
Innovativeness, Entrepreneurial Tendencies and Cultural Differences

Tiina Brandt, Haaga-Helia University of Applied Sciences, Finland
Isaac Wanasika, University of Northern Colorado, USA
Mikus Dubickis, RISEBA University of Applied Sciences, Latvia
Stephen Treacy, University College Cork, Ireland
Hanna Pihlajarinne, Tampere University of Applied Sciences, Finland
Rocco Acocella, University of Malta, Malta
Andreea Militaru, University Politehnica of Bucharest, Romania
Diederich Bakker, Hanze University of Applied Sciences, Netherlands
J. Liu, Hanze University of Applied Sciences, Netherlands
Rong Liu, Hubei University of Economics, China
Yukie Tsuzuki, Seijo University, Faculty of Social Innovation, Japan
Thu Vo, University of Applied Sciences Vaasa, Finland

The purpose of this study was to explore innovativeness and entrepreneurial tendencies among different national cultures. A survey instrument was administered on a sample of 731 business students from several countries in Asian, Baltic, USA, Nordic and Middle, South and East European countries. Respondents completed the questionnaire which focused on innovativeness and proactiveness as well as entrepreneurial risk-taking, growth and intention to start a business. Results indicated various statistically significant differences between cultures. The paper highlights country specific strategies for enhancing entrepreneurship.

Introduction

Entrepreneurs are regarded as inherently creative and innovative (Schumpeter; 1934). Consistent results show that a preference for innovation clearly differentiates entrepreneurs from managers (Carland & Carland, 1991; Stewart et al., 1999; Timmons, 1990). Managers tend to be more adaptive (Buttner & Gyskiewitz, 1993), and to be rewarded for their competence and efficiency (Schein, 1985) rather than for innovation and creative destruction (Schumpeter, 1934). More than eight decades later, Schumpeter's most of Schumpeter's insights are still relevant today. Recent studies have shown that unlike managers, the entrepreneurial mindset is characterized by a high propensity for risk, limited resources, and significant uncertainty that plays into their decision. On the other hand, innovation provides the means for entrepreneurial growth (Estrin et al., 2019)

Entrepreneurial career choices are impacted by entrepreneurial drive (Florin et al., 2007) and cultural values (Dahles, 2005). Culture has direct and indirect effects on different dimensions of entrepreneurship. Culture appears to play an important role in the business process, as cultural diversity can influence the predominant characteristics of entrepreneurship and thus moderate the effects of economic conditions on entrepreneurship (Jaén et al., 2017). Cultural values determine the degree to which a society views entrepreneurship as an attractive or unattractive professional outlet (Liñán et al., 2013). Thus, the level of entrepreneurship varies widely from country to country on the basis of culture (Hunt and Levie, 2003).

Studies on national culture have found interrelationships between national culture and entrepreneurship (Hofstede, 1980; 2000; House et al., 2004). The description of culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another" (Hofstede, 2001, p. 5), implies that cultural norms are manifested in individuals' values, norms, cognitions, motivations, beliefs and behaviors. Scholars have identified culture as a moderating factor in career choice to be an entrepreneur and start a new business (Moriano et al., 2012; Thornton et al., 2011), theory of planned behavior constructs (Hagger et al., 2007), and entrepreneurial intentions (García et al., 2018). Multiple studies have shown that country's culture has impact on students' entrepreneurial intentions (Liñán et al., 2013; Pruett et al. 2009; Sánchez, 2010; Varamäki et al., 2013).

Background

Innovativeness and entrepreneurial orientation

Psychological and personality characteristics have been shown to be predictors of innovativeness. While some believe it is possible for all individuals to be innovative, creating new ideas is just easier for some. In a business setting, a preference for innovation refers to a willingness and inclination towards experimentation and creativity when developing and introducing new products and services (Lumpkin & Dess, 2001). Innovation is also enacted proactively. Proactive individuals scan the environment for opportunities, show initiative, and persevere until they bring about change (Bateman & Crant, 1993).

Studies indicate that innovative persons are persistent (Hurt et al., 1977; Sandberg et al., 2013), self-confident, open to experience, original, independent and have tolerance for ambiguity (Barron & Harrington, 1981; George & Zhou, 2001; Patterson, 1999; West and Wallace, 1991). Innovators are also willing to change (Hurt et al., 1977), eager to try new ideas (Rogers & Shoemaker, 1971), and tend to advance problem solving (Scott & Bruce, 1994). Additionally, they have the ability to inspire others and build networks (Akrich et al., 2002). Regarding personality, studies have found a positive correlation between openness, extraversion, and creativity (Bender et al., 2013; Hughes et al., 2013).

Entrepreneurial orientation includes innovativeness, risk-taking, proactiveness, autonomy and competitive aggressiveness. It has been shown to influence firm performance, profitability, growth and product innovation in entrepreneurial firms (Avlontis & Salavou, 2007; Johan & Dean, 2003; Moreno & Casillas, 2008; Tang et al., 2008). Harris and Gibson (2008) found that personal control, innovation, self-esteem and achievement with respect to business involvement were correlated with intentions to become an entrepreneur (Harris and Gibson, 2008). Additionally, several studies indicate that past experience with family business is linked to stronger entrepreneurial attitudes (Harris & Gibson, 2008; Roberts & Robinson, 2010; Zampetakis et al., 2009).

Florin, Karri and Rossiter (2007) have studied student attitudes which promote entrepreneurship and found that innovation, nonconformity, proactive disposition, self-efficacy and achievement motivation are crucial in this regard. Other researchers studying students used a variety of measures for entrepreneurial attitudes that included a mixture of attitude and trait measures, often including items referencing risk-taking and innovativeness (Domke-Damonte et al., 2008; Langkamp-Bolton & Lane, 2011; Levenburg & Schwarz, 2008; Macko & Tyszka, 2009; Zampetakis et al., 2009) as well as proactivity (Langkamp-Bolton & Lane, 2011; Zampetakis et al., 2009). In addition to creativity and proactivity Zampetakis et al. (2009) found

that the emotional intelligence is connected to entrepreneurial wishes.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) (Ajzen, 1991) is one of the models in the study of entrepreneurial intent in different countries (Autio et al., 2001; González-Serrano et al., 2016; Krueger et al., 2000; Liñán and Fayolle, 2015; Moriano et al., 2012). Ajzen (1991) postulates that behavior is a function of beliefs that influence a certain behavior. These beliefs are considered important premises that determine 1) personal attitude, 2) intention and 3) perceived behavior control. Personal attitude is the favorable or unfavorable assessment that a person makes on the behavior in question. The second predictor of perceived behavior is a social factor referred to as subjective norms. Subjective norms refer to the perceived social pressure to perform or not perform a certain action from people in the immediate environment who exert that influence and pressure. The third antecedent of intention is the degree of perceived behavior control (PBC) over behavior, which is the perceived ease or difficulty of the subject in performing an action based on past experiences, as well as difficulties and obstacles perceived by the subject.

The more favorable the subjective norms and attitudes towards behavior, the greater the perceived degree of control of the individual, leading to a stronger intention to perform a certain behavior (Ajzen, 1991). However, one of the current unresolved issues is the role of subjective norms. Some research findings support a direct influence of subjective norms on the intentions to undertake a behavior, while others do not (Figueiredo and Liñán, 2017; Fayolle and Gailly, 2004; Krueger et al., 2000). Certain authors have found a direct influence of subjective norms through personal attitude and perceived control of behavior (Meek et al., 2010; Moriano et al., 2012).

Previous studies have used TPB to predict certain variables that are related to entrepreneurship. These variables include entrepreneurial intentions, entrepreneurial behavior and entrepreneurial skills and attitudes. Entrepreneurial skills and attitudes are necessary antecedents in the process of effective entrepreneurship. Skills and attitudes are developed through learning, experience and environmental factors. Intention plays a central role in TPB by connecting norms, attitudes and behavioral control with enacted behaviors. Entrepreneurial intention is the “self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future” (Thompson, 2009, p. 676). Entrepreneurial intention is the first step towards taking entrepreneurial action such as contemplating a startup. The second variable of interest is entrepreneurial behavior. Based on the TPB, intentions are correlated with behavior and also linked to behavioral control. Entrepreneurial behavior refers to entrepreneurial actions such as recognizing and exploiting

opportunities by reconfiguring existing and new resources in ways that create an advantage” (Zahra, 2005, p. 25). Entrepreneurial behavior is a necessary action that puts entrepreneurial intentions into play.

Culture

Previous studies have found associations between culture and entrepreneurship. Specific cultural dimensions are likely to strengthen or weaken the relationship between individual factors and entrepreneurial intent (Schlaegel and Engle, 2013). Looking at each of the relevant dimensions, we can identify theoretical and empirical support for this assertion. Commonly used cultural dimensions at research of entrepreneurship are four dimensions from Hofstede, which are power distance (PDI), individualism (IDV), masculinity (MAS) and uncertainty avoidance (UAI). Even Hofstede has defined six dimensions, these four have been noticed to play crucial role regarding entrepreneurship.

Power distance (PDI) dimension expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. Societies exhibiting a large degree of PDI accept a hierarchical order, control and obedience to those with power (Hofstede, 1980). Everybody has a place that needs no further justification. There are contradictory studies of power distance, some studies indicate that high PDI promotes entrepreneurial activity (Busenitz and Lau, 1996) whereas some that low PDI is connected to entrepreneurs (Mueller et al., 2002). Connection to risk-taking propensity in entrepreneurship is moderated by PDI according to Antoncic et al. (2018).

Individualism dimension (IDV) refers to societies that prefer a social framework in which individuals are expected to take care of themselves and their immediate families. On the other hand, collectivist societies take care of the larger extended family in exchange for loyalty. According to Hofstede (1980), IDV culture that emphasize “I” rather than “we” are more likely to demonstrate entrepreneurship. This is supported Lee and Peterson (2000) who found that countries with high levels of individualism develop a greater entrepreneurial spirit. Interestingly, Pinillos Costa and Reyes Recio (2007) also note that the entrepreneurial activity rate of a nation is positively associated with individualism when the country’s income level is high; however, when the level of income is low, collectivist culture predicts a high ratio of business creation. Additionally, Mueller et al. (2002) study indicates that entrepreneurs tend to have high IDV. High IDV is also related to venture-capital investments (Gantenbein, et al., 2019).

Uncertainty avoidance (UA) dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. High uncertainty avoidance implies that the society exhibits strong beliefs and norms of behavior and is uncomfortable with new ideas and the unknown. Studies have found a negative relationship between UA and different attributes of entrepreneurship such

as innovation (Shane, 1993), risk-taking (Kreiser et al., 2010) and early-stage entrepreneurship (Arrak et al., 2020). Accordingly, Mueller et al. (2002) find out that low UA was related to entrepreneurs.

Masculinity (MAS) represents a preference for achievement, heroism, assertiveness, and material rewards for success. MAS has also been associated with traditional male values such as compensation, recognition and career advancement (Hofstede et al., 2005). These traits are somewhat perceived to be necessary in entrepreneurship. Numerous studies found support for this perception (Heilman, 2001). However, recent studies have pointed to sociocultural biases (Pecis, 2016) and gender blindness in research may conceal the gendered nature of innovation processes (Dheer et al., 2019).

Thomas and Mueller (2000) conclude that cultural values such as individualism and uncertainty avoidance are significantly related to traits such as internal locus of control, risk taking, and innovativeness, which are associated with entrepreneurship. Some authors (Del Junco and Brás-dos-Santos, 2009) have emphasized that a country’s cultural and social values impact personal values of entrepreneurs. However, Hofstede et al. (2004) add a psychological perspective, stating that when individuals are dissatisfied, they tend to become self-employed even when the country’s culture of entrepreneurship is not favorable.

Triandis (2004) postulates that collectivists conceive behavior to be a result of external factors, such as norms and roles, while individualists relate it to leadership, high educational attainment and mobility on the social scale. According to Soares et al. (2007), this theory is useful for formulating hypotheses in comparative studies at an intercultural level. Based on previous studies between cultural dimensions and entrepreneurial activity, we are able to develop specific propositions. High individualism and high masculinity appear to be highly correlated to entrepreneurship. Power distance promotes certain aspects of entrepreneurial activity such as risk-taking. Low uncertainty avoidance is likely to be associated with entrepreneurship. Altogether, related to entrepreneurship are high masculinity, low uncertainty avoidance and high individualism.

Entrepreneurship and culture

Gonzales-Serrano et al. (2018) compared entrepreneurial attitudes of eastern and western parts of Europe comparing Lithuanian and Spanish students. Lithuanian students had higher predictor variables for entrepreneurship having higher entrepreneurial intentions and perceived behavior control as well as personal attitude compared to Spanish students.

Earlier studies indicate that Danish and Finnish people have very positive attitudes towards entrepreneurship (Amway Global Entrepreneurship Report, 2013), and the attribute is common among adults under 30 years. Generally, most Europeans tend to have more positive attitude towards

entrepreneurship than US nationals, but interestingly the entrepreneurial rate is higher in the US. Additionally, contrary to positive attitudes, the Finnish and Danish are among the least likely to become entrepreneurs. A possible speculation for this phenomenon is that only 37% of US nationals indicate fear of failure as an obstacle to becoming entrepreneurs, while in Europe the fear of failure factor is 73% (Amway Global Entrepreneurship Report, 2013).

In the US, small businesses and startups play an instrumental role in economic and cultural environments, and account for two-thirds of net employment (Dilger, 2018). A significant part of the US cultural heritage that has been linked to entrepreneurship includes the protestant work ethic, freedom and independence (Morris et al., 1994). Lee and Peterson (2000) found that weak uncertainty avoidance, low power-distance, masculinity, individualism, achievement orientation and universalism were conducive to entrepreneurship. Based on a US sample, Mueller and Thomas (2000) found evidence of high individualism and high uncertainty avoidance as being supportive to entrepreneurship. Finally, while comparing the US culture to nine other countries, McGrawth et al. (1992) concluded that regardless of culture, individualism, high power-distance, low uncertainty avoidance and masculinity were common attributes among entrepreneurs.

Methodology

Sample

Total sample represents 817 students, but not all of them completed background information. Thus, for country comparison we used sample of 731 business students whose background information was filled in. The data was gathered from various countries in university colleges during the 2020-2022 academic period. Completion of background information on gender, age and field of was voluntary. The most represented regions were Asian, Baltic and USA. Some respondents had lived in more than country for more than one year and were categorized as a separate group called "lived in many countries". Below is the breakdown of the sample by country/geographic area:

- Asian, China, n=180
- Asian, Japan, n=133
- Baltic, Latvia, Lithuania, n=103
- Lived in many countries, n=103
- USA, n=73
- Middle Europe (mostly Netherlands and Germany), n=52
- East Europe (Romania, Bulgaria), n=44
- Nordic, Finland, n=43
- All together= 731

We used factor analysis (Varimax rotation) to run the data and create dimensions of the questionnaires of

Innovativeness and Entrepreneurial tendencies. Statistical analyses were made with correlations and ANOVA. Tukey's-b post-hoc test was used to determine statistically significant differences between cultural clusters.

Innovativeness and proactiveness

Innovativeness and proactiveness were measured using established scales. Sixteen questions were used in the questionnaire (Langkamp-Bolton & Lane, 2011). Likert scale was 1-7 (1=Never or almost never to 7=Always or almost always). Factor analyses (Varimax) produced 8 items for both dimensions. Reliability was high for both Innovativeness and Proactiveness.

Innovativeness items included the following: "How often do you look for opportunities to improve things?", "How often do you wonder how things can be improved?", "How often do you create new ideas?". Cronbach's alpha for Innovativeness was 0.914.

Proactiveness items included the following: "How often do you try to convince people to support an innovative idea?", "How often do you put effort in the development of new things?", "How often do you make suggestions to improve current products or services?" Cronbach's alpha was 0.859.

Entrepreneurial intention

Entrepreneurial intention was measured with the following question: How likely is it that you will become an entrepreneur in the next 5 years? Scale was Likert-scale (1-5): 1= I will definitely not start a business... 5=I will definitely start the business.

Entrepreneurial tendencies

Entrepreneurial tendencies were measured with risk-taking and growth orientation with either or questions, e.g. security related risk: "a) Working for someone else the best thing is security or b) You do not need security related to working with others", success related risk: "a) Do you start working only with that kind of projects, whose success is relatively sure or b) If you want to succeed, you must take risks?"

Results

Innovativeness and entrepreneurial orientation

First, we looked at how Innovativeness, Risk@Growth orientation and Entrepreneurial intention correlated (see Table 1). Results showed that Innovativeness, Proactiveness and Innovativeness overall had statistically significant correlation with Risk@Growth orientation and also with Entrepreneurial intention. Though not a research question for this study, we can see that Risk@Growth orientation correlated with Entrepreneurial Intention.

Table 1. Correlations of Innovativeness, Risk and Growth Orientation and Intention to start a Business.

		Innov	Proact	Overall	Risk@Growth	Entrepre
Innovativ.	Pearson Corr	1	,743**	,916**	,251**	,347**
	Sig. (2-tailed)		,000	,000	,000	,000
	N	741	720	720	732	737
Proactiv.	Pearson Corr	,743**	1	,949**	,246**	,377**
	Sig. (2-tailed)	,000		,000	,000	,000
	N	741	720	720	732	737
Innovativ. Overall	Pearson Corr	,916**	,949**	1	,262**	,386**
	Sig. (2-tailed)	,000	,000		,000	,000
	N	741	720	720	732	737
Risk@Growth	Pearson Corr	,251**	,246**	,262**	1	,515**
	Sig. (2-tailed)	,000	,000	,000		,000
	N	741	720	720	732	737
Entrepren.Int	Pearson Corr	,347**	,377**	,386**	,515**	1
	Sig. (2-tailed)	,000	,000	,000	,000	
	N	741	720	720	732	737

** Correlation is significant at the 0.01 level (2-tailed).

Innovativeness and culture

Table 2. ANOVA table: Innovativeness and culture

		Sum of Squares	df	Mean Square	F	Sig.
Innovativeness	Between Groups	27,904	7	3,986	4,537	,000***
	Within Groups	620,293	706	,879		
	Total	648,196	713			
Proactiveness	Between Groups	49,276	7	7,039	4,951	,000***
	Within Groups	983,801	692	1,422		
	Total	1033,077	699			
Innovativeness overall	Between Groups	27,922	7	3,989	3,997	,000***
	Within Groups	684,591	686	,998		
	Total	712,513	693			

Table 2 presents ANOVA results of Innovativeness and culture, showing that there are statistically significant differences in every dimension. Culture impacts on both Innovativeness and Proactiveness.

The Post-Hoc Test (Tukey B) in Table 3 shows differences, with the lowest ratings given to Innovativeness by those respondents who live in the Middle and South

Europe and the highest ratings in Innovativeness were indicated by students who have Lived in Many Countries.

Table 3. Post hoc (Tukey B): Innovativeness and Culture

Cultural Regions	N	Subset for alpha = 0.05	
		1	2
Middle and South Europe	51	4,7510	
Aasia-Japan	130	4,7638	4,7638
Aasia China	178	4,8742	4,8742
USA	69	4,9072	4,9072
Baltic	102	5,2098	5,2098
Nordic	42	5,2190	5,2190
East Europe	43	5,2209	5,2209
Lived in many countries	99		5,2374

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 69,942.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

In the case of Proactiveness (Table 4), Post-hoc test shows that subjects who have Lived in Many Countries and China had the highest points; Japanese respondents gave the lowest ratings to Proactiveness.

Table 4. Post hoc (Tukey B): Proactiveness and Culture

Areas to chosen to study	N	Subset for alpha = 0.05	
		1	2
Aasia-Japan	127	4,0079	
Middle and south Europe	49	4,2472	4,2472
USA	70	4,5000	4,5000
East Europe and Russia	42	4,5185	4,5185
Nordic	40	4,5194	4,5194
Baltic	96	4,5556	4,5556
Aasia China	178		4,7129
Lived in many countries	98		4,7676

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 68,018.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

In case of the Innovativeness overall (the Table 5), Post-hoc test shows that the highest ratings were indicated by

respondents who have Lived in the Many Countries and the lowest points were given by Japanese respondents.

Table 5. Post hoc (Tukey B): Overall Innovativeness and Culture

Areas to chosen to study	N	Subset for alpha = 0.05	
		1	2
Aasia-Japan	126	4,3963	
Middle and south Europe	49	4,5205	4,5205
USA	67	4,6924	4,6924
Aasia China	178	4,7935	4,7935
East Europe and Russia	42	4,8604	4,8604
Nordic	39	4,8670	4,8670
Baltic	96	4,8866	4,8866
Lived in many countries	97		5,0031

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 67,190.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 6. ANOVA: Culture, Risk-and-Growth Orientation of Entrepreneurship

		Sum of Squares	df	Mean Square	F	Sig.
Risk@Growth	Between Groups	23,770	7	3,396	37,554	,000
	Within Groups	64,019	708	,090		
	Total	87,789	715			

Table 7. Post hoc (Tukey B): Culture and Risk-and-Growth Orientation of Entrepreneurship

Areas to chosen to study	N	Subset for alpha = 0.05		
		1	2	3
Asian-Japan	131	1,2576		
Aasia China	178		1,5646	
USA	70		1,6821	1,6821
Lived in many countries	97		1,6959	1,6959
Nordic	43			1,7267
Middle and south Europe	51			1,7451
East Europe and Russia	43			1,7616
Baltic	103			1,7961

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 70,376.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 6 shows ANOVA results of Risk@Growth orientation and cultural impact on Risk@Growth orientation, with statistically significant results.

Post hoc test (Table 7) shows that mostly Risk@Growth oriented in entrepreneurship was highest in the Baltics, Eastern Europe, Middle and South Europe and the Nordic region. The second was Lived in Many Countries, USA and China. The lowest were given by Japanese respondents.

Conclusion

The purpose of this study was to study innovativeness and entrepreneurial tendencies in relation to cultural differences. The sample represented 731 business students from several countries. The students filled a questionnaire which focused innovativeness and proactiveness as well as Entrepreneurial risk-taking, growth orientation and intention to start a business.

Results showed that Innovativeness and Proactiveness correlated statistically with Risk@Growth orientation and also with Entrepreneurial intention. Also, there was a high correlation between Risk@Growth orientation and Entrepreneurial intention. These results support earlier studies where innovativeness and risk orientation are connected to entrepreneurship (Estrin et al., 2019; Harris and Gibson, 2008).

The main target of this study was to investigate cultural differences between Innovativeness and Risk@Growth orientation. Culture impacts both Innovativeness and Proactiveness indicating that the lowest Innovativeness were respondents who live in the Middle and South Europe and the highest ratings were given by the students who have Lived in Many Countries. In case of Proactiveness, lowest ratings were given by Japanese respondents and highest by Lived in many countries and China. Japanese culture does not appreciate active and pushy behavior, and thus it may be a reason for low proactiveness. Students who have been at least one year abroad seem to be both Innovative and Proactive. It may be that those students have innovation and proactiveness tendencies in their character and those qualities are increased in new situations in the new country. Thus, it would be important for students to have possibilities to have new experiences in the new cultures, to increase their innovation and proactive side.

Concerning Risk@Growth the Japanese respondents had the lowest scores. It seems that Japanese culture endorses harmony and balance, and entrepreneurial behavior does not fit in very well. Baltic countries, East, Middle, South Europe and Nordic countries were most Risk@Growth oriented. Baltic countries have pushed intentionally towards entrepreneurship, and most of them have quite good social security system, creating a safety net for entrepreneurial risks.

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