

## Relationship between Entrepreneurial Intention Among Undergraduates Students and Entrepreneurship Education: Differences between Genders

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### Abstract

Entrepreneurial intentions among undergraduates students need a more in-depth study to reveal entrepreneurial intention formation model, intention determinant variables, and how those variables interact each other in the intention formation process and intention strength level. Personal attitudes and social norms are the most important variable influencing entrepreneurial intentions, besides perceived behavioral control. These three variables are the most important entrepreneurial intentions determinant variable that each is directly influenced by personal beliefs. Prior research shows gender gaps in entrepreneurial activity and there is a significant different entrepreneurial intentions formation process between gender. Entrepreneurship educations are aimed to change all personal beliefs to be more positive to entrepreneurial activity so we could find strong entrepreneurial intentions among undergraduate students. The Empirical test shows that entrepreneurship education significantly influences personal attitude dan perceived behavior control to be more favorable in developing entrepreneurship education. Female students tend to value more on nonmonetary entrepreneurial benefits than a male student. Entrepreneurship education strengthens each gender' tendency to value more what they initially believe.

### Keywords

Entrepreneurial intention, beliefs, education, gender

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### Introduction

Empirical evidence shows some groups of people are far behind in its entrepreneurial activity while the other express consistently a very massive entrepreneurial action. This significant entrepreneurial activity difference among communities and specific sub-cultures have attracted much

research. For example in the study report, "Global Entrepreneurship Monitor 2011" (Kelley et al., 2012) show the significant gender gap in entrepreneurial activities, where there are more men than women entrepreneurs. Some research show people with a particular sub-culture background have a much higher prevalence become entrepreneur compared to other sub-

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cultures (Edelman et al, 2010). Carsrud and Brännback, 2011 urge more research to identify the inhibitors of the entrepreneurial intention emergence in the communities that are left behind in carrying out entrepreneurial activities.

Students' assessment of the attractiveness of entrepreneurial activity is crucial and shape their behavior and career option after they graduate later. Fayolle and Gailly (2014) stated that personal attitudes toward a behavior are the very important impetus for such behavior. Student's personal attitudes toward entrepreneurship are shaped by personal beliefs about the consequences that they would receive if they chose to become entrepreneurs, such as financial wealth, challenges, greater autonomy, and life balance between work and social activities (Martin et al., 2013). In order to understand the formation of entrepreneurial intentions among undergraduates, we can use the conceptual framework derived from the Theory of Planned Behavior developed by Ajzen (2006). According to the Theory of Planned Behavior, a behavior that appears in a sequential and systematic way does not come from an impulsive and spontaneous decisions but has gone through a series of planning steps, establishment and strengthening process of individual intentions and mental readiness. The emergence of entrepreneurial activity is preceded by intention which is a product of three variables: attitudes, social norms, and perceived self-efficacy. Perceived self-efficacy is a person's subjective assessment of his ability to be able to effectively carry out entrepreneurial activities. Using the model of the Theory of Planned Behavior, the process of entrepreneurial intention formation can be better understood, how and what factors influence the intention, and whether there is an interactive relationship between these factors in each phase of the process.

According to Ajzen (2006), the entrepreneurial intention is influenced by social pressure which can play as driving or inhibiting force. Social norms is a possibility of people, that are considered important by a person, from the immediate family, respected figures or groups of social support or reject an activity. Social norms role in establishing entrepreneurial intention is in line with social learning theory which states that a person tends to adopt the behaviors displayed by family, close friends, idols or people he respected. The social norms have a decisive influence in the uncertain situation or unpredictable success, just like the decision to become an entrepreneur.

The interaction between three antecedent variables of the entrepreneurial intention, which is personal attitudes towards entrepreneurial activity, social norms, and perceived behavioral control, have different impacts on entrepreneurial intentions, depend on gender, education, and cultural background (Verheul et al., 2012). Hofstede et al., (2010) categorize cultures into six cultural dimensions. There is culture that emphasizes individualism but on the other side, there are cultures that uphold collectivism. In the individualistic culture, attitudes become much more important in shaping the entrepreneurial intentions than the social norm, on the other hand in collective or communal cultures, social norms become very important for every individual who always expects acceptance, approval, and conformity to their environment. Another cultural dimension is masculinity dimension, which is an indication whether there are gender segregation and distinctive features of professions between gender in a community. Based on cultural dimension categorized by Hofstede et al., (2010) Indonesia can be classified into the collective or communal culture. Therefore, we expect social norms play



an important role in the entrepreneurial intentions formation among Indonesia undergraduate students.

Prior research finds indications that women generally have more negative self-efficacy perception to become entrepreneurs than men. Noguera et al., (2013) shows the probability of women to start new businesses was positively related to readiness in capturing the existing business opportunities and their assessment whether they have sufficient knowledge and ability to change the opportunities for profitable business. Verheul et al. (2012) find that women tend to have a strong external locus of control (strength beyond my control determine what happened to me) and therefore women feel there are many external constraints to become entrepreneurs. Noguera et al., (2013) find that although both male and female students have the low entrepreneurial knowledge, female students are more aware and acknowledges it.

This study examines the empirical model of the entrepreneurial intentions formation among students of the faculty of economics and business who are nascent entrepreneurs, and whether there is a significant difference between gender groups. This study will reveal the differences between genders in the process of entrepreneurial intention formation among students. Effect of entrepreneurial education to the factors that influence the entrepreneurial intentions will also be empirically tested, and whether there is a significant different impact of entrepreneurship education on entrepreneurial intention between gender.

## Literature Review

Prior research in entrepreneurship, such as Krueger (2007, 2009) and (Hayton

and Cholakova, 2012) examined how individual and environmental assumptions influence our conclusions in the entrepreneurial intention formation process. Shinnar et al., (2012) examine individual psychological characteristic such as the type of personality, cognitive scripts, and mental scheme, which influence entrepreneurial intention formation process and entrepreneurial behavior as a manifestation of the intention. Environmental assumptions such as social norms, the government supports, and business climate is very critical in the emergence of new business. Based on more richer and rigorous conceptual model, we will be able to understand individual entrepreneurial intention formation process comprehensively (Krueger and Day, 2010).

Ajzen et al., (2009) found strong correlation between entrepreneurial intention and entrepreneurial behavior, but some experts criticize empirical models that do not consider time gap between the establishment of entrepreneurial intention and its realization in real entrepreneurial activities (Krueger and Day, 2010). Long time gap indicates the low level of intention strength. However, this conclusion needs some considerations in entrepreneurship context that new business opportunities are unpredictable and relate to a complex personal and environmental situation.

Entrepreneurial intention determines how a person behaves in any event and in every stages of the business emergence process to set the pace, direct and harmonize all activities that need to be done in each phase. Understanding the details on the role of entrepreneurial intention at every stage of the business creation still need more and deeper research because there are many debates around the determinants of the entrepreneurial intention, how those



variables interact each other, and how the characteristics of the individual or community where the individuals live also influence the entrepreneurial intention formation (Krueger and Day, 2010).

The conceptual framework that is widely used to understand the process of entrepreneurial intention is the Theory of Planned Behavior (TPB) (Ajzen, 1991 2002). TPB states that the emergence of intended behavior is affected by three factors: first, a subjective assessment of an individual toward a behavior (personal attitude). Second, a person's perception that there is social pressure to perform or not to perform a behavior (social norms). Third, the perception of the level of difficulty to realize an activity (perceived behavioral control). This three intention factor is formed and influenced directly by a set of beliefs (Ajzen, 2002). Beliefs explain in more detail how an intention forming factors are developed in a person's mind, so beliefs are indicators of these intention factors. There are three types of belief that influence the intention formation process: first, the belief of the consequences that may arise from an act (behavioral beliefs), second, personal perception of the expectations and acceptance of others to entrepreneurial activities (normative beliefs), third, the personal belief about the existence of certain elements that hamper the emergence of certain actions (control beliefs). In aggregate, these beliefs then produce intention factors: personal attitude, social norms, and perceived behavioral control. These indicators give clearer and deeper aspects that are represented by an intention factor. For example, one can see self-employment as an attractive option (factor level) but the interest to be an entrepreneur can be driven by reasons that vary between individuals: for example, one is interested in becoming entrepreneurs because of

financial wealth, but others are interested in becoming entrepreneurs because it promises personal freedom and autonomy (indicator level).

Behavioral beliefs (indicator level) precede and influence personal attitude (factor level) as factors that shape entrepreneurial intention. Belief is formed from a subjective assessment that entrepreneurial behavior will give the preferred results and such behaviors have positive attributes. For example, if a person puts salary as the most important factor in choosing his future profession, therefore, he hopes highly entrepreneurial activities can meet his personal expectations. Other important attributes which often affect the choice as an entrepreneur is personal challenges, which is an opportunity to realize and prove the individual competence and higher quality of life because of working life-social life balance. (Kolvereid and Isaksen, 2006). Prior research show nearly all of these attributes tend to be male-gendered which the focus of an entrepreneur is to obtain the higher quality of life in the sense of accumulation of money, prestige, and power that can be categorized as masculine motives (Noguera et al., 2013). Noguera et al., (2013) found that both men and women pursue financial benefit, personal autonomy, personal achievement, job satisfaction and acquisition of other non-economic nature, but women put family and children as more important factors in deciding their profession than men Costa et al., (2001) shows that women assess non salary as an important factor when they decide to be a self-employed entrepreneur.

The strength of personal belief in shaping the entrepreneurial intention is strongly influenced by the cultural dimension where the individual lives and perform daily activities. According to Hofstede



et al., (2010), there are six dimensions that can differentiate cultures and sub-cultures that exist in a community. The six dimensions of culture are:

1. Power Distance, which is mental awareness and the belief that there is a social hierarchy and each person has his/her specific position in a community because of differences in the attributes they possess
2. Uncertainty Avoidance, the level of willingness to accept and assume such a level of anxiety (stress) due to the future uncertainty
3. Individualism versus Collectivism, which is the level of integration and conformity of individuals into a homogeneous society group
4. Masculinity versus femininity, which is the existence of a strict division of roles played by women and men in a community
5. Long-Term vs. Short-Term Orientation, which is the focus of the efforts and its results in the context of the time dimension: the future, present or past.
6. Indulgence versus Restraint, which is level of freedom or restriction for human impulse to enjoy life

Community with strong power distance consciousness that is characterized by the social hierarchy and social segregation between community groups, is certainly not conducive to the emergence of entrepreneurial intentions which need an egalitarian environment that give equal treatment for all community members. The abundant entrepreneurial intention will emerge if everybody gets their own rewards based on their own effort, creativity, and productivity without any kind of discriminations. Geertz (2014) divided the Java community into three groups: abangan, santri, and priyayi. Geertz classification not only shows

religious orientation but also reflects social hierarchy and power that exist in the Java community. Priyayi groups which come from the aristocratic hereditary ruler has the specific characteristics that view entrepreneurial activity as a profession for lower social groups and usually choose a career in bureaucracy or government services. Most of the priyayi view entrepreneur as the less respectable job and not match with the degree of nobility they have.

Cultures that are more open to any kind of new ideas, easily accept new ways of understanding or doing something, and appreciate all new possibilities in a business will be conducive to the emergence of entrepreneurial intentions because starting a new business has many unpredictable consequences and always dynamic with all possibilities that may occur in the future. Cultures that value more on regularity, predictability, and a static lifestyle are an antithesis of an entrepreneurship conducive environment. Based on cultural dimensions categorized by and Minkov (2010) that are mentioned above, conducive culture for nurturing entrepreneurial intentions is the culture which the low level of uncertainty avoidance. For an entrepreneur, uncertainty is not something to be avoided even though it reflects a risk. Instead of viewing uncertainty as a business risk, the entrepreneur sees it as an opportunity.

Another determinant of entrepreneurial intentions is social norms which are formed by normative beliefs held by someone. Normative beliefs are the individual's perception that the person or group of people that are considered important would agree or disagree with his decision to become an entrepreneur (Ajzen, 2002). The influence of normative belief is stronger when there is a strong motivation to comply with the opinion



of reference. Verheul et al. (2009) found that when making a decision to become the entrepreneur, men are more affected by social norms than women. Social norms (factor level) is formed from the sum of all the result of interaction and escalation between normative beliefs and motivation to comply with the opinion of the charismatic leader and the social groups that are considered as a reference. For example, an individual may know that some respected figures have a negative perception of entrepreneurial activities and reject entrepreneur as a good profession, but because motivation to obey and follow those figures are not too strong, then he will not follow their opinion.

Bosma et al., (2012) found both genders have similar highly respected role models. However, because entrepreneurs are traditionally dominated by men (Mueller and Conway Dato-on, 2013), women entrepreneurs who play as a role model in entrepreneurial activities and who can influence entrepreneurial intentions among women are in limited number. Hartman and Hartman (2008) found strong role models are very important in the selection of work (occupational intentions) by a woman in a male-dominated profession such as engineering works. Because of gender stereotypes, role models play more important role in generating and strengthening entrepreneurial intentions among female student (Shinnar et al., 2012). Costa et al.,(2001) argue women are more likely to subject to social norms, because cultures which have masculine dimension are more prevalence which often encourages women should not behave as an independent entrepreneur and because women tend to comply with and to conform to their environment.

The cultural context in which an individual intends to become an entrepreneur determines how strong the impact of

social norms on entrepreneurial intentions. Sub-culture that emphasize collectivity and conformity of all individuals to a community, for example, will cause the impact of social norms and normative belief becomes very significant to the formation of entrepreneurial intention. In contrast, the culture that is characterized by strong individualism, intentions and decision to realize these intentions into a series of action more strongly influenced by individualistic considerations and less determined by the presence or absence of social pressure.

The third determinant of entrepreneurial intention is perceived behavioral control or by some researchers called the perceived self-efficacy. Prior research measure perceived behavioral control as an entrepreneurial self-efficacy which is whether a person believes that he has all the entrepreneurship pre-requisite (e.g. Kolvereid and Isaksen, 2006; Linan and Chen, 2009). Many believe entrepreneur highly require problem-solving and decisionmaking ability, financial management, high level of creativity, and leadership. In the context of the model Theory of Planned Behavior developed by Ajzen (1991, 2002), personal belief or self-confidence in his own ability influenced and shaped by the so-called control beliefs. Ajzen distinguishes internal and external control beliefs. Internal control beliefs are related to belief in personal capability while external control beliefs are related to the situation that must be faced. The belief of personal capacity is not sufficient to establish entrepreneurial intentions if situations and environments that must be faced by a person to start a business are not conducive enough. Arenius and Minniti (2005) show external constraints manifest into a mental barrier for the emergence of an act through its effect on the perception of the internal feelings of control firstly. Examples of external control beliefs are



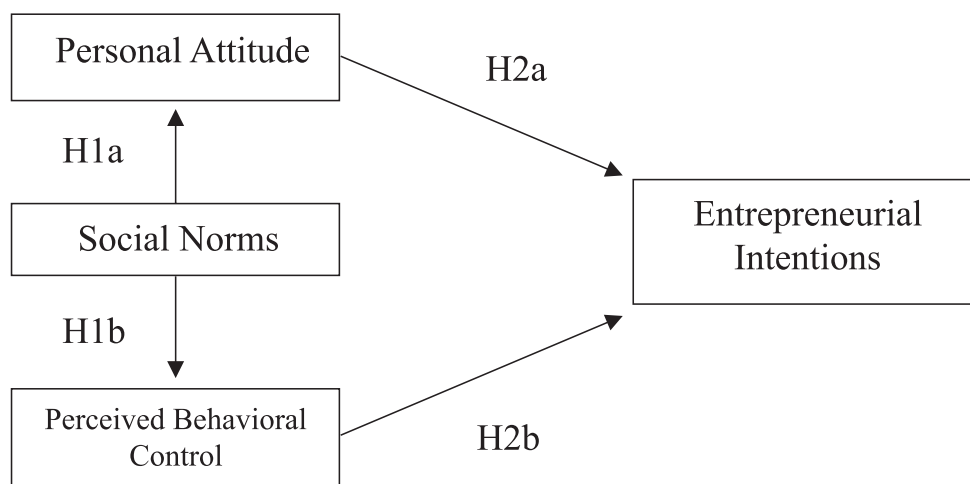
whether a person perceives financial resources is imperative to start a business or the government's role in facilitating and helping entrepreneurs.

Several empirical studies indicate a significant difference in the attitude toward entrepreneurship and strength of the entrepreneurial intentions between students who previously had followed the entrepreneurship education program to those who have never attended such a program. Even though there is continuing debate on a generalization of the influence of entrepreneurship education to an establishment of entrepreneurial intentions, some researchers still try to reveal further what kind of entrepreneurial education program specifications which is effective in establishing entrepreneurial intention (Noguera, et al (2013). Fayolle

and Gailly (2014) show that the causal relationship between the entrepreneurship education and the entrepreneurial intention is highly influenced by some aspects of education such as the selection of participants educational program, the entrepreneurship experience, program content, teaching methods, profile of teachers, and the supporting facilities. (Martin et al., 2013).

Based on a brief review of theoretical and empirical test results that have been described above entrepreneurial intention formation model among the students can be described as the one in Figure 1 and Figure 2 below.

The whole relationship between the constructs summarized in Figure 1 (factor levels) and Figure 2 (level indicator).



**Figure 1. Entrepreneurial Intention Formation Model and Factor Level Hypothesis**

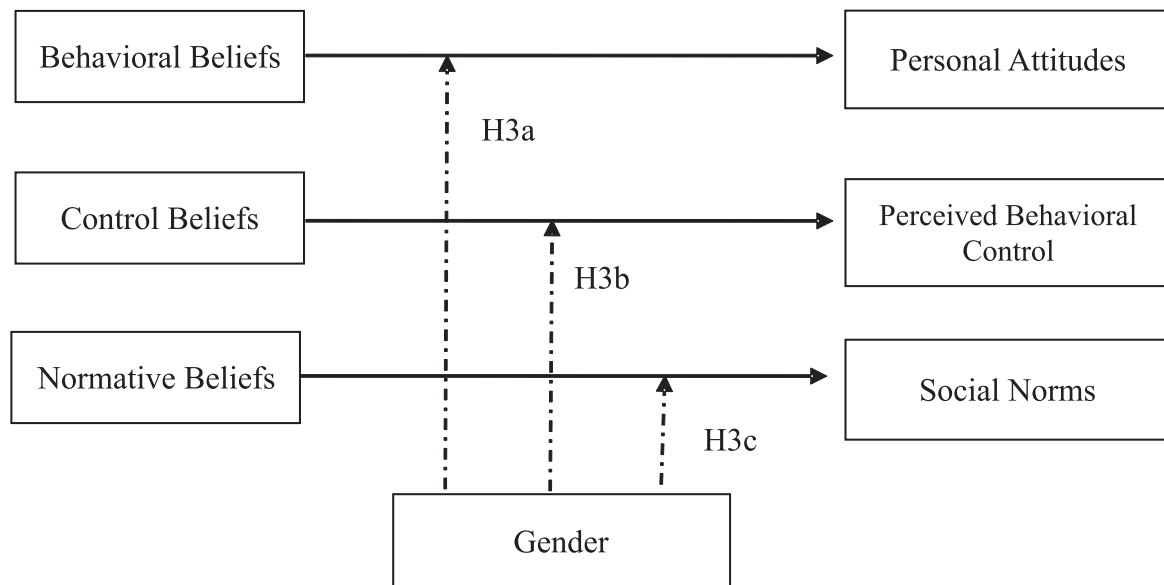
**Hypothesis 1a: Social Norms significantly influence personal attitude toward entrepreneur behavior**

**Hypothesis 1b : Social Norms significantly influence personal behavior control**

**Hypothesis 2a: Personal attitude toward entrepreneurial behavior significantly influence entrepreneurial intention**

**Hypothesis 2b: Personal behavior control significantly influence entrepreneurial intention**





**Figure 2. Factors of Entrepreneurial Intention and Related Personal Beliefs**

**Hypothesis 3a: Relationship between personal attitude toward entrepreneurial behavior and behavioral beliefs is significantly influenced by gender**

**Hypothesis 3b: Relationship between perceived behavior control and control beliefs is significantly influenced by gender**

**Hypothesis 3c: Relationship between perceived behavior control and normative belief is significantly influenced by gender**

## Research Method

### Sample

Our sample is 517 undergraduate students at the Faculty of Economics and Business, University of Indonesia, which is 58% are female students. Students who have taken and passed the entrepreneurship courses as much as 62% of the sample. Following Krueger et al. (2009) and Linan and Chen (2009), the author chose undergraduate business student because they can be

categorized as a group of people who have an interest in a business and was on the crucial stage of life in deciding their future profession as a career (nascent entrepreneurs). Shinnar et al. (2012) state that a sample of students is very suitable for the study of entrepreneurship intention because students face directly the problem of career options after graduation and during the process of their study they are continuously considering various career possibilities and career as an entrepreneur is just one option being considered.

### Measurement Method

This study uses the conceptual framework based on the construct of Theory of Planned Behavior (TPB) with some measures developed by prior research, such as to measure entrepreneurial intentions, measurement methods developed by Linan and Chen (2009) and Bosma et al. (2012) are used; Krueger et al. (2009) for personal attitude measures; Kolvereid and Isaksen (2006) for social norms measures; and Fayolle and Gailly (2014) for perceived behavioral control.



All questions are measured by the six Likert scale ranging from Strongly Agree to Strongly Disagree. For each factor of entrepreneurial intention, this study further specify into some behavioral beliefs and component of beliefs as indicator for those factors. For attitude toward entrepreneurship, its indicators are behavioral beliefs and entrepreneurship value. Behavioral belief is belief up held by a person about entrepreneurship benefits; entrepreneurship value is ordinal valuation of entrepreneurship benefits such as money or financial benefit, autonomy, challenges and balanced life. Social norm measurement are broke down into two indicators; first indicators are motivation to comply, second indicators are normative belief which is personal judgment about important other reaction to entrepreneurial activities. Perceived behavior control are also broke down into two indicators: first indicators are the personal belief about level of urgency having such entrepreneurial resources; second indicators are personal judgment about the quality of entrepreneurial resources already owned.

### Analysis Method

This study used structural equation modeling which allows us to test some alternative models by using existing data in order to examine the role and importance level of factor variables (such as personal attitude, for example). The author will use a multi-group analysis in order to compare the results between the two gender groups that have got the entrepreneurial education and those who have not.

Structural equation modeling was conducted in two stages (McDonald and Ho, 2002). The first phase, we evaluate the adequacy of measurement instruments. The second phase we test the hypothesis of the direct or indirect relationship between constructs exist in the model. To measure the discriminant validity of the constructs, confirmatory factor analysis conducted on items entrepreneurial intentions, personal attitude, motivation to comply, normative and perceived behavioral control opinion. The analysis shows the suitability of the suggested models (good fit of the suggested models, Hu and Bentler, 1998). First, SRMR-value (standardized root mean square residual) of 0.03 which is below the cut-off value of 0.08. Second, RMSEA (root mean square error of approximation) is equal to 0.04 are below the cut-off value of 0.06. Third, the CFI (comparative fit index) equal to 0.97 which is above the cut-off 0.95.

To test significant gender differences in entrepreneurial intention formation process, this study compares factor loadings for each factor between estimated models by male and a female students. Two confirmatory factor analysis separately, one for female group of student and another for male students. The results of the estimation model of the formation of intent are discussed in more detail in sub-item below. In order to reveal more detail the gender effect on entrepreneurial intention, this study elaborates further gender differences in indicators for each entrepreneurial intention factor through regression equations:

$$Personal.Attitude_i = \gamma_0 + \beta_1 Autonomy_i + \beta_2 Money_i + \beta_3 Challenges_i + \beta_4 Life_i + \varepsilon_i \quad (1)$$

$$Perc.Behav.Contr_i = \gamma_0 + \beta_1 Competency_i + \beta_2 BusConn_i + \beta_3 Cap_i + \beta_4 Govt_i + \varepsilon_i \quad (2)$$

where, Perc.Behav.Contr = Perceived Behavior Control, BusConn = Business Connections, Cap = Capital, Govt = Government Support

**Figure 3. Regression Equations**



## Results and Discussion

Entrepreneurship course is an elective and not compulsory course for business students, so that students' registration for this course is entirely subjective individual choices. Female respondents consist of 58% of the total sample.

Table 1 shows the average entrepreneurial intentions in full data is 5.2 on the Likert scale 6. The data shows the entrepreneurial intentions among undergraduate students

is relatively high with supportive personal attitude. However, two other factors: Social Norms, and Perceived Behavioral Control have relatively low scores, below 4. Table 1 also shows significant differences between gender in all observed variables. Average entrepreneurial intentions among female students are lower than male because of female lower scores in personal attitude and perceived behavior control.

**Table 1. Descriptive Statistics**

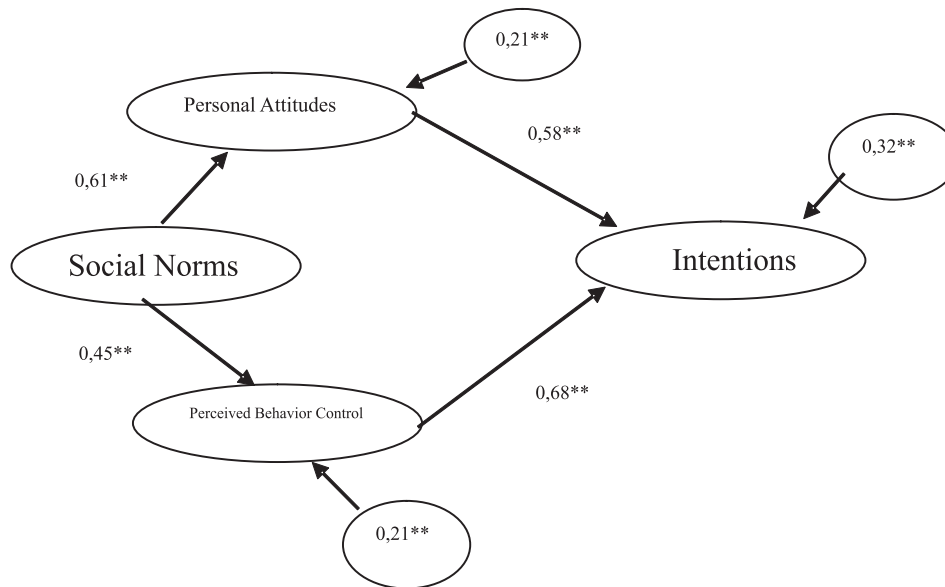
	Average Full Data	Standard of Deviation	Gender		Entrepreneurship Education	
			Male	Female	Have	Have not
Entrepreneurial Intention	5,2	0,67	5,5	4,9	5,6	4,7
Personal Attitudes	4,1	0,72	4,2	4,9	5,1	4,5
Social Norms	3,5	0,69	3,2	4,7	4,2	5,3
Perceived Behavioral Control	3,2	0,78	4,5	3,1	5,4	5,3
Gender (1=Male)	0,42	0,50				

Higher average social norms in a female student show external environment still exert a serious hurdle for female entrepreneurs. Female student tends to perceive they have lack of ability to perform entrepreneurial activities, but on the other hand as a woman, they tend to have positive toward entrepreneurial activities which promise more autonomy and extra time for family related activities.

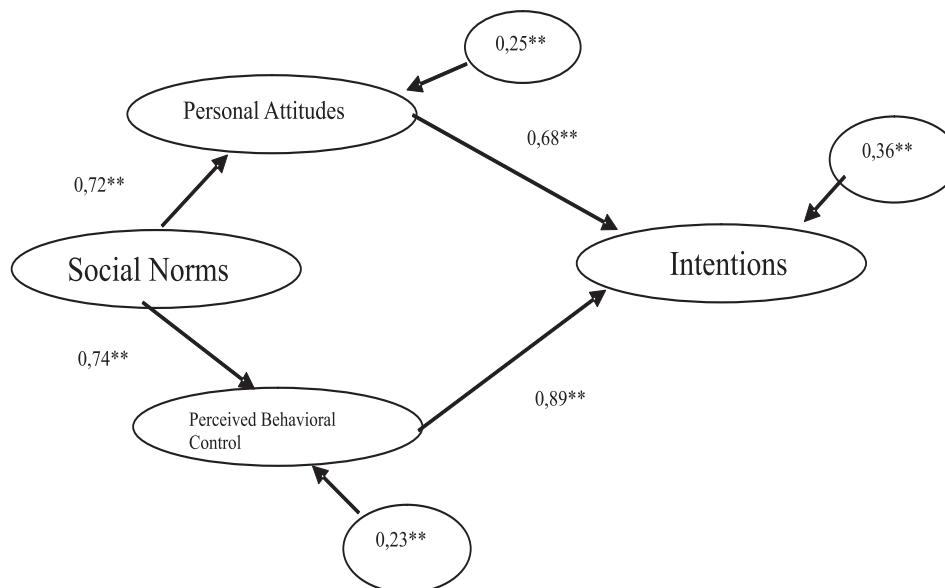
The results of the estimated model for students' entrepreneurial intention formation with all data can be seen in Figure 4. All relationships between variables in the model are similar to predictions of Theory

of Planned Behavior. If we estimated two separated model with a female student and male student sample data, then we get two estimated models which can be viewed in Figure 5 and Figure 6. Social norms have a significant influence on the personal attitudes and perceived behavioral control, both on female and male students but the loading factor is higher for female (see Figure 4) than man ( see Figure 5). Personal attitudes loading factor is much greater in the sample of female students than a male student, while personal judgment about self-efficacy to perform entrepreneurial behavior are much lower for female students than male students





**Figure 4. Estimated Model of Entrepreneurial Intention Formation: Full Data**

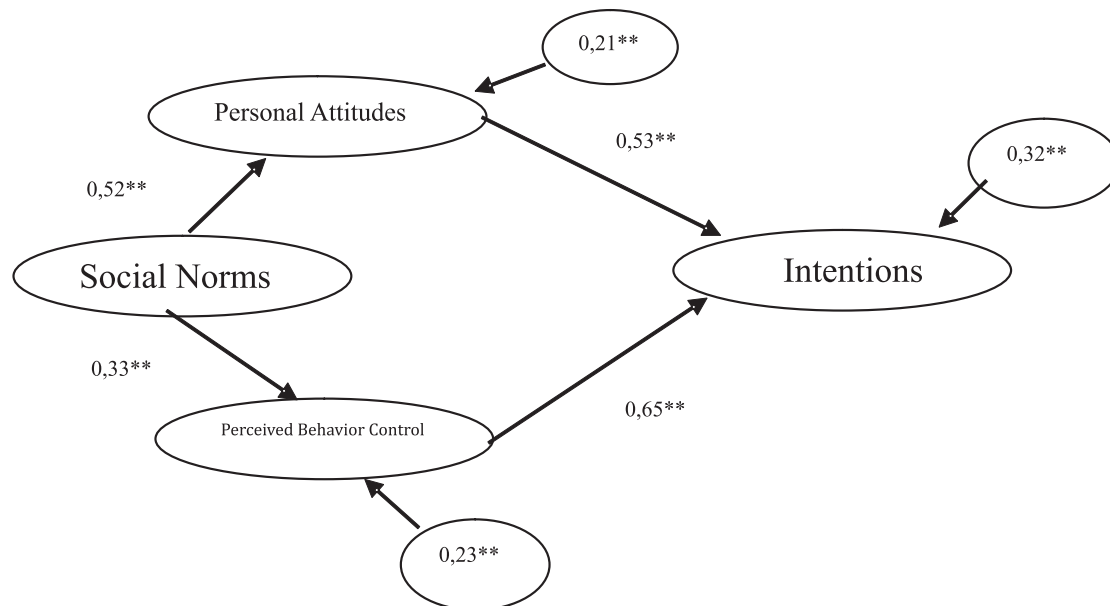


**Figure 5. Estimated Model of Entrepreneurial Intention Formation: Female Student Data**

Model fit to female student sample data (SRMR = 0.05, RMSEA = 0.05, CFI = 0.95) meanwhile estimated model with

male student sample data produce SRMR = 0.04, RMSEA = 0.04, CFI = 0.96.





**Figure 6. Estimated Model of Entrepreneurial Intention Formation: Male Student Data**

Table 2 show significant different beliefs between gender in valuing important aspect of entrepreneurial behavior. For a male student, money is the most important determinant considered when they decide to choose entrepreneur as a career option, on the other hand, the most interesting promises of being an entrepreneur is balanced life for the female student. Perceived behavior control among female student is primarily dominated by availa-

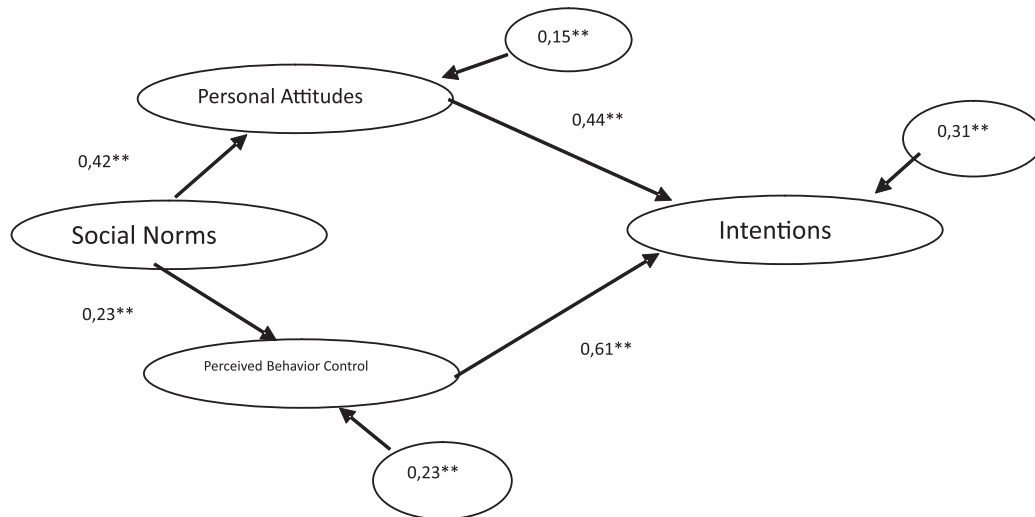
bility of business connection and capital, on the other hand, for male student individual competency is far more important than the availability of those two factors.

The Model is also estimated with two separate sample then: a group of students who have not got entrepreneurship education and those who have already got such an education. Figure 6 exhibit the results

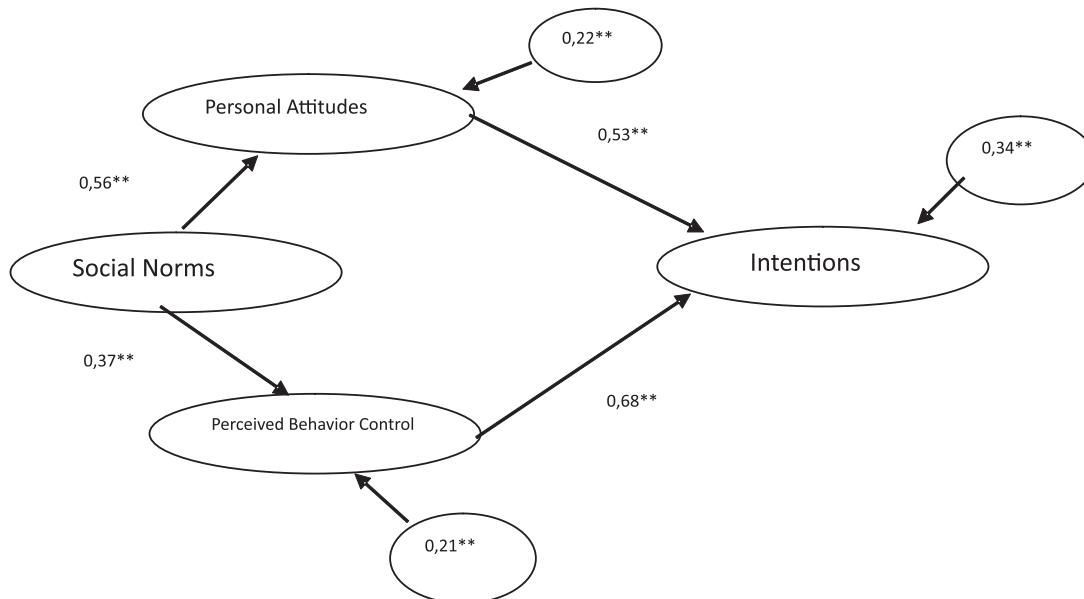
**Table 2. Effect of Beliefs on Personal Attitudes and Perceived Behavior Control: Gender Differences**

	Full Model		Male	Female	F value	Prob
	Beta	R <sup>2</sup>	Beta	Beta		
Personal Attitudes						
Indicators:						
Autonomy	0,35		0,33	0,38	7,77	0,00
Money	0,47		0,76	0,39	7,12	0,00
Challenges	0,26		0,45	0,25	3,12	0,03
Balanced Life	0,16	0,68	0,39	0,54	4,58	0,01
Perceived Behavioral Control						
Indicators:						
Competency	0,67		0,71	0,59	7,75	0,00
Business Connections	0,75		0,54	0,87	7,67	0,00
Capital	0,79		0,47	0,89	7,23	0,00
Government Support	0,12	0,59	0,13	0,11	7,13	0,00





**Figure 7. Estimated Model of Entrepreneurial Intention Formation: Student who take entrepreneurship Course Data**



**Figure 8. Estimated Model of Entrepreneurial Intention Formation: Student not take Entrepreneurship Course Data**

The study examined further what beliefs that construct the gender differences between the groups of students who have taken and passed the entrepreneurship courses to those who have not. Using regression models, the two determinant variables of entrepreneurial intentions, that is personal attitudes and perceived behavior control, are regressed on related beliefs. Two regression models are separately estimated with different gender

subsample, one is with male students sample and another model is with female students sample. Estimated regression coefficient in each model show the gender differences. The test results are shown in Table 3.

Personal attitude towards entrepreneurial activity is significantly influenced by four indicators, namely: autonomy, money or property, challenges, and the balance



between work and family life but the effect of autonomy and challenges to the personal attitude to become entrepreneurs is slightly different between the female student's group and male students group. Compared to male student, female student's tend to value more on autonomy than challenges. This is in line with the

significant difference of valuation of life balance and family interest that are far higher in female subsample than male subsample. On the other hand, male student tends to value money or financial benefit as the most important consideration when considering entrepreneur as a career option.

**Table 3. Effect of Beliefs on Personal Attitudes and Perceived Behavior Control: Gender Differences and Entrepreneurship Education Exposure**

**Panel A: Student Who have got entrepreneurship education**

	Full Model Beta	Male Beta	Female Beta	F value	Prob
<b>Personal Attitudes</b>					
Indicators:					
Autonomy	0,37	0,32	0,35	6,77	0,00
Money	0,68	0,85	0,42	8,12	0,00
Challenges	0,47	0,57	0,45	5,12	0,03
Balanced Life	0,48	0,20	0,67	7,58	0,01
<b>R<sup>2</sup></b>	<b>0,42</b>	<b>0,72</b>	<b>0,38</b>		
<b>Perceived Behavioral Control</b>					
Indicators:					
Competency	0,82	0,77	0,87	7,75	0,00
Business Connections	0,59	0,52	0,76	7,67	0,00
Capital	0,64	0,51	0,69	7,23	0,00
Government Support	0,14	0,13	0,15	7,13	0,00
<b>R<sup>2</sup></b>	<b>0,55</b>	<b>0,89</b>	<b>0,35</b>		

**Panel B: Student Who have got entrepreneurship education**

	Full Model Beta	Male Beta	Female Beta	F value	Prob
<b>Personal Attitudes</b>					
Indicators:					
Autonomy	0,36	0,33	0,38	7,77	0,00
Money	0,69	0,74	0,49	7,12	0,00
Challenges	0,26	0,30	0,25	4,12	0,00
Balanced Life	0,16	0,39	0,14	4,28	0,01
<b>R<sup>2</sup></b>	<b>0,34</b>	<b>0,63</b>	<b>0,21</b>		
<b>Perceived Behavioral Control</b>					
Indicators:					
Competency	0,87	0,67	0,89	8,75	0,00
Business Connections	0,75	0,54	0,87	7,21	0,00
Capital	0,79	0,47	0,89	7,17	0,00
Government Support	0,12	0,13	0,11	7,19	0,00
<b>R<sup>2</sup></b>	<b>0,59</b>	<b>0,72</b>	<b>0,18</b>		



Table 3 shows the strongest effects of entrepreneurship education are found in female students groups; entrepreneurship education changed more significantly female students' beliefs that formed personal attitude and perceived behavior control than what we can found in male students sample. After having entrepreneurship education, female students believed entrepreneurial activity promise more balanced life and challenges. Changes in beliefs of balanced life and challenges are also found in male student sample but its magnitude is higher in female students group. These findings are in line with the results of prior research that show women tend to value more on balanced life than other entrepreneurial benefit. Changes in male students' beliefs are found in money or financial benefit of entrepreneurship. This finding is also in line with result of prior research that reveal men tend to value more masculine benefit such as money and power. Entrepreneurship education strengthens each gender' tendency to value more what they initially believe.

Impacts of entrepreneurship education are also found more significantly in female students' behavior beliefs than what we can found in male students sample. After having entrepreneurship education, female students tend to lower their valuation of capital availability and business connections. Entrepreneurship education gives more knowledge about the various business model and strategy in starting a new business venture to students so that they relied less on capital and business connection as important entrepreneurship prerequisite, especially for the female student. On the other hand, male student tends to value competence as a more important prerequisite and entrepreneurship education strengthen male student independence and reliance

on their own ability to carry out entrepreneurial activities.

Findings in Table 3 show that in a communal society like Indonesia, social norms play far more important than in individualistic society. Geertz (2014) show Indonesian are a communal society with relatively sharp social stratification and high social pressure to individual decision, even to very personal decision for daily life and career option. Social Norms loading factors in Figure 2, 0,61 and 0,45 are far higher than Shinnar, et al (2012) who find 0,32 and 0,21 for US data and Noguera, et al (2013) who find 0,37 and 0,20 with European country data. These findings support Hofstede et al., (2010) postulation that individual decisions are more influenced by the social environment in communal society. Figure 4 and 5 show that stronger social norm influence is found in female student, which support further social pressure theory proposed by Noguera et al., (2013) to understand why in communal society female entrepreneurs are fewer compared to individualistic society. Women put social norms as the more important factor than men. Social Norms loading factors in a Female group, 0,72 and 0,74 are far higher than Male Group (0,52 and 0,33). We also can see that social Norms loading factors in female Indonesia group are far higher than findings of Shinnar, et al (2012) and Noguera et al., (2013). Indonesian women, who live in communal society, put social norms as the more important factor than their American or European fellows.

In table 3 we find the highest goodness of fit (R<sup>2</sup>) is in male students group who have already taken entrepreneurship education (0,72 and 0,89). Female students have far lower (0,35 and 0,38). Lower R<sup>2</sup> indicates that there are other various important influential factors in female student con-



sideration. Personality, family and close social environment diversity play serious role in women group

### Conclusion

Undergraduate students are nascent entrepreneur which is a group of people in the near future should decide to become entrepreneurs or a company employee. The empirical test of entrepreneurial intention establishment model derived from the Theory of Planned Behavior show personal attitude and perceived behavioral control were significant factors of entrepreneurial intention among undergraduate students. There are significant differences in perceived behavior control effect to the formation of entrepreneurial intentions between female and female students. Personal attitudes loading factor is much greater in the sample of female students than the male student, while personal judgment about self-efficacy to perform entrepreneurial behavior are much lower for female students than male students. Social norms have a significant influence on the personal attitudes and perceived behavioral control, both on female and male students sample but its effects are higher for female. Female students tend to value social norms as an important factor when they make a career decision and entrepreneur is just only a career option

The empirical test also reveals that the entrepreneurship education effectively changed the entrepreneurial intention among undergraduate students. Personal attitude toward entrepreneurship and individual perception of the ability to carry out entrepreneurial activities become more conducive after students take non-compulsory entrepreneurship course. Significant changes of beliefs were found mainly in the influence of capital availability and business connections to be able to undertake entrepreneurial

activities. Although the influence of capital and business connections still quite strong after taking entrepreneurship education, in the empirical model which are estimated with the sample of students who have taken entrepreneurship courses, loading factor is much smaller than in the model estimated with the sample of those who have not taken such education. These findings indicate that entrepreneurship courses are quite effective in opening horizons of thinking and introducing a variety of business models to undergraduate students so they are not too dependent on the availability of capital and business connections to start a new business. Students who have taken entrepreneurship courses also exhibit a change in beliefs of opportunities that create greater wealth and a better life balance through entrepreneurial activities.

The results of model estimation show social norms, though not directly affecting entrepreneurial intention, remains a crucial factor in the personal attitude towards entrepreneurial activity and individual perceptions of the ability to succeed as an entrepreneur. Social norms have much greater influence on a group of students who have not received entrepreneurship education and female. Entrepreneurial education is effectively able to change personal attitudes and individual assessment of their own abilities to be more conducive to entrepreneurial intention emergence. Social pressure to be much lower in the group that had received college entrepreneur, individual assessment of the ability to carry out the entrepreneurial activity and personal attitude to be more objective and more individualistic and independent.

The entrepreneurship education also changed more significantly female students' beliefs of entrepreneurship benefit.



Female students believed entrepreneurial activities promise more balanced life after having entrepreneurship education that is inline with results of prior research that show women tend to value more on balanced life than other entrepreneurial benefits. On the other hand, male students' beliefs have an escalation in money or financial benefit of entrepreneurship after taking entrepreneurship education. These findings are also in line with a result of prior research that reveals men tend to value more masculine benefit such as money and power. Entrepreneurship education strengthens each gender's tendency to value more what they initially believe.

There are some practical implications of this study. Entrepreneurship education is an important tool in driving students' attitudes towards entrepreneurial activities. Entrepreneurship education should also focus on cultural approach, not only on entrepreneurial knowledge and know-how, especially for a female student who tend put social norms as a most important factor in deciding a career option.

### Notes on Contributor

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### Appendix A. Items used in the survey

Respondents rated items on a 6-point Likert scale ranging from entirely disagree (1) to entirely agree (6):

#### A.1. Entrepreneurial intention (factor)

I have considered becoming an entrepreneur one day.

I never see myself becoming an entrepreneur.\*

When the opportunity arises, I will become an entrepreneur.

#### A.2. Personal attitude (factor)

It seems attractive to become an entrepreneur.

Being an entrepreneur evokes mainly negative thoughts.\*

Entrepreneurship would present more up than downsides.

I dream of being an entrepreneur one day.

#### A.3.1 Behavioral beliefs: expectancy

As entrepreneur, you make a good living.

Entrepreneurship is a profession full of challenges.

Entrepreneurs experience a lot of autonomy.

As entrepreneur, you can better balance work and private life.

#### A.3.2 Behavioral beliefs: value

I value autonomy in my future profession.

I think it is important to earn enough money.

I would like to meet a lot of new challenges in my profession.

I consider the balance between work and private life as important.\*

#### A.4. Motivation to comply (factor)

I would vest importance in the opinion of others before becoming entrepreneur.

I would listen to the advice of others when deciding whether to be an entrepreneur.

My environment has an important impact on my decision to become an entrepreneur.

Becoming an entrepreneur is entirely my own decision.\*

#### A.5. Normative belief (factor)

My parents are positively oriented towards a career as entrepreneur.

My friends see entrepreneurship as a logical choice.

People important to me would want me to become an entrepreneur.

Becoming entrepreneur would not benefit the relationship with my partner.\*

#### A.6. Perceived behavioral control (factor)

I have every confidence that I can become an entrepreneur.

I believe I can overcome most obstacles in becoming an entrepreneur.

I believe to possess sufficient capacities to become an entrepreneur.

Becoming an entrepreneur seems a feasible option.

#### A.7. Control beliefs: strength

An entrepreneur requires having applied knowledge (knowhow).

Entrepreneurship requires good external business opportunities.

Starting-up a company requires a lot of financial means.

There is not enough governmental support for entrepreneurship.

#### A.8. Control beliefs: power

I think I have the knowledge (knowhow) to become entrepreneur.

I see myself as able to detect good business opportunities.

Lack of financial means does not stop me becoming entrepreneur.

Governmental support doesn't affect my entrepreneurial decision.

\*reverse coding