Antecedents of Entrepreneurial Intentions: A Cross-Country Study of Northern Europe and the Danube Region

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Abstract

The increasing importance of entrepreneurship for flourishing economic progression, innovation and job creation have raised the concerns of decision makers and researchers for the investigation of the dynamics that could have an influence on the entrepreneurial activity levels. Indeed, transformations in entrepreneurship and entrepreneurial activity levels are considerable, persistent and distinctive in their history in different regions, particularly in Europe. This study extends Ajzen's (1991) theory of planned behavior by developing a highly integrated conceptual framework to analyze the entrepreneurial intentions by analyzing individualistic and collectivistic dimensions to entrepreneurship. This framework determines how both dimensions influence the entrepreneurial intentions. This incorporates the significant role of individualism and collectivism along with entrepreneurial capability, social status and social norms across European countries. The study analyzed the cross-cultural applicability of the proposed model across Northern Europe and the Danube Region by using Global Entrepreneurship Monitor (GEM) databases. Structural equation modeling is applied to overcome the limitations of past research studies. The study also provides practical implications for entrepreneurship academicians and policy makers. Specifically, developing awareness and knowledge about entrepreneurship would improve self-efficacy and ultimately entrepreneurial intentions.

Keywords

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Introduction

Entrepreneurial intention (EI) plays a major role in boosting entrepreneurial behavior.As a result, determining the formation of entrepreneurial intentions is essential (Sobel, & Clark, 2018). The role of entrepreneurship is increasingly becoming vital to an economy as it leads to the development of nations' economy and wellbeing of societies by upgrading economic efficiencies, creating more jobs and conveying advancement to the market; thus, it cannot be neglected (Iakovleva, Kolvereid, & Stephan, 2011). Historically, entrepreneurs have been considered as opportunistic risk-taking and resourceful individuals (Tajeddini & Mueller, 2009). Recently, there has been a huge debate on entrepreneurial characteristics as antecedent of entrepreneurial success (Gurol & Atsan, 2006; Hitt & Duane Ireland, 2017). Research studies on entrepreneurship have also focused on the traits perspective of individuals in recognizing latest opportunities, which others either do not identify or do not select to pursue (Mueller & Goic, 2002; Autio, George, & Alexy, 2011; Coduras, Clemente, & Ruiz, 2016). Despite the huge number of research studies on traits and attributes of individuals, national culture also plays an important role in defining the entrepreneurial intentions (Bouncken, Zagvozdina, Golze, & Mrozewska, 2009).

In literature, entrepreneurial intensions are recognized as one of the most reliable predictors of entrepreneurial behavior in relation to other elements (demographic and personality traits) and entrepreneurship is considered as an intentionally planned behavior. Consequently, within the field of entrepreneurship, cognitive research has achieved considerable fame and most of the focus is given to the intention models (Liñán, & Chen, 2009 Khursheed, A. et al., 2018). Thus, among key theories from the past, the theory of planned behavior (TPB) is widely recognized in the field of entrepreneurship. It is an extended form of the theory of reasoned action, with the inclusion of a new variable called perceived behavioral control (PBC). TPB is mainly used among different study areas and provides a substantial potential in the entrepreneurship field. The practical significance of TPB highlights that beliefs and perception-based intentions are learnable (Ajzen, 1991; Peterman & Kennedy, 2003).

Entrepreneurship has been widely studied among various

developing and transitional countries with the perspective of different cultural and social settings (Pang, 1999; Zahra, 1999; Tajeddini, & Mueller, 2012). Hofstede (1980) determines the cultural differences among various countries in view of four orientations: power distance, individualism–collectivism (I–C), uncertainty avoidance, and masculinity–femininity. Later, Franke, Hofstede, and Bond (1991) found a fifth dimension, i.e. long- versus short-term dimension. This study focuses on the cultural orientation by comparing individualistic and collectivistic countries and analyzes its relationship with entrepreneurial intentions. The advancement of research on culture was initiated empirically by investigating the various dimensions of culture. A huge number of research has been done in the field of management and culture (Bruton et al. 2008; Peterman & Kennedy, 2003; Zollo, Rialti, Ciappei, & Boccardi, 2018), and particularly in the subfields of entrepreneurship and culture (Sobel, & Clark, 2018; Collavo, 2018).

For the comparison of cultures across different countries, two key variables are used, namely individualism and collectivism as they help to determine how entrepreneurial activities are accomplished. Individualism explains tendencies to align actions and values toward competition, independence and ones' family, while collectivism describes the perception of being an interdependent member of a group with preference to act jointly for the group's interest (Campos et al., 2013; Pelikánová, 2019). Similarly, various theories are analyzed in the previous literature which highlighted that why certain countries can have greater entrepreneurial culture than others (Autio et al. 2001; Tkachev & Kolvereid, 1999). One of these studies explained that a country having greater proportion of entrepreneurial values will also be higher in terms of entrepreneurial intentions (Collavo, 2018). Therefore, it can be assumed that people having greater entrepreneurial spirit are more likely to start their own venture.

Several past studies in the area of entrepreneurship highlighted the significance of analyzing cognitive factors such as entrepreneurial intentions and motivation in order to explain the complicated process of startups by using the theory of planned behavior (Peterman & Kennedy, 2003; Coduras, Clemente, & Ruiz, 2016). Such kind of cognitive viewpoint is significant as it symbolizes the effort to

understand the development of new ventures and its underlying complex processes (Henry, Hill & Leitch, 2003). Although there have been improvements in these areas, there is still limited research related to the effect of culture on the entrepreneurship in general and the intentions of the entrepreneur in particular (Linan & Chen, 2009; Fisher, Maritz, & Lobo, 2014). Certainly, it can be expected that traditional beliefs enhance the existence of innovative cognition at an individual level as well as at societal levels (Hitt, & Duane Ireland, 2017; Mustafa, F. Khursheed, A. & Fatima, M. (2018). However, in spite of these stimulating research studies, there exist only a few hypothetically driven practical studies focusing on traditional aspects in entrepreneurial intention models (Gwartney, Stroup, Sobel, & Macpherson, 2018; Sobel, & Clark, 2018).

Prior research studies have found that the individualistic and collectivistic cultural orientations have a critical effect on the entrepreneurial intentions (Pelikánová, 2019; Liu, Ip & Liang, 2018). Researchers (Campos et al., 2013; Liu, Ip & Liang, 2018; Zollo, Rialti, Ciappei, & Boccardi, 2018) have also emphasized the significance of the relationship between entrepreneurial activity and cultural orientations. However, a research gap exists in terms of the in-depth analysis of the intentions of entrepreneurs from the northern Europe and Danube region by considering individualistic-collectivistic dimension. Therefore, from a cross-country viewpoint, this research fulfills the existing gap by comparing attitudes, norms and behavioral intentions of entrepreneurs from 18 European countries. This study aims to find the applicability of the proposed intention-based model for doing cross-country analysis and to examine the individualistic and collectivistic dimensions and their influence on the EI in northern Europe and the Danube region.

Research on entrepreneurship has gained significance as one of the most widely recognized subjects in the field of management (Bruton et al. 2008). The field of comparative cross-country entrepreneurial intentions is critically in need of theoretical improvements. In view of previous research studies, we found research gaps requiring further analysis to bring about further understanding of entrepreneurial intentions. Prior studies have highlighted the importance of considering prior experience, subjective norms, perceived behavioral

control and personal attitude for promoting entrepreneurial activities, and according to TPB, values shared within any culture affect the antecedents of entrepreneurial intentions.

There is an important exclusion when we predict the competition of regions and nations and the impact of entrepreneurship on innovation. To fill up this gap, this study aims to explore the influence of individualism/collectivism dimension along with the personal attitude, subjective norms and perceived behavioral control on the entrepreneurial intentions. Therefore, with a cross-country viewpoint, the study at hands compares the attitudes, norms and behavioral intentions of entrepreneurs from 18 European countries with an objective to find the applicability of the proposed intention-based model for the conduction of cross-country analysis, and to examine the traditional and novel factors and their influence on the EI in Northern Europe and the Danube Region. In this research, we also aim to improve some limitations of the past studies. Most of the past studies analyzed intentions via the application of the Theory of Planned Behaviour (TPB) with linear regression models (e.g., Autio et al. 2001; Tkachev & Kolvereid, 1999) in spite of the possibility of losing complex direct and indirect effects. Therefore, this study uses structural equation modeling (SEM) for more refined and robust testing.

Similarly, in order to determine the relationship between entrepreneurial traits and country culture, we compare entrepreneurial intentions in a group of European countries. European regions are important from theoretical and practical perspectives, as promoting entrepreneurship has become a significantly essential policy in the labour market of several European countries since the outbreak of economic crunch (European Commission, 2003). Different crucial steps have also been taken by European commission to enhance the entrepreneurial activities as part of its 2020 Action Strategy. At present, there is a noticeable progress in considering Europe as an area where entrepreneurial activities are widely improved (Hitt, & Duane Ireland, 2017).

Past studies have also discussed the role of key differences in entrepreneurial activities and entrepreneurship that are persistent and distinctive from their initial context in diverse nations and regions, specifically in Europe (Castaño et al., 2016; Saraiva & Gabriel, 2016).

Therefore, the objective of our study is to empirically assess and recognize the key elements of entrepreneurial intentions for 18 technology-driven European countries along with their cultural variances by using databases from Global Entrepreneurship Monitor (GEM). Moreover, the study is very effective in understanding the influence of several variables across different European countries and entrepreneurial intentions.

As a comparative study that considers 18 European countries and permits for a rigorous test of an intention framework in order to assist describing entrepreneurial intentions in diverse cultural backgrounds, this study offers practical suggestions for policymakers, researchers, and educators,. It could be more helpful for policymakers to comprehend not only the framework of associations among intention predecessors, but also its practical suggestions for developing entrepreneurial intentions and interventions. This study is important since legislators and academicians are getting progressively more dedicated to inspire more people to launch their own startups due to their significant advantages for the whole economy. The research questions of the study are: 1) What is the contribution of perceived behavioral control and subjective norms in developing the motivational intentions in entrepreneurs? 2) What is the role of subjective norms in forming the perceived behavioral control? 3) How prior experience contributes to developing entrepreneurial intentions and perceived behavioral control? 4) How do cultural variances influence the impact of perceived behavioral control and subjective norms on developing entrepreneurial intentions? 5) Do cultural variances significantly mediate the effect of subjective norms on the perceived behavioral control?

This study helps us to gain insights about the effects of different values and cultures on the entrepreneurial intentions. The research on the entrepreneurship in the context of institutional framework and culture has significance today not only because it assist entrepreneurs in fulfilling their personal needs but also due to the economic contribution of new startups. This study follows the holistic approach by proposing entrepreneurial intention model for analyzing the link between country culture, business acumen and entrepreneurial intentions across European countries.

Literature Review

1. Theoretical Framework

In view of TPB, three antecedents describe EI, namely subjective norms (SN), personal attitude (PA) and perceived behavioral control (PBC). The perceived behavioral control is the perception of an individual regarding the easiness and difficulty level of initiating and maintaining a business. Atkinson's (1964) theory of achievement motivation contains some components of PBC and it is considered as a supposed probability to flourish at performing a certain job. The theory of planned behavior is differentiated from the previous theory of reasoned action on the basis of its introduction of PBC (Ajzen, 1991). Several research studies in the area of perceived behavioral control are conducted by Bandura and his companions (Bandura, Adams, Hardy, & Howells, 1980; Bandura, 1981). In view of existing literature, the following hypothesis can be suggested:

H1: Perceived behavioral control affects entrepreneurial intentions.

Subjective norm (SN) defines the hypothetical social pressure or support to implement or not to implement an innovative activity. In view of entrepreneurship, personal attitude (PA) is the extent on which a person has a suitable or unsuitable valuation or acknowledgement of entrepreneurship (Linan & Chen, 2009; Kolvereid & Isaksen, 2006). Subjective norms refer to the degree to which friends, family, society and peers expect or influence a person to express the specific behavior (Autio et al., 1997). In the decision-making process of human behavior, the attitudes and behaviors of other people also perform a significant role (Venkatesh, 2000). The most common assumption about subjective norm suggests that most favorable subjective norm leads to more inclination to express that certain expected behavior (Yeon Kim & Chung, 2011). Likewise, studies also found a positive relationship between perceptions of subjective norms and behavioral intentions (Souiden & Pons, 2009; Byabashaija & Katono, 2011; Sukato & Elsey, 2009). Similarly, a study investigated the association between purchase intention and subjective norms. It found a highly positive and significant correlation between both constructs and revealed that attitudes and behaviors boost their worth in the eyes of consumers (Tajeddini, & Nikdavoodi, 2014).

H2: Subjective norms influence entrepreneurial intentions.

H3: Subjective norms affect perceived behavioral control

EI has been analyzed in past empirical studies and many of them proved that it is affected by various factors like SN, PBC, PA, and different cultural aspects. It is found that behavioral accomplishment is dependent on an individual's ability and motivation (Bae et al., 2014; Shinnar, Giacomin & Janssen, 2012; Linan & Chen, 2009; Hayton, George, & Zahra, 2002). Therefore, by considering the importance of TBP, this research implements the latest extensions in this theory. The study focuses on PBC, SN and the internal structure of EI antecedents. EI in our research study model represents the above-mentioned outcomes of the existing literature: the effects of SN and PBC on EI along with the effects of SN through its influence on PBC toward entrepreneurial intentions by assessing the influence of prior experience on intentions.

Generally, prior experience ranges from young entrepreneurs to well-established entrepreneurs with decades of experience (Baum & Locke, 2004; Barkham et al., 1996). Past studies revealed that prior experience is one of the main sources of learning and it significantly influences the preferences and behaviors of entrepreneurs (George, & Zahra, 2002; Linan & Chen, 2009). Research studies that investigated the relationship between prior experience of an individual and entrepreneurial behavior have adopted several perspectives. Some researchers have examined the impact of work context type on entrepreneurial attitudes toward risk (Kautonen et al., 2013; Vinogradov et al., 2013); others have examined how age as a life experience proxy might influence the development of intentions (Kautonen et al., 2013). In view of existing literature, the assessment of prior experience has been done mainly through the number of years worked or work classification, which has limited the assessment of prior experience in relation to entrepreneurial intentions (Baron, 2009). Thus, this study examines prior experience by introducing a factor – i.e. entrepreneurial capability – into the realm of entrepreneurial intentions, in order to get an in-depth analysis of an individual's entrepreneurial behavior.

H4: Prior experience affects perceived behavioral control.

H5: Prior experience affects entrepreneurial intentions.

Although each country has its own values, beliefs, norms, and culture that influence EI, researchers have not clarified this impact. Some research studies (Schröder & Schmitt-Rodermund, 2006; Bandura, 1986) also reported that observing others can influence a person's career choices. Hence, it is expected that role models and expectation of high social positions will also be considered as the most encouraging factors for young entrepreneurs. In this context, our study aims to empirically test what factors stimulate entrepreneurial intentions through H4 and H5.

2. Cultural Values and Developmental Aspects

Hofstede, (1980) defined cultural values as a set of shared beliefs, values, and probable behaviors. "Culture in various forms is depicted as a moderator of the relationship between contextual factors and entrepreneurial outcomes. The moderating role of culture highlights that national culture acts as a catalyst rather than a causal agent of entrepreneurial outcomes" (Hayton, George, & Zahra, 2002). In this study, traditional and developmental variations are analyzed across countries, which are depicted in Figure 1.

The significance of relationship between culture and entrepreneurship have also been highlighted by several past researchers, who used Hofstede's cultural aspects including masculinity, individualism, power-distance, and uncertainty avoidance for investigating the relationship between culture and entrepreneurial phases (Hofstede, 1980; Hayton, George, & Zahra, 2002; Reynolds, Bosma, Autio, Hunt, De Bono, Servais, et al. 2005). Entrepreneurship phases (aggregate and individual) were assumed to be stronger in those countries which are higher in individualism, with lower ranks in uncertainty avoidance and higher levels in masculinity (Shinnar, Giacomi & Janssen, 2012; Linan & Chen, 2009; Shane, Kolvereid & Westhead, 1991).

In this paper, attitudes, norms and behavioral intentions of entrepreneurs from 18 countries of Danube Region and northern Europe are analyzed. The countries from Northern Europe are: Denmark, Estonia, Finland, Ireland, Iceland, Latvia, Lithuania, Norway, Sweden and the United Kingdom. All these countries differ in terms of Hofstede's cultural dimensions. Latvia, Sweden, United Kingdom, Denmark, and Ireland have higher ranks in individualism

(more than 70) and low ranks in power-distance (lower than 45). Higher uncertainty avoidance is observed in Lithuania, Latvia, Estonia, Iceland, Finland, and Norway (over 50), with Sweden, United Kingdom, Denmark, and Ireland being in the lower end (lower than 40). Low levels of masculinity are found in Lithuania, Estonia, Latvia, Iceland, Finland, and Sweden (below 30), while the United Kingdom and Ireland are high in masculinity (over 60).

The eight countries falling in the Danube Region are the Czech Republic, Hungary, Slovenia, Bosnia and Herzegovina, Austria, Croatia, Romania, and Germany. These countries also vary in terms of Hofstede's cultural aspects. Higher levels of individualism are observed in Slovenia, Romania, and Croatia, while Germany and Hungary (above 60) and the Czech Republic and Austria are between 50 and 60 in individualism. Lower ranks in masculinity are observed in Romania, Slovenia, and Croatia (less than 40) and high levels in Hungary, Germany, and Austria (over 45). The levels of uncertainty avoidance are high in Hungary, Slovenia, Romania, the Czech Republic and Croatia (above 70) and lower in Germany and Austria (between 70 and 80).

In view of these cultural aspects, it can be inferred that all these countries are significantly different with regard to their cultural values for entrepreneurial ventures. However, a clear-cut map of countries in terms of entrepreneurship can surely not be developed. As we theorize later, in cultures with high ranks in individualism there exists less impact of subjective norms on EI and PA on entrepreneurial ventures and PBC in comparison to those countries with higher levels in collectivism (particularly Iceland, Estonia, and Lithuania). The following hypotheses are deduced from the existing literature.

H6a: Cultural variances significantly influence the impact of perceived behavioral control and subjective norms on entrepreneurial intents.

H6b: Cultural variances significantly influence the impact of subjective norms on the perceived behavioral control.

Considering the phases of economic development, economies can be classified into three categories of innovation-driven, efficiency driven, and factor-driven. The Global Competitiveness Report classifies all these levels of economic development on the basis of GDP per capita

and the portion of exports consisting of primary goods (Schwab, & Sala-i-Martin, 2011). According to this report, the northern countries of Denmark, Estonia, Iceland, Finland, Sweden, United Kingdom, Norway and Ireland are innovation-driven economies. On the other hand, Lithuania and Latvia fall in the transition stage from efficiency-driven economies to innovation-driven economies. Among the countries falling in the Danube Region; Slovenia, Germany and the Czech Republic are innovation-driven economies. Bosnia and Herzegovina and Romania are categorized as efficiency driven and Croatia and Hungary are classified in a transition state from efficiency to innovation-driven economies (Schwab, & Sala-i-Martin, 2011). In view of economic advancement, initial- stage entrepreneurial activities are often characterized by the Total Early-Stage Entrepreneurial Activity Rate (TEA). This represents the total number of people from 18 to 64 years of age, who are either a nascent entrepreneur or an owner manager (Amoros & Bosma, 2014).

Researchers have also claimed an extremely important relationship between economic advancement and rates of start-ups, and also have disclosed that TEA level declines due to increase in GDP per capita (Kelley, Bosma & Amorós, 2011; Linan & Chen, 2009). Therefore the GDP of a country, to some degree, assists in predicting successful entrepreneurial characteristics in early-stage start-ups. The GDP per capita of 18 European countries, Global Competitiveness Index, and TEA with EI rates provided by GEM are given in Table 1.
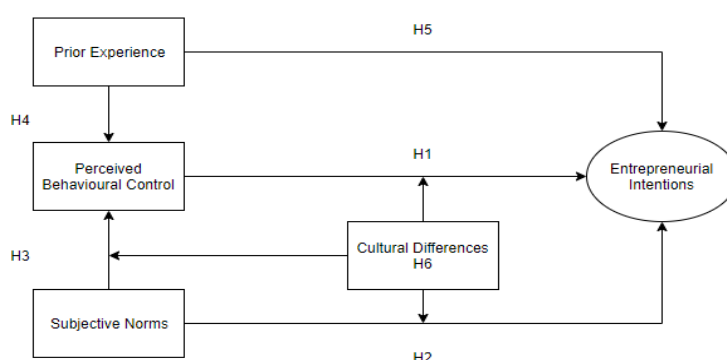
In view of the regional significance – derived from Hofstede's cultural aspects and the level of economic advancement – the selected 18 countries were classified into two subsamples: Subsample 1, comprising of Germany and Austria from the Danube Region and Sweden, Denmark, United Kingdom, Ireland, and Latvia from Northern Europe, representing the countries with the highest ranks in individualism. Subsample 2, comprising of Slovenia, Bosnia and Herzegovina, Romania, Hungary, the Czech Republic, and Croatia from the Danube Region and Norway, Finland, Iceland, Estonia and Lithuania from Northern Europe, representing the countries that have higher levels of collectivism. This directs us to propose the following conceptual framework.

Table 1. Total Early Stage Entrepreneurship Prevalence Rate (TEA), GDP per Capita (PPP), Global Competitiveness Index

Country	Entrepreneurial intention prevalence rates	Global Competitiveness Index	GDP per capita (PPP)	(TEA)
Northern Europe				
Sweden	8.10	7 (5.52)	53,442	7.29
United Kingdom	7.30	8 (5.51)	39,720	8.4
Finland	11.06	10 (5.49)	45,703	6.59
Norway	5.02	11 (5.40)	75,504	5.66
Denmark	7.02	12 (5.39)	56,307	5.47
Ireland	6.28	24 (5.16)	69,330	8.93
Iceland	16.11	28 (4.99)	70,056	7.97
Estonia	19.02	29 (4.58)	19,704	19.38
Lithuania	20.15	41 (4.58)	16,680	11.32
Latvia	18.07	54 (4.40)	15,504	14.15
The Danube Region				
Germany	7.22	5.65 (5)	44,469	5.28
Bosnia and Herzegovina	4.55	103 (3.87)	5,180	3.95
Austria	10.93	18 (5.25)	47,290	9.63
Slovenia	14.23	48 (4.48)	23,597	6.85
Croatia	17.54	74 (4.19)	13,294	8.91
The Czech Republic	13.73	31 (4.77)	20,368	7.33
Hungary	15.11	60 (4.33)	14,224	7.94
Romania	29.01	68 (4.28)	10,813	10.83

Source: Global Competitiveness report 2017–2018
Source: World Bank, Database, GDP per capita is calculated by using purchasing power parity (PPP) (current US dollar-2018)

Fig. 1. Conceptual Framework

Methodology

The review of the existing literature shows that country-based comparisons of entrepreneurship and culture have used different data analysis methods. In the past studies, qualitative research methodologies were used in some cases to analyze how real entrepreneurs achieve their goals (Coduras, Clemente, & Ruiz, 2016; Autio, George, & Alexy, 2011). In other studies, data was collected from the GEM full data sets, and some statistical instruments were used to identify the relationships between the entrepreneurial constructs (Henao-García, Arias-Pérez, & Lozada-Barahona, 2017; Yew Wong, 2005). Besides these, there are few studies in which authors have used individual quantitative questionnaires and methods for analyzing a specific group of people or a specific sector (Lent & Hackett, 1987; Nabi, Holden, & Walmsley, 2006). GEM uses questionnaire method for both the National Expert Survey (NES) and Adult Population Survey (APS). The questionnaires are available on the website of GEM consortium www.gemconsortium.org, including the information regarding the measurement and statistical calculation of the data.

This paper analyzes the entrepreneurial intentions and determines the influence of culture on developing these intentions across European countries. Therefore, we have used full data sets provided by the GEM consortium, GEM Global Reports and country profiles for the year 2013. In order to empirically evaluate and disclose the key factors determining entrepreneurial activity level we have used two databases from GEM. For the selection of European regions (Northern Europe and the Danube Region), the database of GEM 2018 is used. For the application of structural equation modeling, APS and NES data of selected countries from the GEM 2013 database is used, which comprised of approximately 2000 interviews conducted in each country. The respondents – representing a sample of the European adult population – were selected through a random sampling method in order to examine entrepreneurial intentions of PBC, SN and cultural variances across different countries.

The conceptual framework of the study comprises of important elements related to cultural differences in entrepreneurial activity and key contextual aspects. GEM reports consisting of the individual data on the attributes of 2013 have been considered as the main source of data regarding entrepreneurial activities and attitudes toward start-ups.

According to GEM framework, the process of entrepreneurship is comprised of various consecutive stages including EI stage, nascent, new (novel), recognized entrepreneurs (who are working for over three years) and the people who have withdrawn from entrepreneurial career. The data on the variables analyzed in this study were collected from the GEM 2013 adult population survey database and are explained with their measurements below.

- **Prior Experience (PE)**

Respondents were categorized as individuals having some experience in the field of entrepreneurship (new, nascent or recognized entrepreneurs). This factor is measured by designating 1 = individual having entrepreneurial prior experience, and 0 = non-entrepreneur.

According to TBP, Entrepreneurial Intention is identified based on a person's attitude toward a specific behavior, with SN and PBC being classified into external and internal control factors (Ajzen, 1991). External control refers to a person's value for the support or resistance he/she gets from the environment. On the other hand, internal control is equal to an individual's self-efficacy. In keeping this view, we comprised PBC into our research framework as two elements that estimate:

- **Entrepreneurial Capability**: Respondents were inquired as to whether they have the essential experience, knowledge and capability to start a business.
- **Fear of Failure**: Participants were inquired whether the fear of failure may stop them from starting their own entrepreneurial career.

Both variables were measured as binary variables (1 = Yes, 0 = No).

- **EI (Antecedents)**

SN and PBC are the predecessors of EI, are incorporated into the model to replace key variables as proxy variables, and are used with the intention of estimating an undetectable amount of influence (Trenkler & Stahlecker, 1996). Hence, in this research, cultural influence on EI is measured by assessing SN and PBC in view of the following two factors.

- **High social position:** Respondents were inquired whether they acknowledge that successful new entrepreneurs are recognized by their society (1 = Yes, 0 = No).

- **Entrepreneurial inspiration** (Role model or Idol): Respondents were inquired whether they knew an individual who started a business in the past two years (1 = Yes, 0 = No).

- **Entrepreneurial Intention (Dependent variable)**

The regressed variable in this paper is based on entrepreneurial intention rate (scale level variable). It is explained as the rate of prevalence of people falling in the population of working age people who intend to initiate their startups in the upcoming three years.

1. Sample Description

In this study, the samples selected for the representation of the target adult population were analyzed along with the weighting factors of respondents, including their age and gender, to meet (U.S.) Census International database. The characteristics of selected countries are shown in Table 2.

Table 2. Demographic variables of the selected European countries

Country	Sample size	Average age, in years	Number of females in the sample	Number of males in the sample
Subsample 1				
Austria	4,569	42.57	2,319	2,319
Germany	6,009	43.05	2,250	2,250
Sweden	4,258	38.52	2,904	2,904
United Kingdom	1,002	40.51	3,105	3,105
Denmark	1,558	43.52	2,158	2,158
Ireland	2,557	40.57	2,100	2,100
Latvia	2,895	42.87	522	522
Subsample 2				
Bosnia and Herzegovina	2,123	41.53	2,319	2,319
The Czech Republic	8,528	42.89	2,250	2,250
Slovenia	2,506	43.52	2,904	2,904
Croatia	2,304	42.89	3,105	3,105
Hungary	1,953	41.78	2,158	2,158
Romania	2,618	41.20	2,100	2,100
Finland	4,557	41.23	522	522
Norway	3,241	41.09	480	480
Iceland	1,529	40.58	666	666
Estonia	4,583	41.10	892	892
Lithuania	3,114	41.39	1,455	1,455

Source: Adult Population Survey - Global Entrepreneurship Monitor (GEM – 2013)

Table 3. Total country measures

Country	Idols/ Role Models	Entrepreneurial Capabilities	Entrepreneurial Prior experience	Fear of Failure	High Social Position in Society
Subsample 1					
Latvia	34.12	45.87	16.4	42.27	58.54
Ireland	36.74	39.65	18.2	39.62	81.88
Denmark	30.56	38.79	14.9	49.65	70.12
United Kingdom	31.54	51.64	18.0	35.85	75.06
Sweden	36.82	45.85	17.1	36.07	70.52
Germany	26.85	38.59	15.0	36.31	77.09
Austria	39.58	50.86	19.2	37.50	76.03
Subsample 2					
Bosnia and Herzegovina	35.51	52.45	18.5	27.16	65.64
The Czech Republic	24.52	47.51	17.2	43.90	48.57
Slovenia	40.51	52.58	13.8	31.79	73.42
Croatia	25.87	48.57	15.8	26.63	47.71
Hungary	27.95	39.51	19.2	43.17	71.00
Romania	29.51	46.85	17.9	46.97	73.68
Finland	21.87	48.92	13.5	37.55	83.00
Norway	20.54	46.23	14.8	41.53	47.85
Iceland	35.84	48.25	16.5	45.65	38.52
Estonia	40.52	45.96	12.8	31.76	64.74
Lithuania	39.98	51.32	17.0	41.68	52.89

Source: Adult Population Survey - Global Entrepreneurship Monitor (GEM-2013)

Table 3 represents the total country measures of the selected variables used in this research and analyzed at an individual level.

Data Analysis

In this study, data was examined using Warp PLS software while the hypotheses were tested using structural equation modeling (SEM). The structural equation modeling depicts a standard multivariate technique that facilitates a simultaneous study of multiple causal relationships between endogenous and exogenous variables. Moreover, PLS-SEM is applied to test existing theories and efficiently handles complex models through resolving the issue of multicollinearity among independent variables. PLS-SEM is one of

the robust techniques for resolving issues like missing data. It also ensures the validity and reliability of the outcome. Previous studies in this domain (Gorgievski, Ascalon, & Stephan, 2011; Lumpkin & Dess, 2001) used correlational analysis and linear regression rather than structural equation modeling (SEM), which ignores several key aspects of data measurement. Therefore, in this study we have used SEM-PLS. Linan and Chen (2009) also asserted that SEM provides more sophisticated explanation of the relationship patterns both for the measurement model (reliability and validity of indicators) and structural model (hypothesized relationships). SEM also allows analyzing complex relations between one or more predictor variables and one or more dependent variables, which can be either measured variables or factors (Tenenhaus, Vinzi, Chatelin & Yves-Marie, 2005). The hypotheses developed for this research study requires SEM.

The SEM model in this study is based on Bentler-Weeks method (Fidell, Tabachnick, Mestre, & Fidell, 2013). SEM assumes variables on the interval or ratio measurement level. Therefore, the study uses Warp PLS software that offers the most flexibility for SEM analysis with multiple latent dependents and independent constructs measured on different scales. The following model shows the matrix algebra equation of our study.

$$Y = \beta Y + TX + \text{\euro}$$

- Y = represents a vector of endogenous dependent constructs (vector n x 1)
- X = represents a vector of exogenous independent constructs (vector m x 1)
- B = represents a (n x n) matrix of regression coefficients between dependent constructs
- T = represents a (n x m) matrix of regression coefficients between independent and dependent constructs
- € = represents an (n x 1) error vector

For data analysis, SEM with a partial least square method is used (Iconaru, 2013; Brewer, Cinner, Henseler, & Sarstedt, 2012). For the model evaluation, we applied three tests of goodness fit: goodness-of-fit (GoF), average path coefficient (APC), and average adjusted R-square (AARS). In the goodness-of-fit (GoF) test, the value is small if it is equal

to or higher than 0.1, it is medium if it is equal to or higher than 0.25 and it is large if it is equal to or higher than 0.36 (Young, 1993). To test our hypothesis, we used path coefficients connected to the casual link in our model, level of significance ($p<0.05$) and standard error. The parametric t-tests are applied to analyze the subsets of countries.

1. Reliability and validity assessment of the latent constructs
At the initial level, we checked the validity of the four scales of our study and then used composite reliability to test the reliability of the scales. According to Nunnally (1978), a score greater than 0.7 is considered as reliable. In this study, the composite reliability values of all scales are found to be from 0.812 to 0.959. Hence, the scales are strongly reliable. The factor loadings and composite reliability of all scales are presented in Table 4.

Furthermore, the convergent validity is assessed through average variance extracted (AVE) which evaluates the amount of variance that a variable gets from its indicators due to measurement error, which is then compared to a certain cut-point (Chin, 1998). Generally, it is believed that a level greater than 0.5 represents adequate reliability. In the case of this article, all constructs have AVEs above the required level.

Results
A PLS model was analyzed and the results revealed that all our hypotheses were significant in the combined test, while a few were rejected in separate subsample tests. In view of combined and subsample results, both PBC factors are significant and the entrepreneurial capability is significantly and positively related to intentions. The fear of downfall shares a significantly negative influence on EI. Hence, our findings are consistent with past research studies which found that intentions decrease due to the fear of failure, the lack of self-confidence and necessary skills (Henderson & Robertson, 2000; Heckhausen, 2013; Caliendo et al., 2009). Thus, H1 is supported. The output further reveals that perceived strong social position and entrepreneurial inspiration statistically and positively influences EI. These findings are also supported by the existing literature, as Bosma et al. (2012) and Barnir (2011) revealed that role models are recognized as a strong variable which significantly influences the decision of occupation and career of an entrepreneur. Hence, H2 of our study is fully supported and the results are shown in Tables 5, 6 and 7.

In order to analyze the possible cultural country differences and the initial direct effect on EI, the study includes dummy country variables. The results showed that all dummy country variables are significant ($p < 0.05$), which confirmed that countries have significant cultural differences. Denmark is used as a reference country. In order to analyze the difference between European countries, two subsamples formed in view of their regional significance are analyzed in this study. The results are displayed in Table 6 and Table 7.

Table 4. Composite reliability, factor loadings and average variance extracted for the subjective norm, perceived behavioral control and entrepreneurial intentions

Variables and Items	Factor Loadings	Composite reliability	AVE
1. Subjective Norms		0.812	0.598
If I wanted to start my own business my family would support me	0.835		
If I wanted to start my own business my friends would support me	0.817		
If I wanted to start my own business my colleagues would support me	0.720		
2. Perceived Behavioral Control		0.905	0.602
I know the essential knowledge to start a business	0.801		
I can manage the formation process of a new company	0.795		
To start a company and maintaining it would be not difficult for me	0.731		
I am ready to start a sustainable company	0.679		
I know how to begin an entrepreneurial venture	0.686		
If I launched an entrepreneurial venture, I would have a high chance of success	0.668		
3. Entrepreneurial Intentions		0.959	0.705
I will try my best to start and manage my own company	0.856		
I have decided to launch a company in the future	0.895		
I have the strong intention to begin my own business someday	0.832		
My professional aim is to be a successful entrepreneur	0.887		
4. Cultural and Social Norms		0.855	0.701
Our national culture supports an individual success accomplished through own effort	0.815		
Our culture or society encourages entrepreneurship and risk-taking initiatives	0.781		
Our culture or society encourages innovativeness and creativity	0.811		
In our culture, the responsibility for dealing his or her own activities lies with the individual not on collective support	0.715		

Source: GEM Consortium website (2013), Adult Population Survey (APS - 2013) and National Expert Survey (NES - 2013)

Table 5. Path Coefficients (Estimated Values)

Hypotheses	Model group 1	Path coefficient	Expected relationship	Standard error	Significance level
H1	capability → intention	0.211	Positive	0.003	Less than 0.05
	fear → intention	-0.057	Negative	0.004	Less than 0.05
H2	social position → intention	0.025	Positive	0.004	Less than 0.05
	idol → intention	0.072	Positive	0.003	Less than 0.05
H3	social position → capability	0.069	Positive	0.004	Less than 0.05
	idol → capability	0.173	Positive	0.005	Less than 0.05
	social position → fear	-0.042	Negative	0.004	Less than 0.05
H4	prior experience → capability	0.202	Positive	0.004	Less than 0.05
H5	prior experience → intentions	0.123	Negative	0.004	Less than 0.05
	cultural variances→ (PBC→EI)	0.043	Positive	0.002	Less than 0.05
H6a	cultural variances→(SN→EI)	0.069	Positive	0.005	Less than 0.05
H6b	cultural variances→(SN→PBC)	0.022	Positive	0.005	Less than 0.05

Values of AARS = 0.087, $p < 0.05$; GoF = 0.350; APC = 0.072, $p < 0.05$
Source: Research results

Table 6. Path Coefficients (Estimated Values) – Subsample 1

Hypotheses	Model group 1	Path coefficient	Expected relationship	Standard error	Significance level
H1	capability → intention	0.101	Positive	0.009	Less than 0.05
	fear → intention	-0.029	Negative	0.011	Less than 0.05
H2	social position → intention	0.042	Positive	0.008	Less than 0.05
	idol → intention	0.176	Positive	0.007	Less than 0.05
H3	social position → capability	0.052	Positive	0.006	Less than 0.05
	idol → capability	0.114	Positive	0.004	Less than 0.05
	social position → fear	-0.028	Negative	0.009	Less than 0.05
H4	prior experience → capability	0.147	Positive	0.008	Not Significant
H5	prior experience → intentions	-0.057	Negative	0.005	Not Significant
H6a	cultural variances→ (PBC→EI)	0.043	Positive	0.002	Less than 0.05
	cultural variances→(SN→EI)	0.072	Positive	0.005	Less than 0.05
H6b	cultural variances→(SN→PBC)	0.058	Positive	0.005	Less than 0.05

Values of AARS = 0.084, $p < 0.05$; GoF = 0.362; APC = 0.082, $p < 0.05$
Source: Research Results

Table 7. Path Coefficients (Estimated Values) – Subsample 2

Hypotheses	Model group 1	Path coefficient	Expected relationship	Standard error	Significance level
H1	capability → intention	0.040	Positive	0.007	Less than 0.05
	fear → intention	-0.022	Negative	0.008	Less than 0.05
H2	social position → intention	0.023	Positive	0.007	Less than 0.05
	idol → intention	0.019	Positive	0.007	Less than 0.05
H3	social position → capability	0.050	Positive	0.007	Less than 0.05
	idol → capability	0.040	Positive	0.004	Less than 0.05
	social position → fear	-0.052	Negative	0.009	Less than 0.05
H4	prior experience → capability	0.048	Positive	0.009	Less than 0.05
H5	prior experience → intentions	-0.066	Negative	0.006	Less than 0.05
H6a	cultural variances→ (PBC→EI)	0.022	Positive	0.003	Less than 0.05
	cultural variances→(SN→EI)	0.066	Positive	0.004	Less than 0.05
H6b	cultural variances→(SN→PBC)	0.039	Positive	0.004	Less than 0.05

Values of AARS = 0.084, $p < 0.05$; GoF = 0.280; APC = 0.091, $p < 0.05$
Source: Research results

The findings revealed that social position and entrepreneurial inspiration have a significant positive relationship with entrepreneurial capabilities. As anticipated, a statistically significant and negative relationship is found between social position and fear of failure, confirming H3 of our study. The results of the combined sample test and subsample 2 showed a positive relationship between prior experience and the capability, and a negative relationship between prior experience and the fear of failure. However, the result of subsample 1 surprisingly showed that prior entrepreneurial experience did not have any relationship with entrepreneurial capabilities and fear of failure. A possible explanation for the absence of a strong direct relationship between the constructs comes from the fact that countries higher in individualism are generally found to have weaker and complex interpersonal skills in comparison to collectivist countries, which leads to difficulties in assessing individual experiences. The measurement of prior experience by considering the total number of

years limits the evaluation of prior experience impact on entrepreneurial intentions (Linan & Chen, 2009; Kautonen et al., 2013). Hence, H4 and H5 are rejected. This finding calls for future research for understanding the entrepreneurial prior experience in relation to intentions, particularly for the countries with higher ranks in individualism.

According to Table 5, 6 and 7, the value of GoF is found to be medium, ranging from 0.280 to 0.362. The average adjusted R-square and average path coefficients were found to be medium and significant ($p<0.05$). Overall, the results contributed to the existing findings by revealing a valuable outcome regarding the key factors modifying the future start-up intentions and their complex relationships with cultural dimensions.

Table 8. Comparison of path coefficients of two subsamples

Hypotheses	Model group 1	Path Coefficients (Subsample 1)	Path Coefficients (Subsample 2)	Difference	Significance Level
H1	capability → intention	0.101	0.040	0.061	Less than 0.05
	fear → intention	-0.029	-0.022	-0.007	Less than 0.05
H2	social position → intention	0.042	0.023	0.019	Less than 0.05
	idol → intention	0.176	0.019	0.157	Less than 0.05
H3	social position → capability	0.052	0.05	0.002	Less than 0.05
H6a	cultural variances→ (PBC→EI)	0.043	0.022	0.021	Less than 0.05
	cultural variances→(SN→EI)	0.072	0.066	0.006	Less than 0.05
H6b	cultural variances→(SN→PBC)	0.058	0.039	0.019	Less than 0.05

Sources: Research results

The results revealed that cultural differences significantly exist, and influence the impact of PBC and SN on EI and of SN on PBC. Thus, H6 is significantly supported. All values of the coefficient for differences are statistically significant at $p < 0.05$, as shown in Table 8 (only significant relationships in both sub-samples were analyzed). A

stronger relationship between the positive effects of entrepreneurial capability on EI is shown by subsample 1 in comparison to subsample 2. The reason might be that the countries included in subsample 2 are all weaker in individualism. Therefore, this finding reveals that individuals in countries with higher collectivism have stronger interpersonal skills and a unique set of learned business skills. This finding is also consistent with previous studies (Linan & Chen, 2009; Ajzen, 2001). Moreover, the fear of failure negatively influenced EI in both subsamples of the countries. The reason behind this finding may come from the fact that uncertainty avoidance represents the extent to which people have ambiguity for their future in society. Therefore, people with more ambiguity in their career may also have higher levels of fear of failure, which is depicted in both subsamples.

Similarly, several studies (Matthews & Moser, 1996; Schröder & Schmitt-Rodermund, 2006; Zapkau et al., 2015) claimed that an individual's career decisions are affected by observing others. Hence, entrepreneurial inspiration (idols/role models) and social position are generally perceived to positively affect the perceived feasibility and desirability of an individual's career decision. The results revealed that the entrepreneurial inspiration and the desire for high social status are stronger in subsample 1 in comparison to subsample 2.

Discussion and Implications

The outcome of this study has both theoretical and practical implications. The theoretical contribution is the integrated intention-based model, which was developed to analyze the entrepreneurial intentions. This model is developed from the theory of planned behavior used in the context of entrepreneurship, and incorporates critical antecedents of EI. Thus, this research is an empirical effort to provide an explanation regarding antecedents of intentions. The practical contribution of this paper regards the significant implications pointed out by the results. The results highlighted valuable insights for policymakers and educators with regard to different antecedents of entrepreneurial intentions.

Among different research areas, the theory of planned behavior (TPB) is a widely adopted model. Moreover, a huge number of research studies have tried to alter TPB by including new

entrepreneurial determinants. However, entrepreneurial traits are considered as the most crucial factors that include the information regarding the intention. Accordingly, this study attempts to analyze the impact of entrepreneurial key traits combined with cultural variances (individualism and collectivism) on the intentions by proposing an intention-based model. This aspect stands for theoretical significance of this study. The results indicate that the model of theory of planned behavior is supported through our sample of selected European countries. Moreover, the results reveal that formation of entrepreneurial intentions and cognitive factors are widely comparable in the Danube Region and the Northern Europe sub-samples. This strongly supports the cross-cultural applicability of the proposed model. Our study is theoretically important since intention is considered as the most significant antecedent of entrepreneurial behavior, and in order to analyze this behavior, the determination of certain key factors is essential. Consequently, this study offers a positive contribution to the existing literature.

This study supplements past research studies in three ways. First, the study confirms the significant influence of cultural variances (individualism and collectivism) on entrepreneurial intentions, specifically in those countries which enjoyed higher levels of collectivism. Second, in order to utilize the most reliable and updated data, the study analyzed data for cultural and social norms from the National Expert Survey (NES) (Glasner, Albiger, Buist, Tambić Andrašević, Canton, Carmeli, ... & Livermore, 2013) and the Adult Population Survey (APS) for entrepreneurial attributes. Thirdly, the study combined key components of the theory of planned behavior (TPB) into entrepreneurial intention model and proposed a GEM-based conceptual model. Our findings are also supported by the literature, in which significance of cultural differences, subjective norms and perceived behavioral control for shaping entrepreneurial intentions are highlighted (Krueger & Carsrud, 1993; Trenkler & Stahlecker, 1996; Solesvik, Westhead, & Matlay, 2014). The inclusion of entrepreneurial capability into the model (H1) extended the past related research (Liñán, 2008). This variable thus accounts for a valuable contribution to the study. Hence, the study achieved its

objectives by confirming the applicability of the developed intention-based model across 18 European countries.

In addition to theoretical implications, the study at hand offers some practical implications. The first implication is about the intention-based viewpoint of this paper. For the policy makers, the proposed intention-based model and its antecedents will be useful in reducing the perceived entrepreneurial barriers for students. As for changing behavior, it is crucial to change the intention first. Consequently, intention-based research studies are useful for academic practitioners. Furthermore, in view of TPB, both attitude and self-efficacy toward behavior can be learned and improved by entrepreneurial experience. Thus, courses with practical execution of entrepreneurial activities would be helpful in boosting entrepreneurial intentions. As it argued within TPB, the explorative power of practical experience is higher than indirect one. Moreover, since observation, too, can lead to the enhancement of self-efficacy, internships may also be useful in increasing entrepreneurial intentions. Similarly, since prior experience indirectly influences entrepreneurial intention, starting a new venture may also be facilitated by training of policymakers. In view of our findings, supporting the existing and new entrepreneurs will be beneficial for the enhancement of the entrepreneurial orientation.

Our findings also provide the future research studies with significant implications regarding the individualistic-collectivistic dimension. The first implication suggests exploring the impact of subjective norms and perceived behavioral control on shaping motivational intentions. Our results also reveal that subsample 2 is weaker in its entrepreneurial activities and perceived behavioral control. This presents policymakers with an opportunity to address the issue of promoting entrepreneurship across countries with cultural variances through positive entrepreneurial cognitions, especially in those countries that have lower ranks in individualism. The second key implication relates to the effect of entrepreneurial prior experience on PBC. For this purpose, regardless of the country, this study suggests that entrepreneurship educators and decision makers can take crucial steps to enhance the entrepreneurial awareness and knowledge across countries. For this purpose, it is important to send appropriate signals to highlight the significance of

choosing entrepreneurship as a career, which will ultimately enhance the perceived capacity for entrepreneurial venture creation. Thus, this study has significant academic and practical implications in the context of entrepreneurship and specifically for research studies on the theory of planned behavior.

Conclusion

The main objective of this study was to analyze the influence of different cultures and personality traits on the entrepreneurial intention model through a cross-cultural perspective. The study analyzed entrepreneurial key traits combined with cultural variances (individualism and collectivism) to determine how they may influence motivational antecedents of entrepreneurial intention. The majority of our hypotheses are supported by the results. Notably, the hypotheses were supported by the results of the tests for both the combined sample (H1, H2, H3 and H6) and each sub-sample with only two exceptions (H4 and H5).

Overall, the intention-based model seems objectively vigorous as it is appropriate to be applied to both the Danube Region and the Northern Europe region sub-samples, despite the significant cultural differences between these regions. The study explains intention in the light of its essential factors (entrepreneurial capability, prior experience, perception regarding the strong social position, fear of failure and entrepreneurial inspiration), recommending that the development of entrepreneurial intentions and cognitive factors are widely comparable in the Danube Region and the Northern Europe sub-samples. This strongly supports the cross-cultural applicability of the proposed model.

The influence of entrepreneurial capability was felt particularly on PBC, as might be anticipated, and on a smaller scale on SN. Furthermore, despite cultural differences, it was a major predictor of PBC, which recommended a consistent influence of fear of failure and entrepreneurial inspiration on entrepreneurial intentions. One of the major outcomes of the study revealed the significant role of cross-cultural variations in shaping intentions. Specifically, the influence of SN and PBC on intentions was significantly different. PBC and SN supported the Hofstede-based idea by showing its stronger influence

on intentions in the subsample 1 in comparison to subsample 2, a finding which is also in line with Bosma et al. (2008) and other similar works (Uslay et al., 2002). The higher uncertainty avoidance in subsample 2 suggests that entrepreneurial prior experience is not widely recognized and accepted in theoretical terms. This is collectively linked to a higher fear of failure in subsample 2, which may describe the reason for considering PBC as a weaker construct for explaining intentions in subsample 2. Overall, though, the results suggest a theory-driven justification for McGrath, MacMillan and Scheinberg's (1992) outcomes: The existence of higher similarities rather than differences in the formation of precursors of entrepreneurial intentions recommends a considerable degree of union of the pre-founding cognitive factors of entrepreneurs in Danube Region and the Northern Europe region. Our paper provides valuable knowledge for examining the development of entrepreneurial intentions with its antecedents in the European countries through a cross-cultural perspective.

Limitations and Future Research Directions

In view of the major findings of this paper, few limitations should be considered, with each being directed toward future research studies. Firstly, this paper examines entrepreneurial intentions within a narrow time frame, since it is a cross sectional analysis conducted across countries. The entrepreneurial intentions are not constant over time and in the face of varying economic situations. Therefore, it would be significant to conduct this analysis using a longitudinal time frame. Secondly, we recommend a co-citation research investigation on this topic in order to examine the pivotal research work in the field of entrepreneurship. Thirdly, it would be very interesting to determine the practical impact of entrepreneurial intentions in the creation of new startups by analyzing the real number of startups launched by nascent entrepreneurs.

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