Inclinations of Saudi Arabian and Malaysian Students Towards Entrepreneurship

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Abstract

This study investigated the cognitive factors (such as social norms, attitudes, and perceived behaviors) and other factors (such as risk taking, innovation, and perceived risk) that led to entrepreneurial intention amongst university students in Malaysia and Saudi Arabia. Data were collected via a questionnaire survey involving 416 students in these two countries. Overall, the results clearly showed significant differences between the two groups of respondents in all the entrepreneurship intention variables examined in this study. The results suggested that business knowledge played a very important role in determining entrepreneurial intention amongst the students of both countries. As for the differences, amongst the Malaysian students, perceived risk of doing business had medium significant effect on intention, followed by innovation and business knowledge ; whereas, amongst the Saudi Arabian students, business attractiveness was found to have very strong significant effects on intention, followed by readiness to do business and business knowledge. Some practical implications of the findings are also suggested.

Keywords : **entrepreneurship intention, theory of planned behavior, risk taking, perceived risk, innovation**

JEL Classification: L1, L2, M1, M13

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In many countries, nurturing entrepreneurship through teaching and training has received increasing attention from various universities. New trends in globalization, global competition, social development, corporate downsizing, and the emergence of knowledge-based economy across the world has resulted in more attention being given to entrepreneurship. Recently, entrepreneurship has been given serious attention due to its importance on economic growth, job creation, sources of innovation and productivity (Urbano & Aparicio, 2015). Thus, developing countries like Malaysia and Saudi Arabia inspire graduate and undergraduate students to be involved in entrepreneurship and consider entrepreneurship as a career choice. Entrepreneurial activities play quite an important role in promoting cost - effective progression, output, and societal expansion; and this has led many academicians, practitioners, and policymakers to recognize their importance. Due to the development of mass higher education in Saudi Arabia and Malaysia, the employment issue of university graduates is becoming more and more important. Related to this context, it is essential for us to determine if our existing university students are inclined towards entrepreneurship. Therefore, it is important for us to know the factors that influence a student's

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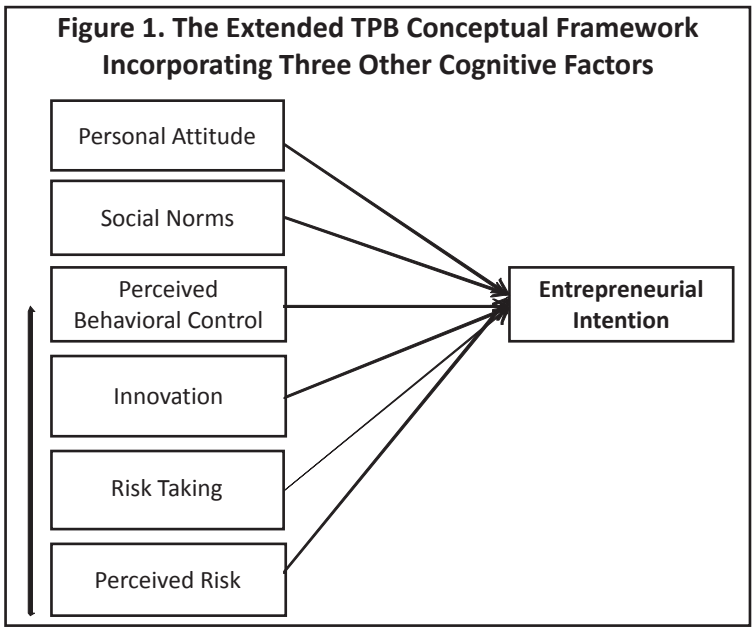
intentions to launch a new business. Very few research studies have focused on this issue where entrepreneurship is viewed as a very significant contributor to economic growth and development (Fayolle & Liñán, 2014 ; Karimi, Biemans, Lans, Chizari, & Mulder, 2016). This will help a country in developing a clear-cut policy to promote entrepreneurship at the national level so that future generations of graduates can be encouraged and motivated to become entrepreneurs. Consequently, entrepreneurship development programs or initiatives have been growing steadily in both countries, and the government of the respective countries has been continuously promoting entrepreneurship and supporting and encouraging university graduates to set up their own businesses.

Theoretical Development

Among the intention models, the theory of planned behavior (TPB) (Ajzen, 1988, 1991) is one of the most extensively investigated models. The model focuses on three key attitudes or independent antecedents to predict intentions. These are attitudes toward behavior (the degree to which an individual holds an optimistic and undesirable subjective assessment about being a businessperson (Autio, Keeley, Klofsten, Parker, & Hay, 2001; Kolvereid, 1996); a subjective norm (observed social pressure from family, friends, or significant others) (Ajzen, 1991) to start a new venture or not ; and perceived behavioral control (easiness or difficulty of becoming an entrepreneur). This model has been applied by Fayolle, Gailly, and Lassas - Clerc (2006) for predicting a wide range of human behaviors, including entrepreneurial intentions.

The TPB exemplary model has been used by numerous investigators and academics as a structure to explore attitudes towards entrepreneurial intentions (Finisterra do Paço, Ferreira, Raposo, Rodrigues, & Dinis, 2011). Several studies have tried to describe the factors and variables that explain intentions. So far, very few empirical analyses have been conducted in Saudi Arabia and Malaysia with regards to innovation, risk taking, and perceived risk that influence students' behavior towards entrepreneurial intention. Furthermore, very limited research has been focused on these two respective countries in relation to student's entrepreneurship. In this paper, we integrated and extended the TPB model in order to examine the entrepreneurship intentions of Saudi Arabian and Malaysian students. We believe that this framework will help the entrepreneurship researchers in recognizing the

Figure 1. The Extended TPB Conceptual Framework Incorporating Three Other Cognitive Factors



critical factors (such as risk taking, innovation, and perceived risk) that determine entrepreneurial intentions amongst university students in the two countries as well as their interrelationships amongst the two groups of students.

This study investigated the cognitive factors (such as social norms, attitudes, and perceived behaviors) and other factors (such as risk taking, innovation, and perceived risk), which incorporate the influence of TPB that leads to entrepreneurial intention (EI), that is, having an intention to become an entrepreneur after graduation from college. It is a cross-cultural study that aims to examine the entrepreneurial intention among Saudi Arabian and Malaysian university students. Basically, the research determined whether students in these two countries had any intentions of starting their individual professional business upon graduation rather than seeking an employment. For students with such intentions, the research examined various influencing factors that lead them to their intentions. Thus, this paper attempts to fill in this gap by focusing on these factors at the university level. With new empirical evidence, our work could contribute to the existing literature on entrepreneurship by incorporating the above - mentioned factors. The Figure 1 shows our extended conceptual framework proposed for this research.

Literature Review

(1) Entrepreneurship Intention Among University Students : A number of past entrepreneurship researchers have empirically applied the TPB to measure students' intentions and have confirmed the theory's prediction regarding the impact of three associated factors (personal attitude, social norms, and perceived behavioral control) on their intentions to be entrepreneurs (Engle, Dimitriadi, Gavidia, Schlaegel, Delanoe, Alvarado, He, Buame, & Wolff, 2010 ; Kennedy, Drennan, Renfrow, & Watson, 2003). These studies supported Ajzen's (1991) assertion that all the three predictors that lead to entrepreneurial intention are very important. However, their relative value and magnitude of the effect is not the same in every situation and country. Thus, these findings led us to include the three of Ajzen's most important variables (personal attitude, social norms, and perceived behavioral control) when examining entrepreneurial intentions amongst Saudi Arabian and Malaysian students' entrepreneurism.

To maintain competencies in a rapidly changing technological environment, the current research is shifting its focus on potential entrepreneurs to address the emergent need for more entrepreneurs to dynamically involve in uplifting the economic development and assist in meeting market needs and demands. It has become very vital for us to comprehend the role of entrepreneurial competencies and their characteristics and to determine how they affect the entrepreneurial intentions of university students (Al Mamun, Nawi, Dewiendren, & Shamsudin, 2016). Entrepreneurial university students are crucial both as backups for current entrepreneurs and as catalysts for future employment, particularly for high-tech industries in developing countries such as Malaysia (Rasli, Khan, Malekifar, & Jabeen, 2013) and Saudi Arabia. Although numerous studies have shown that entrepreneurship education plays a crucial role in producing entrepreneurial individuals, studies examining how entrepreneurial intention leads to start up preparations amongst business students remain scarce (Mahajar, 2012).

According to Wang and Wong (2004), in Singapore, amongst the factors that represent major constraints to students, wanting to become entrepreneurs are inadequate business knowledge and inadequate understanding of the perceived risks of doing business. Generally, the important characteristics of an entrepreneur include innovation and creativity, understanding of the perceived risk, and willingness to take risks. These factors are not only used to evaluate the entrepreneurial behavior of a person, but they also are used to evaluate the entrepreneurial alignment of an association or a corporation (Hagen & Zucchella, 2011). Entrepreneurship refers to an individual's capability to turn ideas into action. It includes creativity, innovation, and risk taking, and also the ability to manage tasks and assignments in order to achieve his/her objectives. Today's small businesses,

predominantly new ventures, are very important for entrepreneurship, contributing not just to occupation, societal and governmental stability, but also to their country's innovative and competitive power (Thurik & Wennekers, 2004). A number of studies have tried to describe the factors and variables that explain intentions. So far, very few empirical analyses have been conducted in Saudi Arabia and Malaysia with regards to innovation, risk taking, and perceived risk that influence students' behavior towards entrepreneurial intention. Thus, this research study tries to fill in this gap by focusing on these factors amongst college students. With new empirical evidence, our work could contribute to the existing literature on entrepreneurship by incorporating these factors, which are of utmost importance to this research domain in the academic circle. Below, we discuss some of the constructs that have been found by researchers to influence entrepreneurial intentions or behaviors amongst people.

(2) Factors Influencing College Students Towards Entrepreneurial Intentions

(i) Personal Attitude (PA) : In terms of entrepreneurship, attitude refers to the individual characteristics that lead people to have a positive outlook towards entrepreneurship in general, and entrepreneurial intention in particular. Several studies have found that formal entrepreneurship education affects students' attitude, influences their future career direction, and has a significant impact on their entrepreneurial attitude over time (Dinis, Arminda, João, Mário, & Ricardo, 2013). According to Maes, Leroy, and Sels (2014), personal attitude and perceived behavior work indirectly with social norms in setting the person's intention to be involved in entrepreneurship. In the same vein, Kadir, Salim, and Kamarudin (2012) found that undergraduate students' attitudes had a positive impact on their intention to choose entrepreneurship as a career choice. In addition, a positive and encouraging attitude of the students may more likely strengthen an individual's intention to participate in entrepreneurship. A recent study found that university students who were exposed to entrepreneurship education developed a more positive attitude to pursuing entrepreneurial careers (Shamsudin, Al Mamun, Nawi, Nasir, & Zakaria, 2016). Attitude characterized the utmost effective forecaster of entrepreneurial intention, followed by subjective norms, and then perceived behavioral control (Yang, 2013).

(ii) Social Norms (SN) : Social norms or social variables are subjective norms. This measure relates to the perceived social pressure to execute or not to execute the entrepreneurial behavior. In particular, it refers to the insight that entrepreneurship - oriented people' would or would not support the choice to become a businessperson (Ajzen, 1991). Social norms play a significant role in guiding the intention and behavior of students to pursue higher education as well as to pursue more substantial entrepreneurial assignments (Iqbal, Melhem, & Kokash, 2012). Most of the people might be stimulated or discouraged to be involved in entrepreneurship by any of the social norm's measurements, such as the family well being, monotonous sorts of businesses, or a mere competition amongst prevailing and customary businesses. By incorporating certain cognitive factors in undergraduates' professional learning, it might direct the students to think differently and to try additionally artistic, inventive, and advanced business ideas. Muhammad (2012) proved the importance of subjective norms in students' choice of their career preference. Therefore, students were likely to be self-employed after graduation when their immediate contacts supported them to become entrepreneurs. The current study focuses on the positivity of SN towards entrepreneurship. SN is also found to mediate in the formation of a positive attitude and perceived behavioral control (Liñán & Chen, 2009).

(iii) Perceived Behavioral Control (PBC) : Perceived behavioral control is a tenet of a person's perceived personal ease or difficulty to perform entrepreneurial behavior (Maes et al., 2014). The study conducted by Kadir et al. (2012) found that behavioral control (creativity and risk taking) had a positive relationship with entrepreneurial intention. They also found that external control may be seen as situational characteristics that act as indicators for

students to react in a certain way, for example, having a perception of getting a financial support as an important requirement for setting up a business. The study done by Souitaris, Zerbinati, and Al-Laham (2007) regarding students' intention towards entrepreneurship showed that students in generally 'elite universities' were most likely to have high self-confidence, which could have a positive effect on their perceived behavioral control. For students who are majoring in business administration, they are certainly equipped to venture into business by the mere fact that they are more knowledgeable about business such as the importance of market orientation by focusing more on niche markets for their products or services (Subhash & Vijayakumar, 2011).

(iv) Innovation (I) : Innovation is concerned with the introduction of all kinds of changes pertaining to products, services, processes, financing, marketing, etc., in order for an organization to continue its existence, to grow, to be competitive, and to be adaptable to the ever-changing future (Zain, Kassim, & Kadasah, 2017). Entrepreneurs contribute to economic progress through their innovativeness, which involves the development of new processes, new products, new supply sources, innovative markets' exploitation techniques, and new ways to develop businesses (Santandreu - Mascarell, Garzón, & Knorr, 2013). Armstrong and Hird (2009) found that innovativeness has a strong impact on entrepreneurial intention and it adds to the fact that innovation and entrepreneurship represent important pillars of a country's growth and its ability to narrow the gap between entrepreneurs and others.

The term is also related to creativity since normally, one has to be creative in order to be able to come up with new products, new ideas, etc. As the global forces become increasingly inevitable, many business and professional specialists are foreseeing that workforce creativity and innovation will be the most important factors in establishing and maintaining their firm's competitive advantage. At a time when countries around the world are stressed because of economic and financial crises, it is all the more important for them to make themselves more attractive to potential investments from multinationals looking for countries that are innovation friendly (Einhorn, 2009).

Liñan (2007) highlighted the need for strengthening innovation and creativity in the educational system of a country because the improvement of this proficiency and competencies might be essential for it to recognize opportunities.

(v) Risk Taking (RT) : According to Kirzner (2009), entrepreneurship is all about opportunity and risk taking, which has created a vacuity of participation among people that are not too ready to take the risk. However, a study conducted by Othman and Ishak (2009) indicated that graduates' involvement in entrepreneurship was relatively very low in the sense that many preferred to be employed by organizations elsewhere rather than to become an entrepreneur. Risk-taking propensity could be conceived as a person's inclination to take risks in decision-making situations (Shamsudin et al., 2016) such as getting involved in entrepreneurship. This association replicates an affirmative influence of risk tolerance on entrepreneurial choice. Individuals with high risk tolerance will be more willing to accept a risky behavior, that is, they will consider alternatives whose eventual magnitudes could vary their frame of consequence outlooks. Meanwhile, individuals with low risk tolerance will incline to accept low-risk behavior and evade substitutes that may cause outcomes to stay away from their prospects. Some researchers found that students' aversion to risk is a barrier to entrepreneurship (Wang & Wong, 2004).

(vi) Perceived Risk (PR) : Sandhu, Sidique, and Riaz (2011) outlined the barriers of entrepreneurship to be an aversion to stress and hard work, fear of failure, aversion to risk, lack of resources, lack of social networking, and personal and demographic factors. Yurtkoru, Acar, and Teraman (2014) posited that being a risk lover has a positive and moderate effect on entrepreneurial intentions. Amongst the dimensions of willingness to take risk, risk-avoidance behavior was found to be less in university students, indicating that students are more risk takers. Aaijaz, Ibrahim, and Ahmad (2012) stated and revealed that 27.6% of the sample university students were ready to

bear great financial risks as entrepreneurs and about 68.8% of them were passionate about entrepreneurship and were willing to execute it.

More precisely, researchers have found that people start business endeavors because "they do not observe the risks involved, and not because they knowledgeably accept high levels of risks" (Simon, Houghton, & Aquino, 2000, p. 114). If people do not perceive risk applicably, they do not need to have a high-risk tendency or a great readiness to take risk knowingly. Therefore, risk perception seems to be a critical factor explaining an individual's decision to start a new venture. The dimension of risk perception seems to be well established and by applying it, one can find whether she/he perceives the risk involved in a decision making to be high, medium, or low. Furthermore, some research evidence indicates that students are more risk averse when they become adult entrepreneurs. Neergaard, Shaw, and Carter (2006) found gender-specific variances in risk aversion to be a significant reason for someone not to become self-employed (with only 46% of all men), but 56% of women considered fear of failure as the reason for them to avoid entrepreneurship.

(vii) Entrepreneurial Intention (EI) : From our review of the literature on entrepreneurial intention, we found that it is a rapidly progressing field of research with diverse major contributions (Engle et al., 2010; Fayolle & Liñán, 2014 ; Schlaegel & Koenig, 2014). Our understanding of entrepreneurial intentions has been directed by Ajzen's (1991) TPB, one of the most widely used theories in this domain which provides a valuable framework for understanding the complexities and complications of human social behavior (Ajzen, 1991; Kautonen, van Gelderen, & Tornokoski, 2013 ; Kautonen, van Gelderen, & Fink, 2015 ; Lortie & Castogiovanni, 2015). The more positive an individual's evaluations of engaging in entrepreneurial behaviour are, the more supportive of entrepreneurial behaviour the individual perceives their significant others to be ; and the more capable they feel of performing entrepreneurial activities, the stronger is their intention to engage in entrepreneurial behaviour (Kautonen, et al., 2013; Kautonen, Tornikoski, & Kibler, 2011). After all, venturing into a small business or entrepreneurship is also a way of poverty reduction in a society (Kumar & Jasheena, 2016).

Many researchers have explored various factors that measure their entrepreneurial intentions and have proposed many statistical models amongst which the TBP by Ajzen (1991) has acknowledged significant research sustenance from diverse frameworks. Wilbard (2009) argued that if we know those entrepreneurial intentions and their level of presence amongst individuals, we can forecast whether enterprising students exist in an academic population. The assumption is that those students with these entrepreneurial intentions will end up setting up their own business ventures.

Based on our review of the literature, several constructs or factors have been identified by researchers to influence entrepreneurial intentions of people. Thus, this study intends to examine whether some of these factors would play a role in influencing college undergraduates' intention to start their own professional or commercial business upon graduation from college instead of seeking employment in an organization.

Objectives of the Study

With this in mind, the objectives of this study are two fold:

(1) To identify the critical factors that determine entrepreneurial intentions amongst college students in Malaysia and Saudi Arabia ; and

(2) To test the differences in means between the two groups of students.

In particular, we intended to answer the following research questions :

(1) What are the relevant factors that have the most impact on entrepreneurial intention of college students in Malaysia and Saudi Arabia, and what are the interrelationships of these factors amongst these two groups of students?

(2) What is the impact of gender and culture on the factors that determine entrepreneurial intentions amongst the respondents? Does gender moderate the relationship between culture and personal attitude, perceived behavioral control, risk taking, perceived risk, innovation, and entrepreneurial intention ?

Methodology and Research Design

Participants, Measures, and Procedures : This study was conducted during the spring and summer semesters (May to August) of the 2016 academic year. As a means of comparative study that examines the determinants of entrepreneurial intentions, we specifically distributed survey questionnaires to university and college students in Malaysia (MY) and Saudi Arabia (SA) who were born in the period of 1977 to 2000 (Generations X and Y). In Malaysia, the survey questionnaires were distributed online to students in several universities, while in Saudi Arabia, survey questionnaires were conveniently distributed to students of a public university in Jeddah. In the end, a total of 416 usable questionnaires (MY= 196, and SA = 220) were collected. The questionnaire consisted of eight sections, that is, personal attitude, subjective norms (single item), perceived behavioral control, risk taking, perceived risk, innovation, entrepreneur intention scales, and demographic information. All items in the survey questionnaire were adapted from previous studies (see Table 1). The items were measured using a 7 -point Likert scale (1 = *"Strongly disagree"*, 7 = *"Strongly agree"*). The questionnaire was translated from English into two languages, - Arabic and Malay (Bahasa Malaysia). To ensure that the two versions of the questionnaires had the same meaning in both languages, we used Brislin's (1986) back to back translation method. The data were analyzed using IBM SPSS and Amos (ver. 20) software.

Table 1. Sources of the Constructs

Construct	Source	No. of Items
Personal Attitude (PA)	Liñán and Chen (2009)	5
Perceived Behavioral Control (PBC)	Liñán and Chen (2009) ; Kolvereid (1996)	6
Risk Taking (RT)	Bolton and Lane (2012)	2
Innovation (I)	Bolton and Lane (2012)	3
Perceived Risk (PR)	Bolton and Lane (2012)	3
Entrepreneurial Intention (EI)	Liñán and Chen (2009)	4

Even though the survey questionnaire was designed around established and validated instrument from the previous studies (see Table 1), location and sampling variations across diverging contextual service settings require the instrument to be revalidated in order to obtain more accurate modeling in two different countries and cultures. Therefore, in this study, to test the dimensionality of the instrument, all the 24 items were analyzed using varimax rotation. The standard of significant factor loading was set to 0.55 to avoid the occurrence of any "cross-loadings" in multiple factors. The use of these criteria resulted in a seven-component solution explaining 62.6% (MY) of the variance amongst Malaysian respondents and six-component solution explaining 66.1% (SA) of the variance amongst Saudi Arabian respondents. The Kaiser Meyer-Olkin value was .87 (MY) and .90 (SA), correspondingly and Bartlett's test of sphericity reached statistical significance ($p < 0.00$), supporting the factorability of the correlation matrix.

Table 2. Assessment of Reliability, Convergent Validity, and Discriminant Validity [*n* = 403]

Constructs	Mean	*SD*	CR	AVE	1	2	3	4	5	6	7
MY [*N* = 196]											
1. Attractiveness[a]	5.14	.87	.74	.59	**.77**						
2. Motivation[a]	5.63	1.32	.75	.60	.31**	**.77**					
3. Readiness[b]	3.53	1.38	.67	.45	.24**	.06	**.67**				
4. Knowledge[b]	4.55	1.29	.61	.44	.05	.01	.19**	**.66**			
5. Risk[c,d,e]	4.20	1.40	.86	.76	-.23**	-.29**	-.29**	-.14	**.87**		
6. Innovation[d,e]	4.67	1.55	.62	.45	-.25**	-.27**	-.27**	.10	.47**	**.67**	
7. Intention[f]	4.22	1.34	.89	.81	-.06	-.20**	-.09	.24**	.42**	.44**	**.90**
SA [*N* = 220]											
1. Attractiveness[a]	5.70	1.11	.80	.66	**.81**						
2. Readiness[b]	4.64	1.09	.75	.51	.39**	**.71**					
3. Knowledge[b]	3.88	1.27	.76	.62	.24**	.54**	**.79**				
4. Risk[d]	5.73	1.02	.69	.53	.34**	.38**	.33**	**.73**			
5. Innovation[e]	5.61	1.08	.77	.63	.38**	.46**	.35**	.48**	**.79**		
6. Intention[f]	5.42	1.21	.94	.86	.67**	.57**	.42**	.34**	.43**	**.93**	

Significant at p <0.01 level (two-tailed); MY = Malaysia; SA = Saudi Arabia

Note. SD = Standard deviation; AVE = Average variance extracted; [a]Personal attitude; [b]Peceived behavioral control; [c] Risk taking; [d]Perceived risk; [e] Innovation; and [f] Entrepreneural intention.

Values below the diagonal are correlation estimates amongst the constructs, diagonal elements are square root of AVE, which are greater than inter-construct correlations.

The Table 2 shows the properties of the components of entrepreneurial measurements and provides evidence of reliability, convergent validity, and discriminant validity between the construct measures (Hair, Black, Babin, & Anderson, 2010).

Next, using IBM AMOS ver. 20 software, we performed confirmatory factor analysis (CFA) to test scale purification, validation (evidence of unidimensionality, reliability, convergent and discriminant validity), and cross-validation of the construct.

The Table 2 shows the convergent validity and reliability issues for the Malaysian and Saudi samples. From the confirmatory factor analysis, convergent validity could also be assessed by investigating the factor loadings and squared multiple regression correlations (R^2). Absolute values of 0.70 or more are suggested, but this standard may be readapted to lower or higher values. For example, minimum values of 0.30 to 0.50 have been suggested (Tabachnick & Fidell, 2001). Based on this standard, except for motivation for the Saudi respondents, not a single item is found to have low factor loadings. According to Nunnally and Bernstein (1994), the acceptable levels of reliability of instruments developed for research purposes can be as low as 0.60. The reliability values as shown in Table 2 are between the ranges of .61 to .89, and thus, they are acceptable for this study.

Analysis and Results

(1) Sample Profile : The profile of the respondents is shown in the Table 3. We used multiple regression analysis and general linear model to answer the research questions using the IBM SPSS and AMOS version 20 software.

Table 3. Sample Profile of the Students

Characteristics	Malaysia [MY]		Saudi Arabia [SA]	
	N	%	*N*	%
Female	102	52.0	142	64.5
Male	94	48.0	78	35.5
Total	196	100.0	220	100.0

(2) Multiple Regression Analysis : In order to answer the first research question, that is, what are the relevant factors that determine the entrepreneurial intentions of students in the two countries as well as their interrelationships amongst these two groups of respondents and to acquire a stronger representation of the perceptions of the respondents, it was vital to study the determining factors of entrepreneurial intentions of the dissimilar dimensions as specified by the students. Following Cohen, Cohen, West, and Aiken's (2003) recommendation, standardized path coefficient with absolute values of less than 0.10 may indicate "small" effects ; values of around 0.30 may indicate "medium" effects ; and values of 0.50 or more may indicate "large" effects. The results suggest that knowledge plays a very important role in determining entrepreneurial intention (Table 4) amongst the students of both countries.

By examining the results in detail, we could see some differences in the results between Saudi Arabian and Malaysian students. Amongst the Malaysian students, risk (risk taking and perceived risk) (β =.34) has a medium significant effect on intention, followed by innovation (β =.27) and knowledge (β =.25). All other remaining factors have non-significant *p* - values for them. For the Saudi Arabian students, attractiveness (β =.51) has a very strong significant effect on intention followed by readiness (β =.27) and knowledge (β =.13). Surprisingly, innovation is only important to Malaysian but not to Saudi Arabian students in recognizing their entrepreneurship opportunities.

Table 4. Regression Analysis Results

Variables			β	*T*	*p*
MY [*N* =196]					
Attractiveness[a]	→	Intention	.09	1.410	ns
Motivation[a]	→	Intention	-.06	-.983	ns
Readiness[b]	→	Intention	.02	.256	ns
Knowledge[b]	→	Intention	.25	4.065	.00
Risk[c,d,e]	→	Intention	.34	4.773	.00
Innovation[d,e]	→	Intention	.27	3.759	.00
SA [*N* = 220]					
Attractiveness[a]	→	Intention	.51	10.105	.00
Readiness[b]	→	Intention	.27	4.595	.00
Knowledge[b]	→	Intention	.13	2.344	.00
Risk[d]	→	Intention	-.01	-.197	ns
Innovation[e]	→	Intention	.07	1.256	ns

Significant level at $p < 0.01$**, MY = Malaysia ; SA = Saudi Arabia; [a] Personal attitude; [b] Peceived behavioural control; [c] Risk taking; [d] Perceived risk; [e] Innovation; and [f] Entrepreneural intention.

Table 5. General Linear Model Results

Independent Variable	Dependent Variable	*F*	*p*
Gender*Culture	Personal Attitude (PA)	.543	ns
Gender*Culture	Perceived Behavioral Control (PBC)	.075	ns
Gender*Culture	Risk Taking (RT)	.629	ns
Gender*Culture	Perceived Risk (PR)	.026	ns
Gender*Culture	Innovation (I)	4.130	.04
Gender*Culture	Intention (EI)	.333	ns

Note. Significant level at $p < 0.05$.

Table 6. Independent - Sample *t* - test

	Nationality	Mean	*SD*	*t*	*p*
Personal Attitude	MY	5.377	.933	3.785	0.000
	SA	5.738	1.007		
Perceived Behavioral Control	MY	3.941	.824	4.833	0.000
	SA	4.384	1.020		
Risk Taking	MY	4.212	1.823	6.595	0.000
	SA	5.184	1.140		
Perceived Risk	MY	4.697	1.524	8.382	0.000
	SA	5.742	.989		
Innovation	MY	4.005	1.357	13.404	0.000
	SA	5.594	1.055		
Entrepreneurial Intention	MY	4.180	1.257	10.354	0.000
	SA	5.449	1.240		

Note. Significance level : $p < 0.001$.

Note. MY = Malaysia; SA = Saudi Arabia

(3) General Linear Model : The next research question is: What is the impact of gender and culture on the factors that determine entrepreneurial intentions amongst the respondents and whether gender moderates the relationship between culture and personal attitude, perceived behavioral control, risk taking, perceived risk, innovation, and entrepreneurial intention? To answer these questions, we performed a two-way ANOVA using univariate general linear model.

The Table 5 shows that the interaction effect between gender and culture is only statistically significant on innovation, [F (*d.f.* = 3, 416) = 4.130, $p < 0.04$]. Furthermore, the impact of innovation is greater for both Saudi Arabian female (Mean : SA = 5.72 ; MY = 3.94) and male (Mean: SA = 5.36; MY = 4.01) students than for their Malaysian counterparts.

Next, we performed an independent - samples *t* - test to compare the mean scores between the Malaysian and Saudi Arabian students (see Table 6). From this table, we can see that there are significant differences in all the mean scores of the constructs between the two groups of respondents.

Discussion and Implications

Overall, the results clearly show significant difference between the two groups of respondents in all the

entrepreneurship intention variables examined in this study. Based on this result, Saudi Arabian students appear to have higher intentions towards entrepreneurship than Malaysian students. Of all the variables examined, only knowledge is found to be common to the two groups of respondents, indicating that both Saudi Arabian and Malaysian students agreed that to venture into their own business, they needed to have business knowledge. Other than knowledge, what causes the students to intend to be involved in entrepreneurship is also different between Saudi Arabian and Malaysian students. Saudi Arabian students found the idea of setting up their own business to be attractive, and they were ready to go into the profession once they had an opportunity to do that upon graduation. As for Malaysian students, they seemed to be more willing to take risks to venture into the unknown than the Saudi Arabian students and they were more interested in business ventures that are novel and innovative if they were to start their individual business after graduating from college or university. Thus, compared to the Saudi Arabian students, their Malaysian counterparts seem to be more adventurous with respect to their entrepreneurial intentions.

Based on the findings, a number of implications can be derived from this study, particularly for government institutions or authorities trying to promote entrepreneurial development amongst college graduates in their respective countries. Souitaris et al. (2007) found that entrepreneurship programs significantly raised students' goals in the direction of entrepreneurship by motivating them to select entrepreneurship as a career. First, they need to ensure that their students have the necessary knowledge about business. This is where the role of universities will come into play in the form of providing not only general knowledge in the functional areas of business, but also specific entrepreneurship courses. For students with business or related majors, this requirement is easily fulfilled since all colleges of business normally offer this knowledge or courses. For non-business college majors, this requirement can be fulfilled by offering elective business and entrepreneurship courses to them. In addition, colleges in the respective countries can also set up business development centres on campuses, where students can seek advice or take some entrepreneurship training programs offered by the centre. Having a business development centre not only benefits college students but also outsiders as well, since the centre can offer them courses or training programs on entrepreneurship. Mmadu and Egbule (2014) suggested that entrepreneurship educational programmes were positively related to students' entrepreneurial intention, which agrees with the view of Souitaris et al. (2007) that entrepreneurship programmes expressively upraise students' intentions toward entrepreneurship by stimulating them to decide on entrepreneurship as a career. This implies that students who have been exposed to entrepreneurial education programmes are more likely to become entrepreneurs.

Secondly, in Saudi Arabia, government institutions or authorities trying to promote entrepreneurial development amongst college graduates in the country need to create the right environment that motivates and encourages students to start their own business, not only by providing the right knowledge about businesses, but also by helping them to secure seed funds to start their business, either in the form of outright grants or business start-up loans. In Malaysia, in addition to providing the right atmosphere for business start-ups, the relevant institutions or authorities need to give students more independence in their attempt to come up with their own business since they are more willing to take risk and be more innovative in their ideas about business. The relevant institutions or authorities should educate their prospective college graduates about specific businesses, particularly in new fields, that are lacking in the country and which they are trying to promote amongst the graduates.

Limitations of the Study and Scope for Further Research

This study, just like in most studies, is not without any limitations. The main limitation of this study is that the data came only in a very limited number of colleges in both the countries. Future studies should gather data from a

wider spectrum of students in all study areas. To come up with a more significant conclusion, a longitudinal study should be conducted with larger samples from private and public universities in Asian countries. Also, a comparative study of private and public university students will enable us to examine the thoroughness of their entrepreneurial inclinations.

Finally, we would like to suggest some possible directions for future research. The replication of the study using different methodological aspects in other public and private universities of Asian countries will generate more generalized results. The theoretical model used in the study can be tested and replicated in other contexts and cultures. Future research should also examine the impact of other institutional factors, such as role of government, on entrepreneurial inclinations.

References

Aaijaz, N., Ibrahim, D. B., & Ahmad, G., (2012). From learners to entrepreneurs: A study on the inclination of university students towards entrepreneurship as a career option and the role of education. *Prabandhan: Indian Journal of Management, 5* (9), 4 -18. doi:10.17010/pijom/2012/v5i9/60249

Ajzen I. (1988). *Attitudes, personality and behavior.* Chicago, IL: Dorsey Press.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50* (2), 179 - 211.

Al Mamun, A., Nawi, N. B. C., Dewiendren, A. A., & Shamsudin, S. F. F. B. (2016). Examining the effects of entrepreneurial competencies on students' entrepreneurial intention. *Mediterranean Journal of Social Sciences, 7* (2), 119 - 127.

Armstrong, S. J., & Hird, A. (2009). Cognitive style and entrepreneurial drive of new and mature business owner-managers. *Journal of Business and Psychology, 24* (4), 419 - 430.

Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C. & Hay, M. (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies, 2* (2), 145 - 160. DOI: http://dx.doi.org/ 10.1080/14632440110094632

Bolton, D. L., & Lane, M. D. (2012). Individual entrepreneurial orientation : Development of a measurement instrument. *Education & Training, 54* (2-3), 219 - 233.

Brislin, R. W. (1986). The wording and translation of research instruments. In W. J. Lonner & J. W. Berry (eds.), *Cross-cultural research and methodology series, Vol. 8. Field methods in cross-cultural research* (pp. 137-164). Thousand Oaks, CA, US: Sage Publications, Inc.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ, US : Lawrence Erlbaum Associates Publishers.

Dinis, A., Arminda, D. P., João, F., Mário, R., & Ricardo, G. R. (2013). Psychological characteristics and entrepreneurial intentions among secondary students. *Education + Training, 55* (8/9), 763 - 780.

Einhorn, B. (2009). *The 30 most innovation-friendly countries.* Retrieved from http://images.businessweek.com/ss/09/03/0312_innovative_countries/1.htm

Engle, R.L., Dimitriadi, N., Gavidia, J.V., Schlaegel, C., Delanoe, S., Alvarado, I.A., He, X., Buame, S., & Wolff, B. (2010) Entrepreneurial intent: A twelve country evaluation of Ajzen's model of planned behavior. *International Journal of Entrepreneurial Behavior & Research, 16* (1), 35 - 57. DOI: http://dx.doi.org /10.1108/135525510 11020063

Fayolle, A., & Liñán, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research, 67* (5), 663 - 666.

Fayolle, A., Gailly, B. & Lassas - Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: A new methodology. *Journal of European Industrial Training, 30* (9), 701 - 720. DOI: http://dx.doi.org /10.1108/03090590610715022

Finisterra do Paço, A.M., Ferreira, J.M., Raposo, M., Rodrigues, R.G., & Dinis, A. (2011). Behaviours and entrepreneurial intentions: Empirical findings about secondary students. *Journal of International Entrepreneurship, 9* (1), 20 - 38.

Hagen, B., & Zucchella, A. (2011). A longitudinal look at the international entrepreneurship dimensions: Cases and predictions. *International Journal of Management Cases, 13* (3), 484 - 504. DOI: http://dx.doi.org /10.5848/apbj.2011.00084

Hair Jr., J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate data analysis: A global perspective* (7th ed.). Upper Saddle River: Pearson Education.

Iqbal, A., Melhem, Y., & Kokash, H. (2012). Readiness of the university students towards entrepreneurship in Saudi Private university : An exploratory study. *European Scientific Journal, 8*(15), 109 - 131. DOI: http://dx.doi.org/10.19044/esj.2012.v8n15p%25p

Kadir, M. B. A., Salim, M., & Kamarudin, H. (2012). The relationship between educational support and entrepreneurial intentions in Malaysian Higher Learning Institution. *Procedia - Social and Behavioral Sciences, 69* (2), 2164 - 2173.

Karimi, S., Biemans, H. J., Lans, T., Chizari, M., & Mulder, M. (2016). The impact of entrepreneurship education: A study of Iranian students' entrepreneurial intentions and opportunity identification. *Journal of Small Business Management, 54* (1), 187 - 209. doi : https://doi.org/10.1111/jsbm.12137

Kautonen, T., van Gelderen, M., & Fink, M. (2015). Robustness of the theory of planned behavior in predicting entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice, 39* (3), 655 - 674. Doi: http://dx.doi.org/10.1111/etap.12056

Kautonen, T., Tornikoski, E. T., & Kibler, E. (2011). Entrepreneurial intentions in the third age: The impact of perceived age norms. *Small Business Economics, 37* (2), 219 - 234.

Kautonen, T., van Gelderen, M., & Tornokoski, E.T. (2013). Predicting entrepreneurial behavior : A test of the theory of planned behaviour. *Applied Economics, 45* (6), 697 - 707.

Kennedy, J., Drennan, J., Renfrow, P., & Watson, B. (2003). Situational factors and entrepreneurial intentions. *Proceedings of the Small Enterprise Association of Australia and New Zealand 16th Annual Conference*, 28 Sept - 1 Oct, 2003, pp. 1-12. DOI: http://hdl.cqu.edu.au/10018/5960

Kirzner, I.M. (2009). The alert and creative entrepreneur: A clarification. *Small Business Economics, 32* (2), 145 - 152.

Kolvereid, L. (1996). Prediction of employment status choice intentions. *Entrepreneurship Theory and Practice, 21*(1), 47 -58.

Kumar, A., & Jasheena, J.C. (2016). Kudumbashree: Promoting the self-help group model of empowerment through women entrepreneurship in Kerala - A study. *Prabandhan: Indian Journal of Management, 9* (6), 20 - 34. DOI: 10.17010/pijom/2016/v9i6/94959

Liñán, F. (2007). The role of entrepreneurship education in the entrepreneurial process. In A. Fayolle (ed.), *Handbook of research in entrepreneurship education.* Cheltenham, UK: Edward Elgar Publishing. DOI : http://dx.doi.org /10.4337/9781847205377.00023

Liñán, F., & Chen, Y.-W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice, 33* (3), 593 - 617. DOI : http://dx.doi.org/10.1111/j.1540-6520.2009.00318.x

Lortie, J., & Castogiovanni, G. (2015). The theory of planned behavior in entrepreneurship research: What we know and future directions. *International Entrepreneurship and Management Journal, 11* (4), 935 - 957. DOI: 10.1007/s11365-015-0358-3

Maes, J., Leroy, H., & Sels, L. (2014). Gender differences in entrepreneurial intentions : A TPB multi-group analysis at factor and indicator level. *European Management Journal, 32* (5), 784 - 794.

Mahajar, A. J. B. (2012). Inclination toward entrepreneurship among Universiti Pendidikan Sultan Idris students. *The Journal of Global Business Management, 8* (2), 248 - 256.

Mmadu, B.A., & Egbule, S. (2014). Intention for entrepreneurship among students of Delta State University, Abraka Nigeria: An empirical investigation. *International Journal of Entrepreneurship and Small Business, 22* (2), 196 - 217.

Muhammad, D. A. (2012). *Entrepreneurial Intention among undergraduate students in International Islamic University Malaysia - IIUM*. A Paper Presented at the 6th Islamic Development Management Conference (IDMAC, 2012), Universiti of Sains Malaysia, Malaysia.

Neergaard, H., Shaw, E., & Carter, S. (2006). The impact of gender, social capital and networks on business ownership: A research agenda. *International Journal of Entrepreneurial Behavior & Research, 11*(5), 338-357. DOI: http://dx.doi.org 10.1108/13552550510614999

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill.

Othman, N. H. J., & Ishak, S. B. (2009). Attitude towards choosing a career in entrepreneurship among graduates. *European Journal of Social Sciences,10* (3), 419 - 434.

Rasli, A., Khan, S. U. R., Malekifar, S., & Jabeen, S. (2013). Factors affecting entrepreneurial intention among graduate students of Universiti Teknologi Malaysia. *International Journal of Business and Social Science, 4* (2), 182 - 188.

Sandhu, M. S., Sidique, S. F., & Riaz, S. (2011). Entrepreneurship barriers and entrepreneurial inclination among Malaysian postgraduate students. *International Journal of Entrepreneurial Behavior& Research, 17* (4), 428 - 449.

Santandreu - Mascarell, C., Garzón, D., & Knorr, H. (2013). Entepreneurial and innovative competences, are they the same? *Management Decision, 51* (5), 1084 - 1095.

Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta- analytic test and integration of competing models. *Entrepreneurship Theory and Practice (Special Issue: Evidence - Based Entrepreneurship), 38*(2), 291 - 332.

Shamsudin, S. F. F. B., Al Mamun, A., Nawi, N. B. C., Nasir, N. A. B. M., & Zakaria, M. N. B. (2016). Policies and practices for entrepreneurial education: The Malaysian experience. *The Journal of Developing Areas, 50* (5), 307- 316.

Simon, M., Houghton, S.M., & Aquino, K. (2000). Cognitive biases, risk perception, and venture formation: How individuals decide to start companies. *Journal of Business Venturing, 15*(2), 113 - 134. DOI: http://dx.doi.org/10.1016/s0883-9026(98)00003-2

Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing, 22* (4), 566 - 591.

Subhash, M.S., & Vijayakumar, A.N. (2011). A glance at evolution of entrepreneurship and scope for entrepreneurship at the BoP (bottom of the pyramid) in India. *Prabandhan: Indian Journal of Management, 4* (1), 3 - 9. DOI: 10.17010/pijom/2011/v4i1/62078

Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th ed.). Boston : Allyn and Bacon.

Thurik, R., & Wennekers, S. (2004). Entrepreneurship, small business and economic growth. *Journal of Small Business and Enterprise Development, 11* (1), 140 -149. DOI: https://doi.org/10.1108/14626000410519173

Urbano, D., & Aparicio, S. (2015). Entrepreneurship capital types and economic growth: International evidence. *Technological Forecasting and Social Change, 102,* 34 - 44. DOI: 10.1016/j.techfore.2015.02.018

Wang, C. K., & Wong P.K. (2004). Entrepreneurial Interest of university students in Singapore. *Technovation, 24* (2), 163 - 172. DOI: http://dx.doi.org/10.1016/s0166-4972(02)00016-0

Wilbard, F. (2009). *Entrepreneurship proclivity: An exploratory study on students' entrepreneurship intention* (Master Thesis in Business Administration). Faculty of Economics and Social Sciences, University of Agdar [online]. Retrieved from http://hdl.handle.net/11250/135478

Yang, J., (2013). The theory of planned behavior and prediction of entrepreneurial intention among Chinese undergraduates. *Social Behavior and Personality : An International Journal, 41* (3), 367 - 376. DOI: http://dx.doi.org/10.2224/sbp.2013.41.3.367

Yurtkoru, E.S., Acar, P., & Teraman, B.S. (2014). Willingness to take risk and entrepreneurial intention of university students: An empirical study comparing private and state universities. *Procedia - Social and Behavioral Sciences, 150,* 834 - 840. DOI: 10.1016/j.sbspro.2014.09.092

Zain, M., Kassim, N., & Kadasah, N. (2017). Isn't it now a crucial time for Saudi firms to be more innovative and competitive? *International Journal of Innovation Management, 21* (3), 1752021-1 – 1752021-22. DOI: 10.1142/S1363919617500219

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