($p < 0.01$), which the average score of men is higher than women. It means that the tendency of men to be a pioneer, enjoy making their own decisions, enjoys the competition, has a strong will, team building, planning, receive suggestions and adapt to the changing is higher than women. The result is in line with Bonnet and Furhnham (1991) and Mueller (2004) that concluded that men are more likely than women to undertake an entrepreneurial venture. The ability to react proactively to the

environment to minimize the negative effects of the business environment is important things that need to be owned. The total score of self-concept are categorized into three groups, namely low (score < 60), moderate (score 60-80), and high (score > 80). The results showed that the largest proportion of men (65.3%) and women (51.6%) were in high category of self-concept. It means that both men and women have high or good self-concept.

Self-concept of the students was high. However, there was different between men and women, which men had a higher self-concept than women. It indicated that men tend to be pioneer, more enjoy making their own decision, tend to enjoy the competition, have more strong will, were able to build a team and were able to plan than women. Based on previous studies, men are more interested and would like to start a business than women as they have higher confidence, ability to analyze situations and solve problems also the ability to change obstacles into opportunities than women (Brijal 2011; Yuhendri, 2015). Kasali (2008) revealed that psychologically women also tend to be difficult to start a new business because there are too many considerations. Women are more conservative that full consideration and tend not to make changes, which showed smaller courage to bear the risk than men, while men are more innovative (Schotchmer 2007).

Entrepreneurship Potential

Independent sample t-test results in Table 3 indicated that the entrepreneurship potential of men and women was significantly different ($p < 0.05$), which

Table 2 The average score and independent sample t-test of self-concept question items

No	Statements	Average score per item questions#			Independent sample t-test
		Men	Women	Total	
1.	Are you a pioneer?	2.99	2.43	2.62	0.000**
2.	Are you independent?	3.69	3.51	3.57	0.096
3.	Do you enjoy making your own decisions?	3.50	3.25	3.33	0.037*
4.	Do you like competition?	3.33	2.86	3.01	0.000**
5.	Do you have a strong will?	3.66	3.46	3.53	0.023*
6.	Are you able to build a team?	3.32	3.07	3.15	0.023*
7.	Are you planning?	3.69	3.44	3.52	0.026*
8.	Are you able to receive an advice	3.89	3.69	3.76	0.060
9.	Are you able to adjust to the change?	3.73	3.57	3.62	0.099
Index of self-concept		70.68	65.03	66.89	0.001**

Scale of Likert 5 (High) <====> 0 (Low); * significant at $p < 0.05$; ** significant at $p < 0.01$



average index of the entrepreneurship potential of men is higher than women. This indicated that men have a greater potential than women. Significant differences were also seen in the 12 items of questions related to the entrepreneurship potential, which average score of men is higher than women. This suggests that men are more able to: recognize and solve problems, make others follow a schedule is made, deal with ambiguity, work for a long time, have good stamina, identify the skills, have the skills that have been identified, fill a shortage of skills, live with very minimal supplies, know the purpose and not allow the need for disrupting the status of business, compared with women. This results were in line with the study of Mueller (2004), which concluded that men have higher degree of confidence in entrepreneurship than women. In addition, the most fundamental reason is women socially very different with men in terms of career included the desire to

be an entrepreneur. Entrepreneurial potential was categorized into three level namely low (score < 60), moderate (score 60-80), and high (score > 80). Results indicated that the highest percentage (46.5%) of students was in the moderate category. Meanwhile, the highest percentage of women (53.3%) was in the moderate category and the highest percentage of men (56.7%) was in the high category. Nitisusastro and Mulyadi (2009) that the talents possessed by an entrepreneurship included a focus on the goal, hardworking, willing to take risks. Pristina et al. (2009) also revealed that the decision in entrepreneurship is preferred and in the high category, meaning that individuals assume that decision-making is something fun. The result indicated that entrepreneurship potential of the students was in the moderate level. However, men were more potential to be entrepreneur than women. It indicated that men were quicker than women in identifying and

Table 3 The average score and independent sample t-test of entrepreneurship potential items

No	Statements	Average score per item questions#			Independent sample t-test
		Men	Women	Total	
1.	Do you like working with experts to pursue achievement?	3.51	3.42	3.45	0.427
2.	Do you have a fixed schedule of activities?	2.86	2.85	2.85	0.916
3.	Do you follow that schedule?	2.94	2.92	2.93	0.863
4.	Do you quickly identify and solve problems that may hinder your ability to achieve the objectives?	3.17	2.90	2.99	0.020*
5.	Can you make others fit your schedule?	2.95	2.65	2.75	0.012*
6.	Can you handle complex problems well?	2.98	2.80	2.86	0.122
7.	Can you deal with ambiguity?	2.83	2.44	2.57	0.002**
8.	Can you work in a long time?	3.28	3.01	3.10	0.028*
9.	Do you have good physical stamina to handle a long-term project?	3.50	3.07	3.21	0.001**
10.	Do you have the emotional strength to overcome the tension and excitement?	3.36	3.17	3.23	0.142
11.	Would you sacrifice to achieve your goal?	3.77	3.63	3.68	0.222
12.	Are you able to identify the skills needed for success?	3.33	3.12	3.19	0.063
13.	Do you have the skills for success?	3.18	2.84	2.95	0.005**
14.	Can you fill skill shortages from anywhere?	3.07	2.80	2.89	0.017*
15.	Are you not afraid to take risks, but will try to avoid the high risk whenever possible	3.58	3.08	3.24	0.000**
16.	Can you live with very minimal supplies?	3.12	2.70	2.84	0.001**
17.	Are you skilled in networking?	2.93	2.81	2.85	0.318
18.	Can you stay focused on the goal?	3.47	3.25	3.33	0.062
19.	Are you sure know your destination	3.64	3.37	3.46	0.020*
20.	Can you communicate with others?	3.29	3.21	3.23	0.511
21.	Can you handle multiple tasks at once with a target time?	3.23	3.09	3.14	0.255
22.	Do you separate the things that are necessary and good things to do?	3.41	3.32	3.35	0.445
23.	If you do not allow the need for disrupting the status of your business?	3.36	3.05	3.15	0.007**
24.	Do not allow your emotional relationship interfere with your business?	3.33	3.17	3.22	0.205
Index of entrepreneurship potential		65.08	60.57	62.05	0.014*

Scale of Likert 5 (High) <==> 0 (Low); * significant at p<0.05; ** significant at p<0.01

solving the problems. Men tend to have ability to make others fit his schedule. Men were more able to deal with ambiguity. Men were more ability to have good physical stamina and work in long time or handle a long-term project. Men tended to have skills for success and fill skill shortages. Men were more able to try to avoid high risk. Men were more capable to live with very minimal supplies than women. Men tended to be more sure knowing their destination than women. Men tended to avoid the need for status disrupting their business.

The Influence of Formal Education Role and Self-concept on Entrepreneurial Potential

The results of multiple linear regression as presented in Table 4 showed that the value of Adjusted R Square is 0.689 means that 68.9% percent of the entrepreneurship potential can be predicted by self-concept and formal education role. While 31.1% of entrepreneurship potential is influenced by other variables was not examined in the study. Based on result showed at Table 4, the regression equation is $y = -0.769 + 0.880x_1 + 0.052x_2$, which y = entrepreneurial potential, x_1 = self-concept and x_2 = formal education role. It means that any increase in self-concept as many as one point will increase the entrepreneurship potential as many as 0.880 point. Self-concept has a significant and positive influence on entrepreneurship potential as 0.817. Thus, the better students' self-concept is, the greater their entrepreneurship potential. Pioneering nature, independence, enjoy making their own decisions, pleased the competition, have a strong will, can build a team, plan, receive advice, the ability to adjust to changes in the basic capital that needs to be owned by a businessman. Meanwhile, formal education did not influence the entrepreneurship potential.

self-concept is, the greater their entrepreneurship potential. It was in line with Kruege and Brazeal (1994). They revealed that the personalities are predictive factor of entrepreneurial potential. Several research findings from different countries also demonstrated that personality traits influence the venture creation propensity of individuals (Utsch and Rauch, 2000; Mueller and Thomas, 2001; Nga and Shanmuganathan, 2010). Therefore, in order to increase the entrepreneurial potential, the universities can strengthen student self-concept by instilling the values of entrepreneurship and training to form a good self-concept.

Perceived desirability and feasibility have increased through participation in entrepreneurship education programmes in Universities (Oriarewo, Chukwujioko and Aondoseer 2013). , According to Friedrich and Visser (2005), education about entrepreneurship and for entrepreneurship will increase students' interest in becoming entrepreneurs at some stage after graduation. The role of formal education was quite high and tended to be similar between men and women. It indicated that formal education helped them to develop an attitude of initiative and entrepreneurial attitude, to better understand the role of entrepreneurs in society, to be interested in becoming an entrepreneur, and to provide the skills and business knowledge. These results support what has been mentioned by Gorman et al., (1997) that education can transfer knowledge and develop relevant skills that improve self-efficacy and effectiveness of the potential entrepreneur. A study by Jiménez et al. (2015) also show similar results that tertiary education increases formal entrepreneurship as a consequence of the higher self-confidence, lower perceived risk and enhanced human capital.

Table 4 The influence of formal education role and self-concept on entrepreneurial potential

Independent Variables	Unstandardized Coefficients (B)	Standardized Coefficients (β)	Sig.
Constant	-0.769		0.766
Self-concept (index) (x1)	0.880	0.817	0.000**
Formal education role (index) (x2)	0.052	0.049	0.073
	F	504.985	
	R	0.831	
	Adjusted R Square	0.689	
	Sig	0.000**	

***) Significant at $p < 0.01$

In the study, self-concept influenced the entrepreneurship potential. Thus, the better students'

However in this study, the formal education did not influence the entrepreneurial potential. This may



caused by the existing formal education system was not enough to establish the entrepreneurial character (Chamard, 1989). Therefore, it was necessary to reorient the system of teaching and education to build the values of entrepreneurship (Singh, 1990). Vesper (1990) stated the lecturer can support entrepreneurial achievement by raising awareness of entrepreneurship among students. Hansemark (1998), Hatten and Ruhland (1995) and Ede, Panigrahi, and Calcich (1998) supports the cultivation of the values of entrepreneurship in the education process at the college level, but in the context of influencing attitudes to choose entrepreneurship as a career alternative.

CONCLUSION

The largest proportion of students is female, 20 years old and currently studying in sixth semester. The role of formal education between men and women tend to be the same, where the largest proportion of women categorized as moderate category and the largest proportion of men categorized as high category. Meanwhile, self-concept and the entrepreneurial potential of men is higher than women. Improvement of self-concept in students will increase the potential for entrepreneurship. Therefore, in order to increase the entrepreneurial potential, the universities can strengthen student self-concept by instilling the values of entrepreneurship and training to form a good self-concept.

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