



# TOURISM STUDENTS' ENTREPRENEURIAL INTENTIONS

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**Abstract:** This study aims to investigate the relationship between entrepreneurial traits, socio-cultural background and entrepreneurial intention of university students in the UK and Turkey. 409 tourism students were surveyed to measure entrepreneurial intention, entrepreneurial traits including risk-taking propensity, innovativeness, tolerance of ambiguity and locus of control and socio-cultural factors. The findings indicate that there is a statistically significant relationship between innovation, propensity to take risks, entrepreneurial family and entrepreneurial intention. Education does not seem to play an important role in fostering entrepreneurial traits and intentions of university students. **Keywords:** socio-cultural background, entrepreneurial traits, intention. © 2010 Elsevier Ltd. All rights reserved.

## INTRODUCTION

Entrepreneurship contributes to a country's economy by promoting innovation, engendering competition, creating employment and thus contributes to economic wealth and spending power (Guasch, Kuznetsov, & Sanchez, 2002; Holmgren & From, 2005). In particular, in developed and developing countries both, tourism entrepreneurship is vital to tourists' experiences and satisfaction and to destination and community development (Bardolet & Sheldon, 2008; Blake, Sinclair, & Soria, 2006; Cawley & Gillmor, 2008; Getz & Carlsen, 2005). Countries therefore are examining how best to cultivate tourism entrepreneurship.

Previous research suggests that individuals' traits influence their intentions to start a business (Koh, 1996; Mueller & Thomas, 2001; Robinson, Stimpson, Huefner, & Hunt, 1991). Individuals with traits such as high propensity for risk taking, tolerance for ambiguity and internal locus of control are more likely to start a new business. However, while investigating the interface between the traits of

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individuals and their intentions, these studies do not consider socio-cultural elements, namely, education, entrepreneurial family background and national culture.

Previous studies claim that education influences individuals' cultural values and thus their level of entrepreneurship (Hayton, Zahra, & Zahra, 2002; Morrison, 2000). For example, the manner in which people are educated from an early age and the transferable skills which they develop during higher education play a significant role in establishing characteristics generally associated with entrepreneurial behaviour (Casson, 1991; Ronstadt, 1985). Tourism and hospitality education is still considered very much vocational and action oriented, and many have doubts about the extent to which it prepares students for thinking critically and working outside existing practices and paradigms (Airey & Tribe, 2000; Echtner, 1995), essential features for fostering entrepreneurship (Kirby, 2005). Although tourism and hospitality management education has come a long way from its origins in on-the-job training to a broad-based liberal curriculum in schools, it is still considered very much vocational and action oriented.

Scholars such as Airey and Tribe (2000) and Ayikoru, Tribe, and Airey (2009) question the extent to which traditional tourism and hospitality management education prepares students to think critically outside existing practices and paradigms. Especially in developing countries, Echtner (1995) proposes a 'three-pronged' approach to tourism education, which cultivates three types of skills: professional, vocational and entrepreneurial. Echtner points out that the existing types of tourism education programs can be grouped into two basic categories: professional education and vocational skills, and she emphasises the third, largely overlooked component in tourism education: entrepreneurial development.

The main objective of professional education is to develop students' ability to interpret, evaluate and analyse by providing theoretical concepts. The main objective of vocational education, on the other hand, is to teach skills; such content is highly practical. Although the debate on the content and approach to tourism education programs has centred on professional education versus vocational skills, they both are mainly concerned with creating human resources to *work for others*. However, according to Echtner, the third component creates human resources to *work for oneself* by developing entrepreneurs. Such an education can tap into an important portion of human resource potential in developing countries by encouraging and cultivating local entrepreneurial tourism development. In fact, one of the most important critical needs of developing countries is to foster not only an environment within which entrepreneurship can flourish, but also entrepreneurs (Echtner, 1995).

A family business tradition also influences the entrepreneurial behaviours of individuals (Basu & Goswami, 1999; Duchesneau & Gartner, 1990). Through working in a family business, people can acquire certain business ideas and skills to start their own or continue their families' businesses. The tourism industry is dominated by family businesses (Getz & Carlsen, 2005), parents being a potential influential

factor on their children's intention to continue with an existing business or start a new business (Altinay & Altinay, 2006).

Similarly, it has been found that national culture plays an influential role on entrepreneurial behaviours (McGrath, MacMillan, & Scheinberg, 1992; Shane, 1993; Sivakumar & Nakata, 2003). Hofstede (2003, p. 25) defines national culture as “the collective programming of mind which distinguishes the members of one human group from another” and suggests four dimensions—power distance, individualism, masculinity and uncertainty avoidance—to explain differences among individuals from different nations. However, to date, there appears to be a limited number of studies exploring tourism entrepreneurs' motives, despite the growing importance in responding to crucial tourism agendas such as ethics and sustainability, climate change and global crises (Getz & Carlsen, 2005; Hjalager, 2007; Russell & Faulkner, 2004).

Given the above factors, this paper aims to investigate the entrepreneurial intention of higher education tourism students in the UK and Turkey by considering their traits as well as their socio-cultural backgrounds. More specifically, this research aims to find out, first, the similarities and differences between the entrepreneurial traits of tourism students in the UK and Turkey; second, the influence of different traits—namely, propensity to take risks, internal locus of control, tolerance for ambiguity and students' innovation—on their intentions to start a business; third, the influence of their socio-cultural backgrounds—namely, family background, education and national culture—on their intentions to start a business and fourth in particular, the moderating effect of education between the entrepreneurial traits and intentions of students.

By exploring the above four factors, the study will address a research gap in the area of tourism entrepreneurship by identifying the intentions of tourism students to start a new business. In particular, it will respond to Johnson's, Simon's and Wjibenga's (2006) call for discipline-based research into the effects of higher education on entrepreneurship. Interestingly, although today's university students make up a significant share of the pool of potential entrepreneurs (Mueller 2004), there appears to be a dearth of studies into tourism students' intentions to get involved in entrepreneurial endeavours.

## FACTORS AFFECTING ENTREPRENEURIAL INTENTION

There are numerous definitions of entrepreneurship. However, as Mueller and Thomas (2001, p. 53) point out the relationship between entrepreneurship and new-venture formation is well covered in the literature, suggesting that “many authoritative definitions of entrepreneur actually include some reference to venture or enterprise creation”. Examples of this can be seen in Vesper (1983, p. 1), who defines entrepreneurship as “the creation of new independent businesses” and in Learned (1992, p. 39), who says that “the term entrepreneur refers to the individual or individuals who may attempt or who are attempting to found a business...” Similarly, Low and

MacMillan (1988) define entrepreneurship as “creation of new enterprise”, accordingly Pillis and Reardon (2007) define entrepreneurial intention as “the intention to start a new business”.

The entrepreneur is the cornerstone of the ‘entrepreneurship phenomena’, as the entrepreneur is the individual who, with certain psychological traits, attributes and values initiates a business venture (Thomas & Mueller, 2000). Researchers have explored the personality differences between entrepreneurs and non-entrepreneurs on the basis that certain psychological characteristics are required preconditions for entrepreneurship (Utsch & Rauch, 2000). Key preconditions identified by Koh (1996) include high need for achievement, internal locus of control, moderate risk-taking orientation, high tolerance for ambiguity, high degree of self-confidence and innovativeness. These traits affect the intentions of individuals to start a new venture (Krueger & Carsrud, 1993; Thomas & Mueller, 2000). Timmons, Smollen, and Dingee (1977) define more than twenty personal characteristics that may distinguish entrepreneurs from others. Among these traits closely associated with entrepreneurial potential, innovativeness, locus of control, tolerance for ambiguity and risk propensity have been selected as the focus of this study.

While giving credit to those studies investigating the interface between traits and intention, Hisrich, Langan-Fox, and Grant (2007) and Pillis and Reardon (2007) question the extent to which traits can be used solely to predict the intention to start a business. Hisrich et al. (2007) also argue that the role of personality traits could have been underestimated in past entrepreneurship research due to design and methodological limitations. In particular, Learned (1992, p. 40) argues that, “some individuals have a combination of psychological traits in interaction with background factors that make them more likely candidates to attempt to found businesses”. Supporting this view, Mueller and Thomas (2001) point out that the socio-cultural background of an individual acts as a stimulator and/or motivator of entrepreneurial behaviours, in particular, venture creation. Therefore, this study adopted a holistic approach to investigate entrepreneurial intention in relation to the influences of traits and socio-cultural backgrounds of individuals.

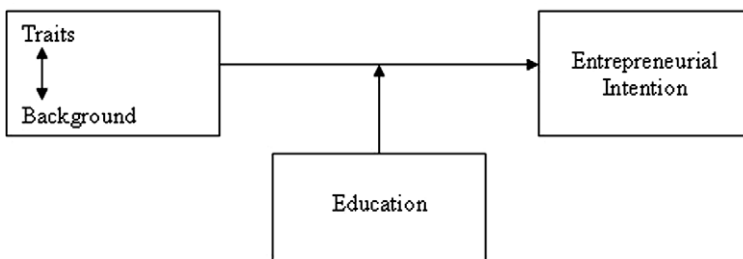
Socio-cultural background has been operationalised as cultural values, family tradition and education. Culture is considered to have an influence on managerial practices that can guide and shape behaviour (Smircich, 1983). Although there are many other levels of culture, values are held to be a critical feature of culture and cultural distinctiveness (England, 1976; Hofstede, 2003; Kluckhohn & Strodtbeck, 1961). Establishment of entrepreneurial priorities, making choices and reaching decisions to start a new business are shaped by values (Hayton et al., 2002). A business tradition in the family and education in some facets of business also influence the intention to start a business by equipping individuals with the skills and vision to engage in entrepreneurial endeavours (Altınay, 2008; Altınay & Altınay, 2006). Education that equips individuals with the knowledge and experience to deal with different situations may stimulate or impede the entrepreneurial intention (Krueger & Carsrud, 1993). Krueger and

Carsrud (1993, p. 327) state that “teaching people about the realities of entrepreneurship may increase their entrepreneurial self-efficacy, but simultaneously decrease the perceived desirability of starting a business”. Based on these arguments and the studies of Learned (1992) and Krueger and Carsrud (1993) on entrepreneurial traits and intention, we propose the model in Figure 1.

Having defined entrepreneurial intention as “the intention to start a new business” like in similar studies (such as Thomas and Mueller, 2000; Wu and Wu, 2008), this model and the relationships between the different variables have been supported with a number of hypotheses. The following section of the paper explains the development of the hypotheses.

### *Traits and Entrepreneurial Intention*

*Locus of control:* Locus of control, which relates to an individual’s perceptions of his/her ability to influence events in life (Begley & Boyd, 1987; Rotter, 1966), is one of the most frequently examined psychological variables in the literature. While individuals with an internal locus of control believe that they are in control of their life, those with an external locus of control believe that external forces have far greater input in their lives than their own actions (Begley & Boyd, 1987). Individuals with a higher internal locus of control are more entrepreneurial than ones with a lower internal locus of control and have a higher achievement orientation (Diaz & Rodriguez, 2003; Rotter, 1966). By linking this argument to the intention to start a business, Koh (1996) found no differences between the scores of entrepreneurially and non-entrepreneurially inclined students in a small sample of MBA students in Hong Kong. However, in a sample of fourth-year university students in Turkey, Gürol and Atsan (2006) report a statistically significant relationship between these variables. Entrepreneurially inclined students showed a higher internal locus of control compared to students without such an intention. Defining entrepreneurial spirit as “the desire to capitalize on opportunities by undertaking wealth-creating and value-adding activities”, Ang and Hong (2000, p. 285) found that internal locus of control is statistically higher in those students with a higher entrepreneurial spirit in Singapore. Therefore, we hypothesise,



**Figure 1. Factors Affecting Entrepreneurial Intention**

**H1:** Internal locus of control will be associated with intention in establishing a business.

*Innovation:* Innovativeness is often referred to in the literature as an important element of entrepreneurship. Schumpeter (1990) defined the entrepreneur simply as an innovator and Drucker (1986, p. 19) suggests that “innovation is the specific tool of entrepreneurs”. Robinson et al. (1991, p. 19) point out that innovation in business is related to “perceiving and acting upon business activities in new and unique ways”. The notion that entrepreneurs are more innovative than non-entrepreneurs is also supported by several empirical research findings (Gürol & Atsan, 2006; Koh, 1996; Robinson et al., 1991). Mueller and Thomas’s (2001) findings show innovation to be a primary motive in starting a business venture. A number of studies have shown that it also has a significant effect on venture performance (Utsch & Rauch, 2000). In the studies of both Koh (1996) and Gürol and Atsan (2006), innovativeness was found to have a positive statistically significant relationship with entrepreneurial intention. Therefore, we hypothesise,

**H2:** Innovativeness will be associated with intention in establishing a business.

*Propensity to take risks:* “Entrepreneurship is historically associated with risk taking” (Gürol & Atsan, 2006, p. 30). Indeed, Hisrich, Peters, and Shepherd (2005, p. 8) define entrepreneurship as “the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risk, and receiving the resulting rewards”. A number of empirical research results also support this characterisation of entrepreneurs as risk-takers, although they also indicate that entrepreneurs prefer to take moderate risks in their business decisions rather than being involved in situations where there is extreme risk or uncertainty (Cunningham & Lischeron, 1991; Koh, 1996; Thomas & Mueller, 2000). Busenitz (1999) suggested that entrepreneurs and non-entrepreneurs do not necessarily differ in their risk propensity but in their risk perception: entrepreneurs may take riskier paths in their proposed ventures because they perceive less risk compared to managers. Research by Koh (1996) and Gürol and Atsan (2006) showed that entrepreneurially inclined students have significantly higher scores in risk-taking than non-entrepreneurially inclined students. Ang and Hong (2000) also found that risk taking is statistically higher in those students with a higher spirit in both Hong Kong and Singapore. Therefore,

**H3:** Risk taking will be associated with intention in establishing a business.

*Tolerance of ambiguity:* Tolerance of ambiguity is defined by Begley and Boyd (1987) as the tendency to perceive ambiguous situations and uncertainty as desirable. Gürol and Atsan (2006, p. 30) suggest that: “tolerance of ambiguity can be efficiently conceptualized as

an individual's orientation toward taking chances in a decision-making state". Since risk and uncertainty are part of entrepreneurial endeavours, entrepreneurs are frequently required to make decisions with insufficient information, which creates ambiguity. Therefore, they must have tolerance for ambiguity (Cromie, 2000). McMullen and Shepherd (2006) link entrepreneurial intent and success with ability to bear uncertain situations. Pillis and Reardon (2007) found that tolerance of ambiguity was negatively correlated with short-term entrepreneurial intention among Irish undergraduate and MBA students. In contrast, Koh (1996) reported that tolerance of ambiguity was statistically higher in those students with intention compared to those without intention in Hong Kong. Given these arguments, we hypothesise:

**H4:** Tolerance of ambiguity will be associated with intention in establishing a business.

#### *Socio-cultural Background and Entrepreneurial Intention*

*Cultural values:* Previous research has identified a direct relationship between the individualism-collectivism dimension of culture and entrepreneurship. In individualist cultures, people are primarily concerned with their own and immediate family interests. In collectivist cultures, the interests of the wider society override the needs/interests of individuals (Hofstede, 2003). While some researchers have argued that individualism leads to increased levels of entrepreneurship (McGrath et al., 1992; Shane, 1993), other scholars have argued that collectivism may foster entrepreneurial values (Franke, Hofstede, & Bond, 1991; Sivakumar & Nakata, 2003).

Tiessen (1997) argued that although individualism leads to new venture creation, it is collectivist values that allow an organisation to leverage its resources. Individualism may facilitate the initiation of new ideas because it triggers creativity and entrepreneurship (Sivakumar & Nakata, 2003) as well as increasing individuals' sense of confidence (Geletkanycz, 1997). On the other hand, such traits might not be turned into business reality unless the leverage of resources is accomplished by adhering to implicit collectivist norms based on the shared values and goals of members (Wilkins & Ouchi, 1983). In addition, those in individualist cultures have a tendency to place a higher value on individual accomplishments than those in collectivist cultures (Hofstede, 2003). People in individualist cultures tend to be more autonomous and independent than people in collectivist cultures, they view uncertainty in the external environment more optimistically than collectivist individuals and they are more likely to involve themselves in situations that collectivist individuals perceive as being extremely risky (Morris, Davis, & Allen, 1994). Based on these arguments, we hypothesise that:

**H5:** Individualism will be associated with intention in establishing a business.

*Family:* Previous research shows that individuals with an entrepreneurial family are more likely to establish their own businesses (Basu & Virick, 2008; Gasse, 1985; Hirsrich, 1986; Linan, Rodriguez-Cohard, & Rueda-Cantuche, 2005). In particular, previous research about the influence of family tradition suggests that individuals acquire certain business skills prior to their business start-up (Basu & Goswami, 1999; Duchesneau & Gartner, 1990). Past experience also equips them with the ideas, vision and confidence to start a new business (Altinay & Altinay, 2006). Based on these arguments, we hypothesise that:

**H6:** Entrepreneurial family will be associated with the students' intention of establishing a business.

*Education:* The literature regarding the impact of education on entrepreneurial behaviour is substantial and quite polarised. While some researchers claim that education lessens the entrepreneurial desire of the individual (e.g. Krueger & Carsrud, 1993), there are others who say that people's entrepreneurial inclination actually increases with education (e.g. Clercq & Arenius, 2006; Crant, 1996).

The first group of researchers argues that education can improve an individual's creativity, flexibility, self-direction and ability to respond to widely variable situations and thus contribute to innovative behaviours (Llewellyn & Wilson, 2003; Rauch & Frese, 2000; Shook, Priem, & McGee, 2003). In particular, individuals with educational attainment know when, how and where to start a company (Ronstadt, 1985). Confirming this, Peters (2002) states that educational attainment equips individuals with the skills and mindsets to remain flexible and open to market forces and opportunities. Linking education to intention to start a business, both Sexton and Bowman-Upton (1984) and Hornaday and Vesper (1981) found that students who studied management, and in particular, entrepreneurship are more likely to be self-employed years later than their counterparts who did not take such courses. Similarly, a meta-analysis of literature on entrepreneurship education undertaken by Dickson, Solomon, and Weaver (2008) showed that there is a positive correlation between specific entrepreneurship education and students' intentions to form a business venture at some point in time.

On the negative side, some researchers argue that formal education can lead to a reduction in curiosity, vision and an increase in risk aversion (Fallows, 1985; Shapero, 1980). Ronstadt (1984) claims that traditional education leads to conformity, decreases tolerance for ambiguity and thus hinders students' creative thinking abilities and intentions to start a new business. Kirby (2005) therefore argues that universities and business schools in particular should revise their curricula and teaching and learning methods in order to stimulate innovative and critical thinking.

In our model, we argue that formal education will impede entrepreneurial intention. As Krueger and Carsrud (1993, p. 327) state: "teaching people about the realities of entrepreneurship may increase their entrepreneurial self-efficacy, but simultaneously decrease the



perceived desirability of starting a business”. Learned (1992) says that although individuals may have the necessary combination of traits and background—in other words, the potential to found a business—the final decision is formed from the interaction of the potential with the situation. The situation may facilitate or inhibit the individual to found his/her own business. Given the above factors, we have set our hypothesis as:

**H7:** Education will moderate the relationship between entrepreneurial traits and intention.

### *Study Methods*

*Questionnaire Development and Measurement.* The questionnaire prepared for the study includes 50 items. Of these, 32 are adapted items from a number of instruments, measure risk-taking propensity (ten items, Jackson, 2007), innovativeness (eight items, Mueller & Thomas, 2001), tolerance of ambiguity (four items, Acedo & Jones, 2007) and locus of control (ten items, Mueller & Thomas, 2001). These items are measured using a five-point Likert scale between “1” representing “strongly disagree” and “5” representing “strongly agree”. Eight items are designed to measure personal circumstances and demographics that predispose individuals to act entrepreneurially and two are designed to measure entrepreneurial intention (Gasse, 1985; Hirsrich, 1986). All these items are measured using a nominal scale with yes/no response with the exception of one question for entrepreneurial intention: Respondents having an intention to start a business are further asked about their probability of establishing a business within the first five years of their graduation by using an ordinal five-point scale between “0%” and “100%”. To minimise response-set bias and the halo effect, some statements are reverse-scored and intermingled with other statements.

*Locus of control:* Mueller and Thomas’s (2001) modified version of Rotter’s I-E Scale, consisting of ten items was used in this study to measure internal locus of control. The instrument was originally designed to measure the respondents’ belief in their abilities to control external forces. Research by Begley and Boyd (1987) has shown that this instrument is reliable and valid.

*Innovativeness:* In order to measure innovativeness, eight items from the Jackson Personality Inventory Manual (JPI) as utilised by Mueller and Thomas (2001) were used. Jackson Personality Inventory defines innovativeness as a tendency to be creative with a high score on this scale indicating that the individual tends to be novel and original in his/her ideas. Mueller (2004) reports that the Cronbach alpha reliability score for this scale was acceptable.

*Propensity to take risks:* The revised edition of the Jackson Personality Inventory also assesses risk-taking propensity. The scale consists of four components: monetary, physical, social and ethical risk-taking. Respondents achieving a high score on this scale tend to enjoy gambling, taking chances, partaking in adventure and are usually

unconcerned with danger (Sexton & Bowman-Upton, 1990). In this study, ten items related to monetary and social risk-taking dimensions were used. This instrument also has accepted internal consistency (Begley & Boyd, 1987).

*Tolerance of ambiguity:* Four items initially proposed by Lorsch and Morse (1974) and adapted by Westerberg, Singh, and Hackner (1997) and Acedo and Jones (2007) were used to test tolerance for ambiguity. Acedo and Jones (2007) report a 0.76 composite reliability for the measure.

*Entrepreneurial intention:* Entrepreneurial intention was measured by the respondents' judgments about the likelihood of establishing their own businesses. Respondents were specifically asked whether they had any intention to establish their own businesses or not. Those who responded positively were further prompted about the probability of establishing their own businesses in the five years after graduation.

*Demographic questions:* Previous research has identified gender (Koh, 1996; Matthews & Moser, 1996; Mueller, 2004) and birth order (Koh, 1996; Webber, 2007) as influential factors on the intention to start a business. They suggest that males and first-born children have higher propensities to establish their own businesses. Given this, we have included both gender and birth order as demographic variables in our analysis.

*Sampling and Data Collection.* The sample for this study included university tourism students in Turkey and the UK. These two countries are selected since according to Hofstede's typology, Turkey is defined as low in individualism, while the UK sample consists of students from individualist cultures. Coombs, Holladay, Hasenauer, and Signitzer (1994, p. 26) state that "the examination of countries from different culture clusters is more comparative because of the greater possibility that the countries will be different and not merely the repetition of a similar culture".

Krueger and Carsrud (1993, p. 324) suggest that "...the sensitivity of intentional processes to initial conditions argues for studying phenomena *before* they occur and for inclusion of non-intending subjects" and add that in entrepreneurial research, individuals who do not intend to start a business are often ignored, which introduces a bias. Following the arguments of these authors, university students are selected as the subjects for this study mainly for three reasons. First, although today's university students make up a significant share of the pool of potential entrepreneurs (Mueller, 2004), they also include individuals without any intention to get involved in entrepreneurial endeavours. Second, as Krueger and Carsrud (1993) point out, by studying students, the phenomena can be studied before they occur. Third, it is possible to maintain control over the environment by integrating university professors in the administration of the research instrument (Mueller, 2004).

The study sample aimed to include all freshman and senior students studying tourism majors at selected business schools in universities in Turkey and the UK to compare entrepreneurial intentions of students

at the early stages of their degree with those who are about to complete it. In the case of Turkey, a total of 254 questionnaires were collected, either under the monitoring of the authors or with the guidance of university professors, from freshman and senior Turkish students studying tourism and hotel management at three universities. Of these, 203 were usable, after eliminating freshman students repeating their freshman courses and senior students who spent more than the normal time required for graduation in the program they are studying. In the UK, a total of 279 questionnaires were collected from freshman and senior students at a selected university studying mainly tourism and hotel management in a similar way to those in Turkey. Of these, 206 were usable, after eliminating those students from collectivist cultures, as the UK university attracts numerous international students. Although the sample mostly included British students (144), it also included students from other European countries defined as individualist according to Hofstede's typology. Freshman students repeating freshman courses and senior students who spent more than the normal time required for graduation in the program they are currently enrolled in were also eliminated. All programs are characterised by a mix of theoretical and vocational education, however, none of the programs examined offered entrepreneurship as a major course under the tourism curricula.

Before we move to the analysis, it is important to state that in line with Tabachnick and Fidell's (1996) suggestions, we have replaced the missing values with the mean value of their series when the total number of missing values for the remaining items was not over five percent. Table 1 provides the summary statistics for the samples. As seen in both samples, the number of students with the intention of starting a business is higher than the number without such an intention. As suggested by Mueller (2004), today's university students seem to make up a significant share of the pool of potential entrepreneurs. In addition, the vocational and sector-specific nature of the programs examined

**Table 1. Sample Characteristics**

Group Profiles	Turkey		UK	
	Frequency	Percentage	Frequency	Percentage
<i>Education</i>				
Freshman	122	60.1	116	56.3
Senior	81	39.9	90	46.7
<i>Gender</i>				
Female	112	55.2	141	68.6
Male	91	44.8	65	31.6
<i>Entrepreneurial intention</i>				
With intention	123	60.6	121	58.7
Without intention	79	38.9	84	40.8
Missing	1	0.5	1	0.5

N = 203 Turkey, N = 206 UK.

might attract a high proportion of individuals with entrepreneurial intention.

*Properties of the Scales.* For the Turkish sample, reliability coefficients (Cronbach's alpha) are 0.69 for locus of control, 0.70 for innovativeness, 0.50 for propensity to take risks, and 0.55 for tolerance of ambiguity. For the UK sample, they are 0.71 for locus of control, 0.68 for innovativeness, 0.64 for propensity to take risks, and 0.70 for tolerance of ambiguity. We also conducted exploratory factor analysis (EFA) to examine the factor structure of the measures. In our analysis, the factor structures appeared to be different than the conceptual ones. Close examination of the results showed that the negatively worded items produced separate factors. The existence of such a negative factor is well documented in survey research (DiStefano & Molt, 1991; Marsh, 1996). As suggested by the researchers, such effects associated with negatively worded items may be considered a response style.

### *Statistical Methods*

First, descriptive statistics (frequency distributions) are computed to develop a profile of the sample. Second, both univariate and multivariate tests are conducted to analyze the data and test the hypotheses of this study. At the univariate level, t-tests of significant differences are performed to investigate the similarities and differences between entrepreneurial traits of students in the UK and Turkey. At the multivariate level, logistic regression analysis is performed to test the relationship between not only the entrepreneurial traits, but also the socio-cultural background factors of students on their intentions to start a business. By introducing education as a moderating variable in this analysis, we also investigated the moderating influence of education between entrepreneurial traits and intention.

*Findings and Discussion.* In order to ensure that the results are not affected by systematic differences of extraneous factors, we conduct  $\chi^2$  tests of independence to examine whether there are significant differences between freshman and senior students with respect to their entrepreneurial intention and demographic and family characteristics, including gender, birth order and entrepreneurial inclination of family. The findings showed that at a significance level of 0.05, with the exception of gender in the Turkish group, none of the selected demographic and family factors are significantly different between freshman and senior students. In the Turkish sample, we observe that while 65 of the freshman students are male, there are only 26 male senior students. The findings also indicate that freshman and senior students do not differ with respect to their intention to establish their own business. Therefore, based on these findings, in both samples the two groups can be considered homogenous with respect to entrepreneurial intention, birth order and family entrepreneurial inclination. As far as the

**Table 2.** t-tests of Significant Differences Between Entrepreneurial Traits

	Intention		t-value
	Mean		
<i>Turkish Sample</i>	<i>yes</i>	<i>no</i>	
Tolerance of ambiguity	2.44	2.30	-1.133
Risk-taking propensity	3.11	2.96	-2.239**
Innovation	3.60	3.38	-2.560**
Locus of control	3.51	3.50	-.142
<i>UK Sample</i>	<i>yes</i>	<i>no</i>	
Tolerance of ambiguity	3.27	3.10	-1.555
Risk-taking propensity	3.15	2.96	-3.120***
Innovation	3.25	3.04	-3.018***
Locus of control	3.50	3.57	1.053

\*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ ; (2-tailed).

UK sample is concerned, the two groups can also be considered homogenous with respect to gender.

The t-test analysis is conducted in order to identify the differences and similarities in terms of the traits of students in the UK and Turkey (see Table 2). Interestingly, the results of the t-tests of significant differences between entrepreneurial traits of the Turkish and the UK samples showed that higher innovation and risk-taking propensity are important entrepreneurial traits in the case of both samples. This shows that regardless of cultural differences, innovation and risk-taking propensity are universal qualities of entrepreneurship.

To investigate the effect of entrepreneurial traits, background factors and education on intention, a direct logistic regression is performed for the total sample. In the second model of this logistic regression analysis, education is included as a moderating variable. As Garson (2009, para. 2) points out, logistic regression is used when the dependent variable is dichotomous and adds that it “can be used to predict a dependent variable on the basis of continuous and/or categorical independents and to determine the percent of variance in the dependent variable explained by the independents; to rank the relative importance of independents; to assess interaction effects; and to understand the impact of covariate control variables. The impact of predictor variables is usually explained in terms of odds ratios”. Therefore, we perform a logistic regression on entrepreneurial intention as outcome with our four entrepreneurial traits of locus of control, innovativeness, propensity to take risks and tolerance of ambiguity as predictors and education as the moderating variable. As suggested by Aiken and West (1991) for moderated regression analysis, we centred the continuous variables. Results of this regression analysis are summarized as Table 3. In this analysis, gender and birth order are included as demographic variables.

**Table 3. Logistic Regression Analysis**

	Model			Interaction Model		
	$\beta$	Wald's $\chi^2$	$e^\beta$ (odds ratio)	$\beta$	Wald's $\chi^2$	$e^\beta$ (odds ratio)
Constant	-.102	.141	.903	-.089	.105	.915
Gender	-.116	.248	.890	-.117	.247	.890
Birth order	.138	.399	1.148	.177	.633	1.194
Entrepreneurial family	.839	15.053	2.315***	.836	14.784	2.307***
Education	.225	1.049	1.253	.237	1.134	1.267
Country	.025	.013	1.026	-.019	.008	.981
Risk-taking propensity	.571	4.275	1.770**	.707	3.449	2.029*
Tolerance of ambiguity	-.006	.002	.994	.025	.016	1.025
Locus of control	-.274	1.603	.760	-.482	2.974	.617
Innovativeness	.628	8.102	1.875***	.533	3.317	1.705*
Education $\times$ Risk-taking propensity				-.298	.299	.742
Education $\times$ Tolerance of ambiguity				.557	1.549	1.746
Education $\times$ Locus of control				.258	.333	1.294
Education $\times$ Innovativeness				-.089	.105	.915
Model chi-square	40.062***			42.203***		
Degrees of freedom	9			13		

Entrepreneurial intention was coded dichotomously; 0 = having no intention and 1 = having intention to establish a business. Education and country were coded dichotomously as 0 = freshmen and 1 = senior; 0 = Turkey and 1 = UK. The interaction was calculated as the product term of Education and each covariate.

\*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ .

Table 3 shows regression coefficients, Wald statistics and odds ratios for each of the predictors.

*Traits and Entrepreneurial Intention.* The results of the analysis show that (according to the Wald criterion) of the different traits, risk-taking propensity and innovation lead to higher levels of entrepreneurial intention. These findings are in line with the results of Koh (1996) and Gürol and Atsan (2006), who also found that students with a higher risk-taking propensity and higher innovativeness are more entrepreneurially inclined. Innovation appears to be an important trait as generating new business ideas and concepts are the primary motives for starting a new business (Mueller & Thomas, 2001). Moreover, risk-taking propensity has been found to be an influential factor on entrepreneurial intention. This result is not surprising; starting a business involves financial, psychological and social risks (Hisrich et al., 2005) and it is only those individuals who can bear risk taking would move into such an endeavour. Given these results, we have accepted H2 and H3.

In contrast, unlike the arguments of Begley and Boyd (1987), Diaz and Rodriguez (2003), and McMullen and Shepherd (2006), this study's findings did not demonstrate a relationship between locus of control, tolerance of ambiguity and intention to start a business. This is surprising given that a new business start up involves both uncertainty (Pillis & Reardon, 2007) and the need to take a proactive approach. These arguments lead us to not accept H1 and H4. These findings are consistent with Gürol and Atsan (2006), who found that there is no statistically significant relationship between tolerance of ambiguity and intention, and also with Koh's (1996) findings in relation to locus of control and entrepreneurial intention.

*Socio-cultural Background and Entrepreneurial Intention.* It became apparent that among different socio-cultural factors only entrepreneurial family has a statistically significant relationship with intention to start a business. When a student has a family with a business, the intention of establishing a business him/herself increases by a factor of 2.315. This result is in line with several authors' findings (Basu & Virick, 2008; Gasse, 1985; Hisrich, 1986; Linan et al., 2005) that suggest that individuals coming from entrepreneurial families have more tendencies to establish businesses. One can argue that this finding is expected given that an entrepreneurial family gives individuals an opportunity to acquire certain business skills experience, develop ideas and vision (Altinay & Altinay, 2006; Basu & Goswami, 1999), all of which contribute to inclination to start a new business. These results lead us to accept H6.

What is surprising in the findings is that education does not have a statistically significant relationship with students' intentions to start a business. A similar finding was reported in Britain by Henley (2005) who, in his longitudinal research, found that educational background is not strongly associated with entrepreneurial aspirations. This shifts the focus of the argument from whether education influences

entrepreneurial intention (Collinson & Quinn, 2002; Dickson et al., 2008; Ronstadt, 1984) to what kind of education should be offered to develop students' critical and analytical thinking skills as well as entrepreneurial features (Airey & Tribe, 2000; Ayikoru et al., 2009; Echtner, 1995; Kirby, 2005). Given these arguments, we reject H7 and conclude that since the tourism industry has untapped opportunities in the area of entrepreneurship, tourism entrepreneurship deserves special attention, with more emphasis on social science-informed curriculum as well as the use of creative teaching and learning techniques. Such a radical shift from vocational teaching and learning appears to be inevitable, as the response of the tourism industry to global challenges owes itself to entrepreneurship in the public and private sectors (profit and non-profit organizations).

Kirby (2005) argues that although there are a number of entrepreneurship programs around the world, rather than educating individuals *for* entrepreneurship, they educate them *about* entrepreneurship and enterprise by teaching them about the entrepreneurial process (opportunity recognition, entry strategies, marketing, and so on). Although such principles and practices are important for students to learn for creating their own enterprises, they do not develop the personal skills, attributes and behaviours present in successful entrepreneurs. In order to establish entrepreneurial capabilities in students, these attributes must be developed. According to him, "traditional education system stultifies rather develops the requisite attributes and skills to produce entrepreneurs and processes that if entrepreneurs are to be developed, considerable changes are required in both the content and process of learning" (Kirby, 2005, p. 173). He states that from a neuropsychological perspective, the brain is divided into two hemispheres as the left and the right brain. While the left brain deals with language, logic and symbols in a focused and systematic way, the right brain is lateral, unconventional, unsystematic and unstructured. The two ways of thinking are complementary. As he points out, since the ancient Greeks, most formal educational systems develops the students' left brain capabilities—critical or vertical thinking. However, to develop entrepreneurial capability, both critical and creative thinking are required. Therefore, right-brain functions, which are mostly associated with the skills, attributes, and behaviours characteristic of the enterprising or entrepreneurial individual, should also be developed.

Unlike Sivakumar and Nakata (2003) and Tiessen (1997), our findings demonstrate no statistically significant relationship between individualist/collectivist cultures and students' intention to start a business (see Table 3). This means that intention to start a business cannot be explained by the cultural domain of the individual, whether individualist or collectivist. However, when further analysis examined the probability of starting a business within five years of graduation rather than the intention to start a business, students from Turkey, low in individualism according to Hofstede's cultural typology, showed a statistically higher probability of establishing their businesses compared to students from individualist cultures in the UK sample. In Table 4 we report the results of our moderated multiple regression



**Table 4. Multiple Moderated Regression Analysis**

	Model			Interaction Model		
	$\beta$	SE	t	$\beta$	SE	t
Constant	2.914	.174	16.724***	2.907	.176	16.495***
Gender	-.027	.135	-.197	-.021	.136	-.152
Entrepreneurial family	.445	.128	3.478***	.455	.130	3.499***
Birth order	.043	.129	.336	.048	.131	.370
Education	-.053	.126	-.420	-.062	.129	-.479
Country	-.470	.127	-3.707***	-.473	.130	-3.628***
Risk-taking propensity	.533	.172	3.098***	.558	.251	2.224**
Tolerance of ambiguity	.005	.077	.001	-.033	.114	-.291
Locus of control	.094	.123	.764	.057	.166	.345
Innovation	.171	.131	1.309	.100	.179	.560
Education $\times$ Risk-taking propensity				-.055	.339	.871
Education $\times$ Tolerance of ambiguity				.053	.159	.738
Education $\times$ Locus of control				.092	.250	.713
Education $\times$ Innovativeness				.153	.263	.562
Model R <sup>2</sup>	.186			.189		
Adj R <sup>2</sup>	.154			.142		
F	5.887***			4.075***		

The probability of establishing a business was rated by using a five-point scale between 0% and 100%. Education and country were coded dichotomously as 0 = freshmen and 1 = senior; 0 = Turkey and 1 = UK. The interaction was calculated as the product term of Education and each covariate.

\*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1.

analysis in relation to the probability of establishing a business. In these analyses, we observed that the residuals were normally distributed (Tabachnick & Fidell, 1996).

One might argue that individualism would lead to venture creation, as individuals may be considered to have more confidence to initiate new business ideas (Sivakumar & Nakata, 2003; Tiessen, 1997). However, in the case of this study, it was found that the probability of starting a business is significant in the case of students from a collectivist society, Turkey. This could be explained by the current economic conditions in Turkey. Self-employment could be due to push factors, such as no job prospects or no prospects with pay adequate to live properly. These findings support the arguments of Learned (1992) that not only traits and background factors but also the situation individuals are in and interacting with may play an important role in influencing their intention to start a business.

The analysis of the probability of starting a business within five years also demonstrated that, in addition to country of origin (individualist versus collectivist), entrepreneurial family and risk-taking propensity also have a positive bearing. According to our earlier analysis, it was also found that entrepreneurial family and risk-taking propensity are positively related with intention to start a business.

## CONCLUSION

The purpose of this study was to examine the effect of entrepreneurial traits and socio-cultural background on entrepreneurial intention of higher education tourism students in the UK and Turkey. The results indicated that there is a positive statistically significant relationship with entrepreneurial intention and some entrepreneurial traits; particularly innovativeness and propensity to take risks both in Turkey and the UK. In addition, among the socio-cultural factors, having an entrepreneurial family seems to be an important predictor in the entrepreneurial intention of tourism students. Culture, on the other hand, seems to play a role when the probability of establishing a business is concerned rather than having entrepreneurial intention. These findings suggest that entrepreneurial intention cannot be solely explained by individual traits; socio-cultural background also has an important bearing on entrepreneurial intention. It is therefore important that researchers take a holistic approach to understanding entrepreneurial intention. As suggested by Learned (1992), a combination of psychological traits in interaction with background factors makes individuals likelier candidates to attempt to start a business.

The study findings also indicate that education does not play a statistically significant role in increasing either entrepreneurial intention or entrepreneurial qualities of tourism students neither in Turkey nor the UK. Since education does not appear to have a moderating effect between traits and intentions, we may question the academic provisions offered to students in tourism and hospitality schools and return to the arguments put forward by scholars such as Airey and

Tribe (2000), Ayikoru et al. (2009), Echtner (1995) and Kirby (2005) who argue that traditional education has to change to encourage entrepreneurship. Since entrepreneurship is about creativity, innovation, risk taking, and opportunity seeking, there has been an ongoing debate in the literature about whether entrepreneurship can be taught at all (Holmgren and From, 2005). However, as pointed out by Gorman (1997), there is considerable consensus among researchers that with a certain reformation and reorganisation of the so-called traditional education, it can be taught. Holmgren and From (2005) state that although researchers disagree on what entrepreneurship education should be, they agree on the fact that something positive must replace or be a part of traditional education. As Owusu-Ansah and Flemin (2002:92) state, “The educational system traditionally teaches young people to obey, to reproduce facts and to look for work as an employee. Entrepreneurs on the contrary, must trust their own judgement, learn by doing and create their own jobs. It is reported that several authors agree that enterprise can be taught by teaching entrepreneurial qualities, that is creativity, independence and need for achievement, and that it should be taught early in the educational system.” Encouraging the enterprise spirit is in the agenda of the European Union, therefore, in a similar fashion, in a report of the European Commission (2002:9), it was stated that “The educational systems have not in the past been geared towards the development of entrepreneurship and self-employment, the final goal of the educational path being rather to produce employees working in a big company or in a public administration.” Several researchers (such as Cooper, Bottomley and Gordon, 2004; Kirby, 2005) have suggested that to increase the number of students who view business start-up as a viable career option, entrepreneurship education must involve learning and facilitating for entrepreneurship, not about it.

This study does not aim to offer appropriate teaching methods to encourage the enterprise spirit, rather it aims to understand whether today’s university education has an effect on the entrepreneurial mindset of the students. In the above sense, the findings of this research are important for policy makers and academics not only in Turkey, but also in the UK. Since, this study suggests that the current education processes should be changed and developed to create enterprising individuals, it offers valuable guidelines and insight for those who formulate, deliver and evaluate educational policy; they may wish to review the current higher educational system in a way to foster the entrepreneurial mindset in individuals. As suggested by Kirby (2005) the challenge is to develop a system of learning that can complement the traditional.

Finally, research into entrepreneurship in tourism appears to be scant and at the embryonic stage. Previous studies in the area of tourism entrepreneurship have predominantly focused on how entrepreneurship could be fostered and developed at the country level (Getz & Carlsen, 2005; Hjalager, 2007; Russell & Faulkner, 2004). They ignored the serious linkages between the entrepreneur as the key player of business development, entrepreneurship and country. This

study focused on tourism students, who are regarded as the potential driving force of entrepreneurship, in two countries, Turkey and the UK. The study demonstrated that regardless of country of origin, tourism students possess two key characteristics of entrepreneurship: innovativeness and propensity to take risks. More importantly, these two traits have a bearing on their intentions to start a business. These results suggest that both the UK and Turkey might need to develop educational, socio-economic and political frameworks that will enable tourism students to exploit their innovative and risk-taking entrepreneurial qualities. This is particularly important in the context of a developing country such as Turkey, because entrepreneurship is being seen as a route to empower citizens, generate innovation and integrate the country into the global economy by changing mindsets (Hisrich & Drnovsek, 2002; UNCTAD., 2008).

There are a number of limitations in the study. First, we used cross-sectional method of data collection. However, longitudinal data would have provided more valid support for our study. Another important limitation of this study is the number of factors that are investigated. There are literally hundreds of variables that can influence entrepreneurial intentions of individuals; four of those important variables, religion, family income, self-efficacy and energy level were not investigated in the study. In addition, a larger sample including various other cultures would make the investigation more global and generalizable. Further research should investigate potential educational approaches and provisions that could foster entrepreneurial traits of individuals. In addition, students from different subject areas (e.g. engineering, education and business administration) or countries maybe studied. Finally, an institutional approach to the analysis of entrepreneurial intention and identification of factors in the institutional framework (legal, economic, educational) that stimulate and/or hinder entrepreneurial intention in different countries could also be examined. **A**

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## REFERENCES

- Acedo, F. J., & Jones, M. V. (2007). Speed of internationalization and entrepreneurial cognition: Insights and a comparison between international new ventures, exporters and domestic firms. *Journal of World Business*, 42, 236–252.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Airey, D., & Tribe, J. (2000). Education for hospitality. In C. Lashley & A. Morrison (Eds.), *In search of hospitality: Theoretical perspectives and debates* (pp. 276–291). Oxford: Butterworth-Heinemann.
- Altınay, L. (2008). The relationship between an entrepreneur's culture and the entrepreneurial behaviour of the firm. *Journal of Small Business and Enterprise Development*, 15(1), 111–120.
- Altınay, L., & Altınay, E. (2006). Determinants of ethnic minority entrepreneurial growth in the catering sector. *The Service Industries Journal*, 26(2), 203–221.
- Ang, S. H., & Hong, D. G. P. (2000). Entrepreneurial spirit among East Asian Chinese. *Thunderbird International Business Review*, 42(3), 285–309.

- Ayikoru, M., Tribe, J., & Airey, D. (2009). Reading tourism education neoliberalism unveiled. *Annals of Tourism Research*, 36(2), 191–221.
- Bardolet, E., & Sheldon, P. (2008). Tourism in archipelagos: Hawaii and the Balearics. *Annals of Tourism Research*, 35(4), 900–923.
- Basu, A., & Goswami, A. (1999). Determinants of South Asian entrepreneurial growth in Britain: A multivariate analysis. *Small Business Economics*, 13, 57–70.
- Basu, A. & Virick, M. (2008). Assessing entrepreneurial intentions amongst students: A comparative study. *Paper presented at 12th Annual Meeting of the National Collegiate Inventors and Innovators Alliance*. Dallas, USA.
- Begley, T. M., & Boyd, D. (1987). Psychological characteristics associated with performance in entrepreneurial firms and small businesses. *Journal of Business Venturing*, 2, 79–93.
- Blake, A., Sinclair, M. T., & Soria, J. A. C. (2006). Tourism productivity – evidence from the United Kingdom. *Annals of Tourism Research*, 33(4), 1099–1120.
- Busenitz, L. W. (1999). Entrepreneurial risk and strategic decision making: It's a matter of perspective. *Journal of Applied Behavioral Science*, 35, 325–340.
- Casson, M. C. (1991). *The entrepreneur: An economic theory*. London: Gregg Revivals.
- Cawley, M., & Gillmor, D. A. (2008). Integrated rural tourism: Concepts and practice. *Annals of Tourism Research*, 35(2), 316–337.
- Clercq, D. D., & Arenius, P. (2006). The role of knowledge in business start-up activity. *International Small Business Journal*, 24(4), 339–358.
- Collinson, E., & Quinn, L. (2002). The impact of collaboration between industry and academia on SME growth. *Journal of Marketing Management*, 18(3/4), 415–435.
- Coombs, W., Holladay, S., Hasenauer, G., & Signitzer, B. (1994). A Comparative analysis of international public relations: Identification and interpretation of similarities and differences between professionalization in Austria, Norway, and the United States. *Journal of Public Relations Research*, 6(1), 23–39.
- Crant, M. J. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 34(3), 42–49.
- Cromie, S. (2000). Assessing entrepreneurial intentions: Some approaches and empirical evidence. *European Journal of Work and Organizational Psychology*, 9(1), 7–30.
- Cuningham, J. B., & Lischeron, J. (1991). Defining entrepreneurship. *Journal of Small Business Management*, 29, 45–61.
- Diaz, F., & Rodriguez, A. (2003). Locus of control and values of community entrepreneurs. *Social Behavior and Personality*, 31(8), 739–748.
- Dickson, P. H., Solomon, G. T., & Weaver, K. M. (2008). Entrepreneurial selection and success: Does education matter? *Journal of Small Business and Enterprise Development*, 15(2), 239–258.
- DiStefano, C., & Molt, R. W. (1991). Further investigating method effects associated with negative worded items on self-report surveys. *Structural Equation Modelling*, 13(3), 440–464.
- Drucker, P. F. (1986). *Innovation and entrepreneurship*. New York: Harper and Row, Publishers, Inc.
- Duchesneau, D. A., & Gartner, W. B. (1990). A profile of new venture success and failure in an emerging industry. *Journal of Business Venturing*, 5(5), 297–312.
- Echtner, C. M. (1995). Entrepreneurial training in developing countries. *Annals of Tourism Research*, 22(1), 119–134.
- England, G. W. (1976). *The manager and his values: An international perspective*. Cambridge, Mass: Ballinger Press.
- Fallows, J. (1985). The case against credentialism. *The Atlantic Monthly*, December, 49–67.
- Franke, R. H., Hofstede, G., & Bond, M. H. (1991). Cultural roots of economic performance. A research note. *Strategic Management Journal*, 12, 165–173.
- Garson, D. (2009). *Logistic regression*. <<http://faculty.chass.ncsu.edu/garson/PA765/logistic.htm>> Retrieved 18.05.09.
- Gasse, Y. (1985). *A strategy for the promotion and identification of potential entrepreneurs at the secondary school level*. *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College.

- Geletkanycz, M. A. (1997). The salience of 'culture's consequences': The effects of cultural values on top executive commitment on the status quo. *Strategic Management Journal*, 18, 615–634.
- Getz, D., & Carlsen, J. (2005). Family business in tourism – state of the art. *Annals of Tourism Research*, 32(1), 237–258.
- Guasch, J.L., Kuznetsov, Y. N. & Sanchez, S. M. (2002). Small and medium sized enterprises in Argentina: A potential engine for economic growth and employment. *World Bank Sector Rep.* No. 22803-AR. Washington, D.C.: World Bank.
- Gürol, Y., & Atsan, N. (2006). Entrepreneurial characteristics amongst university students: Some insights for entrepreneurship education and training in Turkey. *Education and Training*, 48(1), 25–38.
- Hayton, J. C., Zahra, G. G., & Zahra, S. A. (2002). National culture and entrepreneurship: A review of behavioral research. *Entrepreneurship Theory and Practice*, 26(4), 33–52.
- Henley, A. (2005). *From entrepreneurial aspiration to business start-up: Evidence from British longitudinal data.* (Swansea University, School of Business and Economics Working Paper SBE 2005/2).
- Hisrich, D. R. (1986). The woman entrepreneur: characteristics, skills, problems and prescriptions for success. In D. L. Sexton & R. W. Smilor (Eds.), *The art and science of entrepreneurship* (pp. 61–81). Cambridge: Ballinger.
- Hisrich, D. R., & Drnovsek, M. (2002). Entrepreneurship and small business research – a European perspective. *Journal of Small Business and Enterprise Development*, 9(2), 172–222.
- Hisrich, R., Peters, M., & Shepherd, D. (2005). *Entrepreneurship with OLC* (6th ed.). Illinois: McGraw Hill.
- Hisrich, D. R., Langan-Fox, J., & Grant, S. (2007). Entrepreneurship research and practice. A call to action for psychology. *American Psychologist*, 62(6), 575–589.
- Hjalager, A. (2007). Stages in the economic globalization of tourism. *Annals of Tourism Research*, 43(2), 437–457.
- Hofstede, G. (2003). *Culture's consequences, international differences in work related values.* Beverly Hills: Sage.
- Holmgren, C., & From, J. (2005). Taylorism of the mind: Entrepreneurship education from a perspective of educational research. *European Educational Research Journal*, 4(4), 382–390.
- Hornaday, J. A., & Vesper, K. H. (1981). Alumni perceptions of entrepreneurship courses after six to ten years. In D. Sexton & P. Van Auken (Eds.), *Entrepreneurship education.* Waco, TX: Baylor University.
- Jackson, D. (2007). *Jackson personality inventory – revised.* Goshen, NY: Research Psychologists Press.
- Johnson, P. S., Simon, C. P., & Wijbenga, F. (2006). Nascent entrepreneurship research: Achievements and opportunities. *Small Business Economics*, 27(1), 1–4.
- Kirby, D. A. (2005). Entrepreneurship education: Can business schools meet the challenge. In *Proceedings of the 2005 San Francisco-Silicon Valley Global Entrepreneurship Research Conference*, USA, pp. 173–193.
- Kluckhohn, F. R., & Strodtbeck, F. L. (1961). *Variations in value orientations.* Westport, CT: Greenwood Press.
- Koh, H. C. (1996). Testing hypotheses of entrepreneurial characteristics: A study of Hong Kong MBA students. *Journal of Managerial Psychology*, 11(3), 12–25.
- Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behavior. *Entrepreneurship and Regional Development*, 5, 315–330.
- Learned, K. E. (1992). What happened before the organization? A model of organization formation. *Entrepreneurship Theory and Practice*, 17(1), 39–48.
- Linan, F., Rodriguez-Cohard, J. C. & Rueda-Cantuche, J. M. (2005). Factors affecting entrepreneurial intention levels. *Paper presented at the 45th Congress of the European Regional Science Association*, Amsterdam.
- Llewellyn, D. J., & Wilson, K. M. (2003). The controversial role of personality traits in entrepreneurial psychology. *Education and Training*, 45(6), 341–345.

- Lorsch, J. W., & Morse, J. J. (1974). *Organizations and their members: A contingency approach*. New York: Harper & Row.
- Low, M. B., & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, 14, 139–161.
- Marsh, H. W. (1996). Positive and negative global self-esteem: A substantively meaningful distinction or artifacts? *Journal of Personality and Social Psychology*, 70, 810–819.
- Matthews, C. H., & Moser, S. B. (1996). A longitudinal investigation on the impact of family background and gender on interest in small firm ownership. *Journal of Small Business Management*, 34(2), 29–43.
- McGrath, R. G., MacMillan, I. C., & Scheinberg, S. (1992). Elitists, risk-takers, and rugged individualists? An exploratory analysis of cultural differences between entrepreneurs and non-entrepreneurs. *Journal of Business Venturing*, 7(2), 115–135.
- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132–152.
- Morris, M. H., Davis, D. L., & Allen, J. W. (1994). Fostering corporate entrepreneurship: Cross-cultural comparisons of the importance of Individualism versus Collectivism. *Journal of International Business Studies*, 25, 65–89.
- Morrison, A. (2000). Entrepreneurship: what triggers it? *International Journal of Entrepreneurial Behaviour and Research*, 6(2), 59–71.
- Mueller, S. L. (2004). Gender gaps in potential for entrepreneurship across countries and cultures. *Journal of Developmental Entrepreneurship*, 9(3), 199–220.
- Mueller, S. L., & Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16, 51–55.
- Peters, N. (2002). Mixed embeddedness: Does it really explain immigrant enterprise in Western Australia? *International Journal of Entrepreneurial Behaviour and Research*, 8(1/2), 32–53.
- Pillis, E., & Reardon, K. K. (2007). The influence of personality traits and persuasive messages on entrepreneurial intention: A cross-cultural comparison. *Career Development International*, 12(4), 382–396.
- Rauch, A., & Frese, M. (2000). Psychological approaches to entrepreneurial success. A general model and an overview of findings. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology* (pp. 101–142). Chichester: Wiley.
- Robinson, P. B., Stimpson, D. V., Huefner, J. C., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship Theory and Practice*, Summer, 13–31.
- Ronstadt, R. (1984). *Entrepreneurship: Text cases & notes*. Dover, MA: Lord.
- Ronstadt, R. (1985). The educated entrepreneurs: A new era of entrepreneurial education is beginning. *American Journal of Small Business*, Summer, 7–23.
- Rotter, J. B. (1966). Generalized expectations for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80(609), 1–28.
- Russell, R., & Faulkner, B. (2004). Entrepreneurship, chaos and the tourism area lifecycle. *Annals of Tourism Research*, 31(3), 556–579.
- Schumpeter, J. (1990). The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle. In M. Casson (Ed.), *Entrepreneurship* (pp. 105–134). Hants: Edward Elgar Pub. Ltd.
- Sexton, D. L. & Bowman-Upton, N. (1984). The effects of preexisting psychological characteristics on new venture initiations. *Paper presented to the Academy of Management*, USA.
- Sexton, D. L., & Bowman-Upton, N. (1990). Female and male entrepreneurs: Psychological characteristics and their role in gender-related discrimination. *Journal of Business Venturing*, 5, 29–36.
- Shane, S. (1993). Cultural influences on national rates of innovation. *Journal of Business Venturing*, 8, 59–73.
- Shapiro, A. (1980). Are business schools teaching business? *Inc.*, January, 13.

- Shook, C. L., Priem, R. L., & McGee, J. E. (2003). Venture creation and the enterprising individual: A review and synthesis. *Journal of Management*, 29(3), 379–399.
- Sivakumar, K., & Nakata, C. (2003). Designing global new product teams: Optimizing the effects of national culture on new product development. *International Marketing Review*, 20(4), 397–445.
- Smircich, L. (1983). Concepts of culture and organisational analysis. *Administrative Science Quarterly*, 28, 339–358.
- Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics*. New York: Harper Collins College Publishers.
- Thomas, A. S., & Mueller, S. L. (2000). A case for comparative entrepreneurship: Assessing the relevance of culture. *Journal of International Business Studies*, 31, 287–301.
- Tiessen, J. H. (1997). Individualism, collectivism, and entrepreneurship: A framework for international comparative research. *Journal of Business Venturing*, 12(5), 367–384.
- Timmons, J. A., Smollen, J. E., & Dingee, A. L. M. (1977). *New Venture Creation*. Irwin: Homewood, III.
- UNCTAD. (2008). *The importance of entrepreneurship*. <<http://www.unctad.org/Templates/Page.asp?intItemID=4320&lang=1>> Retrieved 12.03.09.
- Utsch, A., & Rauch, A. (2000). Innovativeness and initiative as mediators between achievement orientation and venture performance. *European Journal of Work and Organizational Psychology*, 9(1), 45–62.
- Vesper, K. H. (1983). *Entrepreneurship and national policy*. Chicago: Walter E. Heller International Corporation Institute for Small Business.
- Webber, L. (2007). *Firstborns more likely to become entrepreneurs*. <[http://www.inc.com/nes/articles/200712/oldest\\_Printer\\_Friendly.html](http://www.inc.com/nes/articles/200712/oldest_Printer_Friendly.html)> Retrieved 12.03.2009.
- Westerberg, M., Singh, J., & Hackner, E. (1997). Does the CEO matter? An empirical study of small of Swedish firms operating in turbulent environments. *Scandinavian Journal of Management*, 13(3), 251–270.
- Wilkins, A. L., & Ouchi, W. G. (1983). Efficient cultures: Exploring the relationship between culture and organizational performance. *Administrative Science Quarterly*, 28(3), 468–481.

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