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## **Perceived desirability, feasibility, and social norms as antecedents on hospitality students' entrepreneurial intention in Malaysia: does gender make a difference?**

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**Abstract:** The purpose of this study is to test a research model that investigates the effects of perceived desirability, social norms, and perceived feasibility as antecedents on entrepreneurial intention in a Malaysian context. Data for this empirical investigation were gathered from a sample of full-time undergraduate hospitality management programme students. Respondents self-administered the questionnaires. A total number of 427 questionnaires were obtained in the research location. Results based on hierarchical regression analysis reveal that perceived desirability, social norm, and perceived feasibility are significant predictors on entrepreneurial intention. Results also demonstrate that female students are more willing on their entrepreneurial intentions when compared to male counterparts. The current study provides further contribution to tourism and hospitality management literature and provides useful guidelines to practitioners as well.

**Keywords:** entrepreneurship; self-employment; hospitality; social norms; perceived desirability; Malaysia.

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## **1 Introduction**

Entrepreneurship has emerged as the most economic force the world has ever experienced (Kuratko, 2005). The entrepreneurial interest has gained its intensive level almost everywhere in the world. The developed economies consider it as a revitalising socio-economic agent, a way of coping with unemployment problems and a potential catalyst for technological progress, product and market innovation. In most of developing countries, it is seen as an engine of economic progress, job creation and social adjustment (Jakpar et al., 2012; Ramadani, 2011; Yusof et al., 2007).

Entrepreneurship and self-employment are considered to be important for economic development (Pietrobelli and Rabellotti, 2007) and positively associated with employment and wealth creation. Self-employed individuals are those who work for themselves rather than for someone else and who explore new market opportunities and start their own businesses. They are viewed as being associated with entrepreneurship. According to Dana (1997), entrepreneurial spirit may be described as orthodox (culture) or reactionary (circumstantially induced) and also he accepts the self, the ethno-cultural milieu, and the host society as forces influencing self-employment.

Previous studies focused on explaining and predicting the choice of an entrepreneurial career (self-employment) as an important research topic (Kuratko et al., 1997). Recently, entrepreneurial intentions of university students have received considerable interests among researchers (e.g., Autio et al., 2001; Tkachev and Kolvereid, 1999; Veciana et al., 2005). Entrepreneurial intentions represent "a state of mind that directs attention, experience and action towards a business concept" [Bird, (1988), p.442]. Entrepreneurial intent refers to the intention of an individual to start a new business. A number of researchers (Autio et al., 2001; Jaafar et al., 2011; Kolvereid, 1996a; Krueger et al., 2000; Tkachev and Kolvereid, 1999; Veciana et al., 2005) have recognised the important role played by entrepreneurial intent. Thus, self-employment and entrepreneurship are critical issues which have recently received attention from governments and policy makers (Halim et al., 2014; Levine, 2004).

As a case in point, the subject of entrepreneurship has attracted much attention in Malaysia and is widely recognised both by the government as well as academics party. The growing interest in entrepreneurship in Malaysia can be seen against the current developments such as globalisation and the emphasis made by Malaysia's Prime Ministry on innovation and entrepreneurship as a central economic driver in the country's 'New Economic Model 2010'. In relation to this, the Malaysian Government considers involvement in entrepreneurship as a possible solution to the problem of graduate unemployment. This is because many economists and politicians agree that entrepreneurship stimulates the generation of employment opportunities and wealth

creation (Schaper and Volery, 2004). According to Jakpar et al. (2012) and Ramadani (2011), small and medium-sized enterprises (SME) play an important role in the development of the economy of a country. Apart from dominating in terms of number in the economy of a country, they also represent an incomparable source for new jobs; have high participation in the creation of the gross domestic product (GDP); are present in all possible sectors, somewhere with higher percentage and somewhere else with lower; are a source of innovations; have great influence in increasing the quality of products and services that are offered in the market.

The importance of small business and entrepreneurship to the growth of the economy and job creation of self-employment has been also recognised by the Malaysian Government. Due to this political awareness, policies were developed to encourage entrepreneurship behaviour through education programmes. Specifically, hospitality entrepreneurship studies were given attention in the 'Ninth Malaysia Plan (2006–2010)' to support the economic drive of the national economy. Other virtues are to address the employment issues among the graduates of the country and to equip them with the skills and knowledge in order to produce successful entrepreneurs who are competitive locally and globally. The role of entrepreneurial education is seen as critical in shaping attitudes, skills and culture, from the primary level up (Frederick et al., 2002; Reihana et al., 2007). Minniti (2005) suggests that those who are more educated pursue opportunity-based ventures. The less educated are involved out of necessity and those with secondary level education tend to work for salary and wages. The importance of education is to reduce the number of necessity entrepreneurs as well as business failures and to build appropriate business management and technological skills required for business efficiency and innovation in all industry sectors.

Hospitality entrepreneurship in particular helps the re-generation of communities through the development of destinations by offering new products and services which enhance the tourist experience (Getz and Petersen, 2005; Hjalager, 2007; Jaafar et al., 2011; Li, 2008; Reihana et al., 2007). Majority of hospitality businesses in the majority of countries are SME. There is a strong link between entrepreneurial activities in hospitality and SME theory and practice (Altinay, 2010). Malaysia is therefore developing long-term plans and investing in the physical and academic infrastructure to effectively channel business support resources, including training to students with entrepreneurship potential.

There is marked increase in efforts to instil entrepreneurship towards self-employment among Malaysian graduates through exposure of entrepreneurial education. Empirical research has demonstrated a range of results regarding the relationship between education, entrepreneurship and success, with education frequently producing nonlinear effects in supporting the probability of becoming an entrepreneur, or of achieving success (Zali et al., 2013). However, despite many Malaysian higher learning education offer entrepreneurship courses, little is known about business students' intention to become self-employed and the antecedents which impact on their intentions.

Against this backdrop, the present study attempted to examine the hospitality students' intention of becoming entrepreneurs who have attended these courses and also the influence of perceived desirability, social norm, and perceived feasibility as antecedents on their intentions in a Malaysian university context. This study was the first conducted on hospitality student sample in Malaysian context.

The rationale for adding these antecedents into our model is the researchers concluded that a strong percentage of the university's students aspired towards

entrepreneurship even those with majors outside of business school (Ajzen, 1991; Souitaris et al., 2007). This strengthens Krueger et al.'s (2000) statement that decision to become an entrepreneur may reasonably be considered as voluntary, intentional, and conscious. Intentions are beliefs and attitudes that derived from information cues in one's own environment where they are perceived and interpreted. In other words, entrepreneurial intentions are derived through the perceptions of feasibility, and desirability to act upon opportunities. Intention of any individual of carrying out a given behaviour may be affected by several other factors such as wants, needs, values, habits and beliefs (social norms) (Bird, 1988). An empirical study conducted in Malaysia showed that individual and environment factor do have relationship with the level of involvement in business (Jakpar et al., 2012). Another empirical research conducted by Dana (1995) supports the interrelatedness of culture with entrepreneurship that entrepreneurship should not be viewed as function of opportunity, but rather as a function of cultural perceptions of opportunity.

The remainder of this paper is structured as follows: firstly, theoretical background on perceived desirability, social norm and perceived feasibility is reviewed and the hypotheses presented. Following this, the methodology and data collection procedure of the study is described. Finally, the article concludes with a discussion of the results, limitations of the study, and future research directions.

## **2 Research context, conceptual model, and hypotheses**

Universities enhance entrepreneurial potential of the potential entrepreneurs (Van Burg et al., 2008). Now entrepreneurship has become a prime university function (Fitzkowitz, 2004). The common perception of universities as merely institutions of higher learning is giving way to one where universities are viewed as engines of economic growth and development (Chrisman et al., 1995). In Malaysian public universities, entrepreneurship is currently taught as a subject or incorporating entrepreneurial element in all subjects that are related to business, management and entrepreneurship. Universiti Utara Malaysia (UUM), as a management-oriented one, was selected to conduct this case study survey. Basic entrepreneurship is a core subject in the university. Students are given the needed training in entrepreneurial skills and the opportunities for them to setting up businesses and to consider self-employment as a viable option. Elements of entrepreneurship are also included in the co-curriculum programme at school and also at the higher learning institutions.

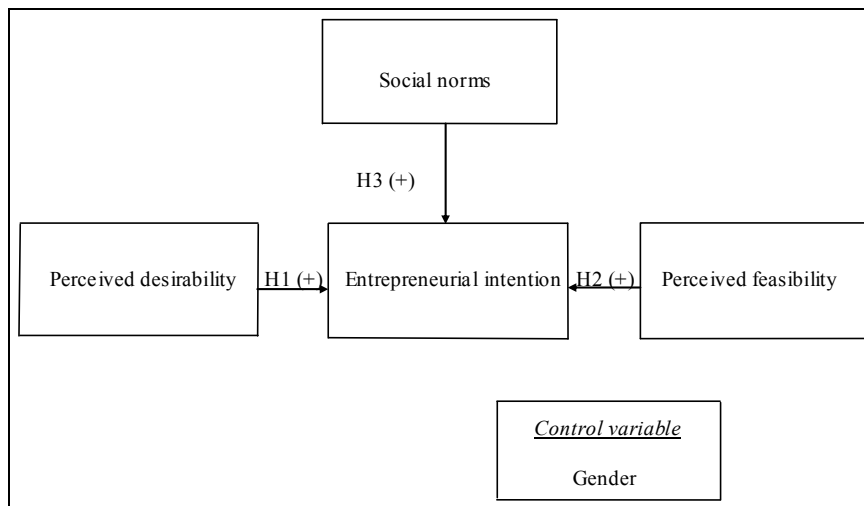
All these efforts have been intensified with a major goal to create more self-employment opportunities in various business sectors including SMEs, agriculture, and services including hospitality. To further foster entrepreneurship values among the graduates, an equally big step was taken to change their mindset and their attitude so as to view entrepreneurship as a new job opportunity and as an alternative career to salaried employment. For these reasons, tourism and hospitality students who are considered very much vocational and action oriented have been given the element of on-job-training in their curriculum towards developing highly skilled workers. The emphasis given in tourism and hospitality education in providing source of skilled employees for the future (Gurel et al., 2010) will not only prepares the students to be skilled and able to working for others but also creating 'working for oneself' that is developing them to be

entrepreneurs. This is in line with the finding of previous studies in entrepreneurship which has been seen as a major source of job creation and economic development (Jaafar et al., 2011; McMullen and Shepherd, 2006).

In addition, according to Halim et al. (2014), SMEs form a very large part of Malaysia’s economy and this is supported by the Tenth Malaysia Plan which reported that 99.2% or 518,996 of total established businesses in Malaysia are SMEs and only 0.8% or 4,136 are large establishments. Malaysian Government also has also recognised that SMEs act as a catalyst to inject investment and transform Malaysia into a developed nation by 2020. In fact, SMEs in Malaysia are playing a significant contribution in the economic development which is driven predominantly by the services sector of 86.6% followed by manufacturing with 7.2% and 6.2% from agriculture sector (Department of Statistic Malaysia, 2010). Nevertheless, the contribution of Malaysian SMEs to the national GDP is relatively low as compared to other countries.

Hospitality industry has the wide potential and scope that enable the new entrepreneurs to go further. Therefore, the present study develops and tests a model that sheds light on the impact of perceived desirability, feasibility, and social norms as antecedents on hospitality students’ entrepreneurial intentions in a Malaysian hospitality school context. The hypothesised model elaborates the structural relationships between the antecedents and outcome (see Figure 1). In addition, while the number of female entrepreneurs are increasing all around the world (Hasse et al., 2012; Ramadani et al., 2013), it stays important to understand female students’ entrepreneurial intention level compared to male students. The Global Entrepreneurship Monitor (2004) reported that women represented more than one-third of all people involved in entrepreneurial activity. In recent years, female entrepreneurs have attracted increasing attention among researchers (Colette and Johnston, 2007; Kariv, 2012). Thus, this study also aims to make this comparison in a Malaysian context.

**Figure 1** Conceptual model



### *2.1 Perceived desirability*

Perceived desirability reflects the extent to which one views venturing into entrepreneurship as compelling and attractive. It is defined as "...the degree to which one finds the prospect of starting a business to be attractive; in essence, it reflects one's affect towards entrepreneurship" [Krueger, (1993), p.8]. To form attitudes toward performing a certain behaviour, there must be a belief that performing the behaviour will result in certain consequences (Boyd and Vozikis, 1994). According to De Vries (2002), the desire to be recognised can make individuals more self-reliant, and increased self-reliance can increase the likelihood of becoming an entrepreneur. Also, McClelland (1961) suggests that individuals with a high need for achievement would be influenced by that need and consequently pursue entrepreneurial activity. A comparative study conducted by Ali et al. (2013) found higher desirability in Pakistani students towards entrepreneurial intention.

An empirical research conducted by Nimalathasan and Achchuthan (2012) suggested that entrepreneurial motivation and self-employment intention was significantly determined by the desirability. Segal et al. (2002) also tested the relationship between perceived desirability and entrepreneurial intentions in a sample of business students and the results indicate that perceived desirability significantly predict entrepreneurial intentions. Fitzsimmons and Douglas (2011) found entrepreneurial intentions to be positively related to both perceived feasibility and perceived desirability. Veciana et al. (2005) noted a positive relationship between desirability and entrepreneurial intention by a sample of students. Similarly, Kumara (2012) and Dissanayake (2013) found a significant positive impact of desirability on entrepreneurial intention for a sample of students in Sri Lanka. Thus, based on the discussion above, the following hypothesis was proposed:

H1 There is a positive relationship between perceived desirability and entrepreneurial intention.

### *2.2 Perceived feasibility*

Krueger et al. (2000) state that decision to become an entrepreneur derived from information cues in one's own environment where they are perceived and interpreted. In other words, entrepreneurial intentions are derived through the perceptions of feasibility and desirability to act upon opportunities. The concept of perceived feasibility is conceptually related to 'self-efficacy' (Wang et al., 2011). It is simply a belief in oneself to start a business and also, there are back-up resources to make it work (Shapero, 1981). The back-up resources include tangible resources like finance and human capital and intangible resources like social networks, family business experience, education, all of which are essential to intention toward entrepreneurship.

Basu and Virick (2001) found that entrepreneurial education can affect students' attitudes toward entrepreneurship and their entrepreneurial self-efficacy. Dugassa (2012) identified that business management students who had went through entrepreneurship education be inclined to have better entrepreneurial intentions than engineering students who had not taken such course. Venkatapathy and Pretheeba (2014) examined the entrepreneurial intention of post-graduates students in India. They found that family business experience and education level significantly affect intention in starting one's own business. Hence, developing entrepreneurship intention through education from

graduate level will be the right approach that will lend a hand for adolescence to understand and encourage an entrepreneurial attitude in emerging countries.

According to Zhao et al. (2005), perceptions of formal learning from entrepreneurship-related courses had the strongest positive relationship with intentions through the mediation of entrepreneurial self-efficacy. Izquierdo and Buelens (2011) found initial evidence that entrepreneurial self-efficacy mediates the relationship between the students' perceived competencies for entrepreneurship and their intentions to new venture creation. They also found that students' attitudes toward entrepreneurial acts positively influence their intentions to create a new venture. Peterman and Kennedy (2003) found that enterprise education accounted for an increase in the students' desirability to start a business. Thus, exposing students to entrepreneurship training is expected to mobilise their attitudes which, in turn, can have a positive effect on intentions to start a new business.

Wang et al.'s (2011) study was partially supported by the entrepreneurial event model suggesting a positive impact of perceived feasibility on entrepreneurial intention. Empirical studies conducted by Guerrero et al. (2006) and Singh et al. (2012) tested and reported a significant influence of perceived feasibility on the university students' entrepreneurial intention to create a new business. However, there is a paucity of empirical support which shows the influence of perceived feasibility on hospitality students' entrepreneurial intention in a Malaysian context. Thus, the following hypothesis was formulated:

H2 Perceived feasibility is positively related to hospitality students' entrepreneurship.

### 2.3 *Social norms*

Social norm refers to what others such as parents, friends, role model think of engaging in entrepreneurial behaviours. Shapero and Sokol's (1982) study model suggest that societal beliefs that influence attitudes should predict an individual's intention. In other words, people's intentions to perform a particular action are a function of subjective norm. Past research has not been consistent on the relationship between social norms and entrepreneurial attitudes. Reitan (1996) found subjective social norms to be an important mediating and moderating variable on intentions. On the other hand, Krueger et al. (2000) did not find social norms to have a significant influence on entrepreneurial intentions. An empirical study conducted in New Zealand by Reihana et al. (2007) revealed that Maori social-cultural factors play a significant role in their contributions towards entrepreneurial activity. Attitudes, beliefs, values, culture and tradition can be seen to both limit and foster entrepreneurial behaviour. They also asserted that the extent to which New Zealand social-cultural norms (values, attitudes and behaviour) influence individual entrepreneurs and individual perceptions of entrepreneurs also continues to evolve.

Moreover, the significant relationship between social norm and entrepreneurial intention was in agreement with the finding conducted by Diochon et al. (2002). Kolvereid (1996a) found significant correlations between perceived social norms and entrepreneurial intentions in a sample of Norwegian business school students. Autio et al. (2001) concluded that social norms – which reflect cultural influences – hardly explained entrepreneurial intentions from a large sample of predominantly technical students in the USA and Scandinavia. In a gender-based entrepreneurial study, the entrepreneurial social environment was found to affect the gendered entrepreneurial intentions of students. The

number of self-employed relatives, friends and colleagues is seen as influential for women's decision to be self-employed after graduation, but there is no detectable effect on men. This finding underpins the usefulness of family, friends and a general support network to enlarge the confidence of women (Hasse et al., 2012).

Similarly, the research by Dodd and Patra (2002) based on Hofstede's four dimensional cultural model, reports that Greek entrepreneurs, coming from a more collectivist culture, use strong tie networks based on family and friends rather on business contacts. Zali et al. (2012) argue that, in collectivistic cultures a network of family and friends is of primary importance for entrepreneurial activity. Lastly, Zali et al. (2013) argues that it may be cultural norms and values as well as traditions within the MENA region are incompatible with the requirements of an 'innovation culture in entrepreneurship' is associated with uncertainty acceptance, lack of power distance, and individualism. Sayigh (1952) found Christians and Jews to be the prominent entrepreneurs of Lebanon. Kong et al. (1991) showed how Singaporean Chinese are active entrepreneurs in Malaysia. Based on this discussion, the current study proposed the following hypothesis.

H3 There is a positive relationship between social norm and hospitality students' entrepreneurial intentions.

### **3 Method**

#### *3.1 Sample and data collection*

The study population consisted of all hospitality students studying at University Utara Malaysia (UUM). They consist of local and international students from semester 1 to semester 7 students during the semester. The total number of the population is 474 students according to the UUM ASIS system. In order to test for any necessary revision of the research content, the questionnaire was pilot tested with 15 students from the programme. As a result of the pilot test, no reason was found to change the survey instrument. The questionnaires were distributed to 474 hospitality management students along with a cover letter and information assuring confidentiality. Data were collected through a self-administered questionnaire. The questionnaires were distributed and collected in all class attended by the students during the semester. As a result, nearly most of the questionnaires were conducted on a face to face basis with the willing respondents and the rest of the respondents were asked to contact the research team via e-mail or telephone to return the self-administered questionnaires by hand over the following days. Of the 474 questionnaires, 427 were completed and usable for further data analysis, yielding a response rate of 90%.

#### *3.2 Survey instrument*

Several sources from the literature were used in preparing the questionnaire for the present research. The questions of the survey were prepared in English. The survey instrument used in the current study was composed of two parts. The first part consisted of 27 questions that related to entrepreneurial intention, perceived desirability, social norm, and perceived feasibility. Based on an extensive literature review, measurements



for the related constructs were adopted from existing measures such that entrepreneurial intention item scale was adopted from Linan and Chen (2009). A five-item scale, developed by Kolvereid (1996b) was used to measure perceived desirability. A four-item scale to measure social norm was adopted from the study of Kolvereid (1996b) and Krueger et al. (2000). Perceived feasibility was measured using eight items derived from Chen et al. (1998). In addition, all measures used a five-point Likert-type scale that ranged from 'strongly disagree' to 'strongly agree'. The second part of the survey was composed of four demographic questions: age, gender, nationality, and working experience. The profile items were measured using from two-point scales to four-point scales.

### 3.3 *Data analysis*

The Statistical Package for Social Sciences version 19 was used to analyse the data. As for statistical techniques, first reliability (Cronbach's alpha) value and validity tests were conducted. Next, mean score descriptive analysis was employed to observe average responses of the respondents who participated in this survey. The exploratory factor analysis was performed in order to provide support for issues of dimensionality and convergent validity and correlation analysis was carried out in order to ascertain the strength and the direction of association between the items. At the final stage, in order to test the proposed model outlined in Figure 1, regression analysis were carried out and independent samples *t*-test was conducted to see the possible impact of the control variable such as gender on the entrepreneurial intention.

## 4 **Analysis and results**

### 4.1 *Descriptive statistics*

The total number of respondents was 427. The majority of respondents in this study were females (80.3%). The majority of respondents' age ranges between 21 and 29 years old (83.6%) and only 70 respondents (16.4%) were below 21 years old. Over 90% of the respondents were Malaysian and the rest were from China, Saudi Arabia, and some Asian countries. More than three quarters of respondents had working experience (80.8%).

### 4.2 *Psychometric properties of the measures*

The exploratory factor analyses were performed in order to test the assumptions for issues of dimensionality and convergent validity. There was a reasonable fit of the four-factor measurement model to the data. To test construct reliability, Cronbach's alpha coefficient was used. As presented in Table 1, the overall reliability for all scales exceeded the acceptable cut-off value of 0.70, as suggested by Nunnally (1978), indicating that items were free from random error and internal consistency was adequate (Fornell and Larcker, 1981). In order to test whether the distribution of values was adequate for conducting analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used and all constructs exceeded the threshold value of 0.50 (ENT = 0.944, PERDE = 0.828, SON = 0.862, and PERFE = 0.901) as suggested by Field (2000). In addition, Bartlett's test of sphericity measure indicated that the multivariate normality of

the set of distributions was normal for the all constructs, showing a significant value,  $p = 0.000 (< 0.05)$ . Therefore, the data was appropriate for conducting the factor analysis (Hair et al., 1998). In observing the commonalities, except one item from entrepreneurial intention and one item from perceived feasibility which were omitted from further analyses, all item loadings were found to be significant following threshold of 0.50 recommended by Barclay et al. (1995).

**Table 1** Scale items, reliabilities, and exploratory factor analysis results

<i>Scale items</i>	<i>Factor loads</i>	<i>Alpha</i>
Entrepreneurial intention (ENT)		0.93
ENT1: Probably own a business one day	0.66	
ENT2: Able to make decision will succeed in business	0.68	
ENT3: Will make every effort to start business	0.67	
ENT4: Venture into business because want to be own boss	0.71	
ENT5: See myself as successful businessman	0.67	
ENT6: Plan to start business in the near future	0.50	
ENT7: My goal to become entrepreneur	0.78	
ENT8: To do whatever it takes to establish business	0.66	
ENT9: Ready to make anything to be entrepreneur	0.71	
ENT10: My character portray entrepreneur drive	0.72	
Perceived desirability (PERDE)		0.89
PERDE11: Prefer own business than a promising career	0.57	
PERDE12: Future success lies in starting own business	0.66	
PERDE13: Friends like to see me start business	0.78	
PERDE14: Relatives like to see me start a business	0.77	
PERDE15: Family like to see me start business	0.72	
Social norm (SON)		0.94
SON16: Owning business is respected by community	0.76	
SON17: Owning business is respected by family	0.89	
SON18: Owning business is respected by relatives	0.87	
SON19: Owning business is respected by friends	0.87	
Perceived feasibility (PERFE)		0.90
PERFE21: I can manage staff	0.60	
PERFE22: My skills and abilities help me to start business	0.66	
PERFE23: I am confident to start business	0.67	
PERFE24: I have access to information to become entrepreneur	0.60	
PERFE25: I have good social network to become entrepreneur	0.50	
PERFE26: Have access to capital to become entrepreneur	0.66	
PERFE27: Easy to start business	0.65	

Notes: All items are measured on five-point Likert-scales ranging from 1 = strongly disagree to 5 = strongly agree.

All loadings are significant at the 0.01 level or better. All internal reliability estimates are above the 0.070 cut off value.

Due to the self-reporting nature of the survey, method variance is identified as a potential issue. Spector (1987) reported that the most frequently found sources of method variance in self-reports are acquiescence bias. As a first precaution for common method bias, the survey instrument in the present study was organised into various sections by separating the independent and dependent variables in an effort to reduce single-source method bias (Podsakoff et al., 2003). One approach to dealing with acquiescence responding in surveys and questionnaires is to employ a balance of positively and negatively keyed items in terms of the intended content. So the reversed-keyed items were included in the survey questionnaire of this study. In the analysis process, all of the self-report items were entered into a principal components factor analysis with varimax rotation. According to this test, if a single factor emerges or one factor accounts for more than 50% of the variance in the variables, common method variance is present (Podsakoff et al., 2003). Our analysis showed that no general factor was present. Also, any highly correlated variables are evidence of common method bias – usually results in extremely high correlations ( $r > 0.90$ ) (Bagozzi et al., 1991). There were not highly correlated variables in the current study (see Table 2).

#### 4.3 Correlation analysis results

As shown in Table 2, the mean value ranged from 2.45 to 2.77 and the standard deviation from 0.94 to 0.97. Perceived desirability was found to be positively associated with entrepreneurial intention ( $r = 0.73, p < 0.01$ ). Again there was a significant correlation between social norm and entrepreneurial intention ( $r = 0.55, p < 0.01$ ), meaning that hospitality students are positively affected by their social environments. Finally, a significant positive correlation was found between perceived feasibility and entrepreneurial intention ( $r = 0.74, p < 0.01$ ).

**Table 2** Correlations, means, and standard deviations

Scale	1	2	3	4
Perceived desirability	1.00			
Social norm	0.54**	1.00		
Perceived feasibility	0.63**	0.51**	1.00	
Entrepreneurial intention	0.73**	0.55**	0.74**	1.00
Mean	2.57	2.77	2.45	2.65
Standard deviation	0.97	0.95	0.95	0.94

Notes:  $n = 427$ . \*\*Correlation is significant at the 0.01 level.

#### 4.4 Model test

Pairwise and multiple variable collinearity were inspected by collinearity diagnostics in SPSS prior to analysis. The tolerance values were found well above the commonly accepted threshold value of 0.10 (Hair et al., 2005) and none of the variance inflation factor (VIF) values exceeded 10. For examining the hypothetical relationships presented in Figure 1, hierarchical regression method was used. The results are presented in Table 3.

As shown in Table 3, hierarchical regression analysis was used for testing the study hypotheses. Hypothesis 1 suggested that perceived desirability is positively associated with entrepreneurial intention. The results of regression analysis lent empirical support to this relationship (0.39,  $p < 0.01$ ). Hypothesis 1 was therefore supported. Hypothesis 2 predicted that social norm exerts a significant positive effect on students' entrepreneurial intention. The effect of social norm on entrepreneurial intention was both significant and positive (0.11,  $p < 0.01$ ). Hypothesis 2 was therefore supported. Hypothesis 3 stated that perceived feasibility has a significant positive influence on students' entrepreneurial intention. According to the results of the statistical analysis, the positive effect of perceived feasibility on entrepreneurial intention was significant (0.43,  $p < 0.01$ ). Hypothesis 3 was therefore supported.

**Table 3** Regression analysis results

<i>Variables</i>	<i>Path coefficient</i>	<i>t-values</i>	<i>Sig.</i>	<i>Results</i>
<i>I. Impact on entrepreneurial intention</i>				
H1 PERDE → ENT	0.39	10.29*	0.000	Supported
H2 SON → ENT	0.11	3.36*	0.001	Supported
H3 PERFE → ENT	0.43	11.68*	0.000	Supported

Notes: Explained variance  $R$  square = 0.67%.

\*The  $t$ -values demonstrate statistically significant relationship at the 0.05 level or better.

In order to test comparison of the mean scores of entrepreneurial intention, this study used the independent samples  $t$ -test. As demonstrated in Table 4, there is a significant gender-based difference in the perception of entrepreneurial intention (0.001,  $p < 0.005$ ). This result shows that female students are more willing on their entrepreneurial intention compared to males.

**Table 4** Independent sample  $t$ -test result

	<i>Gender</i>	<i>N</i>	<i>Mean</i>	<i>Std. deviation</i>	<i>Std. error mean</i>		
Total	Male	84	23.2976	7.71601	0.84189		
ENT	Female	343	26.4023	7.78371	0.42028		
		<i>Levene's test for equality of variances</i>		<i>t-test for equality of means</i>			
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	<i>Mean difference</i>
Total	Equal variances assumed	0.173	0.678	-3.282	425	0.001	-3.10471
ENT	Equal variances not assumed			-3.300	127.60	0.001	-3.10471

Note: \*All items are measured on five-point Likert-scales ranging from 1 = strongly disagree to 5 = strongly agree.

## 5 Discussion

### 5.1 Conclusions

The importance of small business and entrepreneurship to the growth of the economy and job creation of self-employment has been recognised by the government. Due to this political awareness, policies were developed to encourage entrepreneurship behaviour through education programmes. There is marked increase in efforts to instil entrepreneurship towards self-employment among Malaysian graduates through exposure of entrepreneurial education. However, despite many Malaysian higher learning institutions offer hospitality entrepreneurship courses, little is known about hospitality students' intention to become self-employed and the antecedents which impact on their intentions. Therefore, the current study in an effort, examined the perceived entrepreneurial intentions of hospitality students and the effect of critical antecedents such as perceived desirability, perceived feasibility, and social norm on their intentions. To this end, an integrative model of aforementioned impacts and relationships was developed and tested. All the hypothesised relationships were supported by the findings of present study.

The finding concerning the effect of perceived desirability on entrepreneurial intention was significant. Not surprisingly, this result was consistent with that of Kumara (2012) and Dissanayake (2013). However, these studies were conducted in Sri Lanka and perceived desirability was found to be less effective on students' entrepreneurial intention in this context. In present study, perceived desirability was found to be the strongest impact factor on students' intention. This suggests that the students, at this moment of their life, have more positive intrinsic motivations than extrinsic one (e.g., capital or social terms).

The regression-analysis results revealed that perceived feasibility exerts a significant positive effect on students' entrepreneurial intention. This finding also indicated that perceived feasibility is a significant predictor for hospitality students in Malaysia. Perceived feasibility was found to be the second effective factor in this study. This finding was consistent with Krueger et al.'s (2000) model. But this study by being conducted in Asia-Pacific region added new a contribution to this model. Both studies suggest that the relationship between self-efficacy and performance (or behaviour) has direct implications for the development of entrepreneurial intentions and actions.

Finally, the finding concerning the effect of social norm on entrepreneurial intention was slightly significant. As discussed before, past research has not been consistent on the relationship between social norms and entrepreneurial attitudes. The reason for this may be the contextual factors. As such, Krueger et al. (2000) did not find significant relationship between these constructs in a Sri Lankan context. On the other hand, Autio et al. (2001) found a positive relationship between them in the US and Scandinavia context. The current study reported a positive slight effect of social norm on hospitality students' intentions in an Asia-Pacific context. Ajzen's (1991) theory of planned behaviour (TPB) maintains that there are three predictors of intention; attitude toward the behaviour, subjective norms, and the degree of perceived behaviour control. According to the theory, the more favourable the appraisal, the greater the intention would be. The second predictor, subjective norms, refers to the degree to which family, friends, peers and society at large expect or pressure the individual to perform the behaviour in

question. However, the present study moved this theory one step further by confirming the positive relationship between social norms and entrepreneurial intention.

Finally, gender as a control variable in this study was found to be effective on students' intention. The result shows that female students have more willingness to be an entrepreneur in this context. On the other hand, a study comparing entrepreneurial intentions of French, German and Polish students showed that, in general, males have stronger entrepreneurial attitudes than females (Packham et al., 2010). Analyses concerning the entrepreneurial attitudes of students in the USA showed that males scored higher on innovation in businesses than females (Harris and Gibson, 2008). This may be the result of dominance of women in service workforce of Malaysia.

### *5.2 Managerial implications*

The key objective of this research was to investigate the hospitality students' entrepreneurial intention to start business and also the effect of selected critical predictors on their intentions. The study reveals that the perceived desirability was found to be the dominant predictor for them to become an entrepreneur. An important implication of all this requires one additional insight: entrepreneurship (or the entrepreneur) is not something mystical nor is it confined to some anointed group of people. Entrepreneurs are made, not born. They are made through a perception-driven enactive process that begins with forging a potential for entrepreneurship. As educators, as consultants, and as policy advisers we can assist this process through helping empower potential entrepreneurs who will be better able to seize opportunities when the environment presents them.

Timmons and Spinelli (2004) suggest that entrepreneurship education is effective when it enables participants to develop higher capacity for imagination, flexibility, and creativity as well as developing ability to think conceptually and to perceive change as opportunity. At many times, university social science programmes emphasise theory at the expense of practical approaches. In the case of entrepreneurship education, theoretical approaches deny participants the opportunity to perceive doing business as a career of choice because they could not see the real environment of doing business and the situation is not helped by the fact that friends and relatives do not expect university students to go into business after graduation.

### *5.3 Limitations and future research directions*

The findings reported in the current paper should be considered in light of some study limitations. The cross-sectional design of the study was the first limitation, which prevents the researcher to have causal deductions. Also, data from a single source (hospitality students) generally pose the problem of common method bias, although this did not seem to be a problem with the current data. Using longitudinal data from multiple sources in the future would be helpful in mitigating these concerns. This research was unable to incorporate a qualitative approach. Future research in this area should aim to use in-depth interviews and observations to provide a more detailed insight into the outcomes and antecedents associated with entrepreneurial intention. In confirming the findings of current study, as well as to broaden the scope and make generalisations, more studies of hospitality students from different management universities in Malaysia are

needed. This study used a sample of hospitality students from UUM as a management university only. Replications of this study in different states of Malaysia would be helpful in cross-validating our findings. Finally, incorporating personal resources such as intrinsic motivation and training as an external resource into the research model in future research would provide additional insights into the antecedents of entrepreneurial intention.

## References

- Ajzen, I. (1991) 'The theory of planned behavior', *Organizational Behavior and Human Decision Process*, Vol. 50, No. 2, pp.179–211.
- Ali, S., Lu, W. and Wang, W. (2013) 'Comparison of entrepreneurial intentions among college students in China and Pakistan', *International Journal of Pluralism and Economics Education*, Vol. 4, No. 1, pp.51–60.
- Altinay, L. (2010) 'Market orientation of small ethnic minority-owned hospitality firms', *International Journal of Hospitality Management*, Vol. 29, No. 1, pp.148–156.
- Autio, E., Keeley, R., Klofsten, M., Parker, G. and Hay, M. (2001) 'Entrepreneurial intent among students in Scandinavia and in the USA', *Enterprise and Innovation Management Studies*, Vol. 2, No. 2, pp.145–160.
- Bagozzi, R.P., Yi, Y. and Phillip, L.W. (1991) 'Assessing construct validity in organizational research', *Administrative Science Quarterly*, Vol. 36, No. 3, pp.421–458.
- Barclay, D.W., Thompson, R. and Higgins, C. (1995) 'The partial least squares (PLS) approach to causal modeling: personal computer adoption and use an illustration', *Technology Studies*, Vol. 2, No. 2, pp.285–309.
- Basu, A. and Virick, M. (2001) *Assessing Entrepreneurial Intentions amongst Students: A Comparative Study* [online] <http://nciia.org/conf08/assets/pub/basu2.pdf> (accessed 30 January 2014).
- Bird, B. (1988) 'Implementing entrepreneurial ideas: the case for intention', *Academy of Management Review*, Vol. 13, No. 3, pp.442–453.
- Boyd, N.G. and Vozikis, G.S. (1994) 'The influence of self-efficacy on the development of entrepreneurial intentions and actions', *Entrepreneurship Theory and Practice*, Vol. 18, No. 9, pp.64–77.
- Chen, C.C., Greene, P.G. and Crick, A. (1998) 'Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?', *Journal of Business Venturing*, Vol. 1, No. 4, pp.295–316.
- Chrisman, J.J., Hynes, T. and Fraser, S. (1995) 'Faculty entrepreneurship and economic development: the case of the University of Calgary', *Journal of Business Venturing*, Vol. 10, No. 4, pp.267–281.
- Colette, H. and Johnston, K. (2007) 'Introduction', in Carter, M.N., Henry, C., O'Conneide, B. and Johnston, K. (Eds.): *Female Entrepreneurship: Implications for Education, Training and Policy*, Routledge, Abington.
- Dana, L-P. (1995) 'Entrepreneurship in a remote sub-Arctic community', *Entrepreneurship Theory and Practice*, Vol. 20, No. 1, pp.57–72.
- Dana, L-P. (1997) 'The origins of self-employment in ethno-cultural communities: distinguishing between orthodox entrepreneurship and reactionary enterprise', *Canadian Journal of Administrative Sciences*, Vol. 14, No. 1, pp.52–68.
- De Vries, R.E. (2002) 'Ethnic tension in paradise: explaining ethnic supremacy aspirations in Fiji', *International Journal of Intercultural Relations*, Vol. 26, No. 3, pp.311–327.
- Department of Statistic Malaysia (2010) *Developing SMEs as an Engine of Growth and Innovation*, Economic Planning Unit [online] <http://www.epu.gov.my> (accessed June 2013).

- Diochon, M., Gasse, Y., Menzies, T. and Garand, D. (2002) 'Attitudes and entrepreneurial action: exploring the link', *Administrative Sciences of Canada 2002, Conference Proceedings*, Vol. 23, No. 21, pp.1–11.
- Dissanayake, D.M.N.S.W. (2013) 'The impact of perceived desirability and perceived feasibility on entrepreneurial intention among undergraduate students in Sri Lanka: an extended model', *The Kelaniya Journal of Management*, Vol. 2, No. 1, pp.39–57.
- Dodd, S.D. and Patra, E. (2002) 'National differences in entrepreneurial networking', *Entrepreneurship & Regional Development*, Vol. 20, No. 2, pp.117–134.
- Dugassa, T.G. (2012) 'Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia', *African Journal of Economic and Management Studies*, Vol. 3, No. 2, pp.258–277.
- Field, A. (2000) *Discovering Statistics using SPSS for Windows*, Sage Publications, London, Thousand Oaks, New Delhi.
- Fitzkowitz, H. (2004) 'The evolution of the entrepreneurial university', *International Journal of Technology and Globalization*, Vol. 1, No. 1, pp.64–77.
- Fitzsimmons, J.R. and Douglas, E.J. (2011) 'Interaction between feasibility and desirability in the formation of entrepreneurial intentions', *Journal of Business Venturing*, Vol. 26, No. 4, pp.431–440.
- Fornell, C. and Larcker, D.F. (1981) 'Evaluating structural equation models with unobservable and measurement error', *Journal of Marketing Research*, Vol. 18, No. 1, pp.39–50.
- Frederick, H., Carswell, P., Henry, E., Thompson, J., Campbell, J. and Pivac, A. (2002) *Bartercard New Zealand Global Entrepreneurship Monitor 2002*, New Zealand Centre for Innovation & Entrepreneurship, Auckland.
- Getz, D. and Petersen, T. (2005) 'Growth and profit-oriented entrepreneurship among family business owners in the tourism and hospitality industry', *International Journal of Hospitality Management*, Vol. 24, No. 2, pp.219–242.
- Global Entrepreneurship Monitor (2004) *Women and Entrepreneurship*, Centre for Women's Leadership, Babson College, MA.
- Guerrero, M., Rialp, J. and Urbano, D. (2006) 'The impact of desirability and feasibility on entrepreneurial intentions: a structural equation model', *International Entrepreneurship Management Journal*, Vol. 4, No. 1, pp.35–50.
- Gurel, E., Altinay, L. and Daniele, R. (2010) 'Tourism students' entrepreneurial intentions', *Annals of Tourism Research*, Vol. 37, No. 3, pp.646–669.
- Hair Jr., J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998) *Multivariate Data Analysis*, Prentice-Hall, Upper Saddle River, NJ.
- Hair Jr., J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (2005) *Multivariate Data Analysis*, 6th ed., Maxwell Macmillan International, New York, NY.
- Halim, H.A., Ahmad, N.H., Ramayah, T. and Hanifah, H. (2014) 'The growth of innovative performance among SMEs: leveraging on organizational culture and innovative human capital', *Journal of Small Business and Entrepreneurship Development*, Vol. 2, No. 1, pp.107–125.
- Harris, M.L. and Gibson, S.G. (2008) 'Examining the entrepreneurial attitudes of US business students', *Education & Training*, Vol. 50, No. 7, pp.568–581.
- Hasse, H., Lautenschläger, A. and Thomas, A. (2012) 'Entrepreneurial intentions of university students: a gender perspective', *International Journal of Entrepreneurship and Small Business*, Vol. 17, No. 3, pp.378–393.
- Hjalager, A. (2007) 'Stages in the economic globalization of tourism', *Annals of Tourism Research*, Vol. 43, No. 2, pp.437–457.
- Izquierdo, E. and Buelens, M. (2011) 'Competing models of entrepreneurial intentions: the influence of entrepreneurial self-efficacy and attitudes', *International Journal of Entrepreneurship and Small Business*, Vol. 13, No. 1, pp.75–91.



- Jaafar, M., Abdul-Aziz, R.A., Maideen, S.A. and Mohd, Z.S. (2011) 'Entrepreneurship in the tourism industry: issues in developing countries', *International Journal of Hospitality Management*, Vol. 30, No. 4, pp.827–835.
- Jakpar, S., Shaikh, J.M., Tinggi, M. and Jamali, N.A.L. (2012) 'Factors influencing entrepreneurship in small and medium enterprises (SMEs) among residents in Sarawak Malaysia', *International Journal of Entrepreneurship and Small Business*, Vol. 16, No. 1, pp.83–101.
- Kariv, D. (Ed.) (2012) *Female Entrepreneurship and the New Venture Creation*, Routledge, New York.
- Kolvereid, L. (1996a) 'Prediction of employment status choice intentions', *Entrepreneurship Theory and Practice*, Vol. 21, No. 1, pp.47–57.
- Kolvereid, L. (1996b) 'Organizational employment versus self-employment: reasons for career choice intentions', *Entrepreneurship Theory and Practice*, Vol. 20, No. 3, pp.23–31.
- Kong, W.W.W., Soon, J.F.K. and Hwa, L.C. (1991) 'Trans-national investments in Johor: opportunities and strategies for Singaporean entrepreneurs', in Oliga, J.C. and Kim, T.B. (Eds.): *Proceedings of the ENDEC World Conference on Entrepreneurship and Innovative Change*, Nanyang Technological University-Peat Marwick Entrepreneurship Development Centre, Singapore, pp.662–669.
- Krueger, N. (1993) 'The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability', *Entrepreneurship Theory and Practice*, Vol. 18, No. 1, pp.5–21.
- Krueger, N., Reilly, M. and Carsrud, A. (2000) 'Competing models of entrepreneurial intentions', *Journal of Business Venturing*, Vol. 15, No. 5, pp.411–432.
- Kumara, S. (2012) 'Undergraduates' intention towards entrepreneurship: empirical evidence from Sri Lanka', *Journal Enterprising Culture*, Vol. 20, No. 1, pp.105–118.
- Kuratko, D.F. (2005) 'The emergence of entrepreneurship education: development, trends, and challenges', *Entrepreneurship Theory and Practice*, Vol. 29, No. 5, pp.577–598.
- Kuratko, D.F., Hornsby, J.S. and Naffziger, D.W. (1997) 'An examination of owners' goals in sustaining entrepreneurship', *Journal of Small Business Management*, Vol. 35, No. 1, pp.24–33.
- Levine, R. (2004) *Finance and Growth: Theory and Evidence*, National Bureau of Economic Research, 1050 Massachusetts Avenue Cambridge, MA 02138.
- Li, L. (2008) 'A review of entrepreneurship research published in the hospitality and tourism management journals', *Tourism Management*, Vol. 29, No. 5, pp.1013–1022.
- Linan, F. and Chen, Y.W. (2009) 'Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions', *Entrepreneurship Theory & Practice*, Vol. 33, No. 3, pp. 593–617.
- McClelland, D.C. (1961) *The Achieving Society*, D. Van Nostrand, Princeton, NJ.
- McMullen, J.S. and Shepherd, D.A. (2006) 'Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur', *Academy of Management Review*, Vol. 31, No. 1, 132–152.
- Minniti, M. (2005) *Global Entrepreneurial Monitor characteristics of the entrepreneur. Presentation at GEM 2004 Global Report Launch*, Babson College, London.
- Nimalathasan, B. and Achchuthan, S. (2012) 'Entrepreneurial motivation and self employment intention: a case study on management undergraduates of University of Jaffna', *International Conference on Business and Information (ICBI)*, pp.77–90, University of Kelaniya, Kelaniya.
- Nunnally, J.C. (1978) *Psychometric Theory*, 2nd ed., McGraw-Hill Book Company, New York.
- Packham, G., Jones, P., Miller, C., Pickernell, D. and Thomas, B. (2010) 'Attitudes towards entrepreneurship education: a comparative analysis', *Education & Training*, Vol. 52, Nos. 8/9, pp.568–586.
- Peterman, N.E. and Kennedy, J. (2003) 'Enterprise education: influencing students' perceptions of entrepreneurship', *Entrepreneurship: Theory and Practice*, Vol. 28, No. 2, pp.129–144.

- Pietrobelli, C. and Rabelotti, R. (2007) *Upgrading to Compete: Global Value Chains, Clusters and SMEs in Latin America*, Harvard University Press, Cambridge, MA.
- Podsakoff, P.M., Mackenzie, S.B., Lee, J. and Podsakoff, N.P. (2003) 'Common method biases in behavioral research: a critical review of the literature and recommended remedies', *Journal of Applied Psychology*, Vol. 88, No. 5, pp.879–903.
- Ramadani, V. (2011) 'The economic power of small businesses – the case of Republic of Macedonia', *International Bulletin of Business Administration*, Vol. 11, No. 2, pp.135–148.
- Ramadani, V., Gërguri, S., Dana, L-P. and Tašaminova, T. (2013) 'Women entrepreneurs in the Republic of Macedonia: waiting for directions', *International Journal of Entrepreneurship and Small Business*, Vol. 19, No. 1, pp.95–121.
- Reihana, F., Sisley, M. and Modlik, H. (2007) 'Māori entrepreneurial activity in Aotearoa New Zealand', *International Journal of Entrepreneurship and Small Business*, Vol. 4, No. 5, pp.636–653.
- Reitan, B. (1996) 'Where do we learn that entrepreneurship is feasible, desirable and/or profitable?', Paper presented at the *ICSB World Conference*.
- Sayigh, Y.A. (1952) *Entrepreneurs of Lebanon*, Harvard University Press, Cambridge, MA.
- Schaper, M. and Volery, T. (2004) *Entrepreneurship and Small Business: A Pacific Rim Perspective*, John Wiley and Sons Australia Ltd., Milton, Queensland.
- Segal, G., Borgia, D. and Schoenfeld, J. (2002) 'Using social cognitive career theory to predict self-employment goals', *New England Journal of Entrepreneurship*, Vol. 5, No. 2, pp.47–56.
- Shapiro, A. (1981) 'Self-renewing economies', *Economic Development Commentary*, Vol. 5, No. 2, pp.19–22.
- Shapiro, A. and Sokol, L. (1982) 'The social dimensions of entrepreneurship', in Kent, C.A., Sexton, D.L. and Vesper, K.H. (Eds.): *Encyclopedia of Entrepreneurship*, pp.72–90, Englewood Cliffs, Prentice Hall, NJ.
- Singh, I., Prasad, T. and Raut, D.R. (2012) 'Entrepreneurial intent: a review of literature', *Ninth AIMS International Conference on Management*, pp.201–207.
- Souitaris, V., Zerbini, S. and Al-Laham, A. (2007) 'Do entrepreneurship programs raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources', *Journal of Business Venturing*, Vol. 22, No. 4, 566–591.
- Spector, P.E. (1987) 'Method variance as an artifact in self-reported affect and perceptions at work: myth or significant problem?', *Journal of Applied Psychology*, Vol. 72, No. 3, pp.438–443.
- Timmons, J. and Spinelli, S. (2004) *New Venture Creation: Entrepreneurship for the 21st Century*, 6th ed., Irwin, Burr Ridge.
- Tkachev, A. and Kolvereid, L. (1999) 'Self-employment intentions among Russian students', *Entrepreneurship & Regional Development*, Vol. 11, No. 3, pp.269–280.
- Van Burg, E., Romme, A.G.L., Gilsing, V.A. and Reymen, I.M.M.J. (2008) 'Creating university spin-offs: a science-based design perspective', *Journal of Product Innovation Management*, Vol. 25, No. 2, pp.114–128.
- Veciana, J.M., Aponte, M. and Urbano, D. (2005) 'University students' attitudes towards entrepreneurship: a two countries comparison', *International Entrepreneurship and Management Journal*, Vol. 1, No. 2, pp. 165–182.
- Venkatapathy, R. and Pretheeba, P. (2014) 'Gender, family business background and entrepreneurial intentions in an emerging economy', *Int. J. Business and Emerging Markets*, Vol. 6, No. 3, pp.217–229.
- Wang, W., Lu, W. and Millington, J.K. (2011) 'Determinants of entrepreneurial intention among college students in China and USA', *Journal of Global Entrepreneurship Research*, Vol. 1, No. 1, pp.35–44.
- Yusof, M., Sandhu, M.S. and Jain, K.K. (2007) 'Relationship between psychological characteristics and entrepreneurial inclination: a case study of students at a private institution of higher learning', *Journal of Asia Entrepreneurship and Sustainability*, Vol. 3, No. 2, pp.23–41.

- Zali, M.R., Bastian, B.L. and Qureshi, S. (2013) 'Promoting innovation in the MENA region: the role of social norms and individual factors in entrepreneurial networks', *International Journal of Business and Globalization*, Vol. 11, No. 4, pp.413–426.
- Zali, M.R., Razavi, S.M., Yadollahi Farsi, J. and Kordnaeij, A. (2012) 'Entrepreneurs', *Social Networks and Global Entrepreneurship Monitor (GEM) Indexes*, Labour & Security Institute, Tehran.
- Zhao, H., Seibert, S.E. and Hills, G.E. (2005) 'The mediating role of self-efficacy in the development of entrepreneurial intentions', *Journal of Applied Psychology*, Vol. 90, No. 6, pp.1265–1272.