Cross-Country Entrepreneurial Intentions Study: The Danube Region Perspective

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Abstract

In this article, we investigate how entrepreneurial intentions of individuals in the eight countries of the Danube region are shaped by different components of individuals' personal attitudes, the subjective norm and personal behavioral control. We analyze the internal structure of these components as well as some demographic and human capital factors. Cultural and developmental differences influencing variation in causal effects among variables in the model are analyzed. Structural equation modeling is used for data obtained by adult population surveys within the GEM research. Results of our study show that the entrepreneurial intention model is applicable across countries and that the internal effects among components of motivational antecedents exist, although not all hypothesized relationships are confirmed. Our study suggests that the process from perception to intention is similarly shaped across the eight countries

of the Danube region, although there are several differences in the magnitude of causal effects as well as differences regarding influential factors.

Keywords: entrepreneurial intentions, motivational antecedents, cultural and developmental differences, Danube region

JEL classification: L26

1 Introduction

Entrepreneurial intention (EI) research is an extensive and growing field of research. The theory of entrepreneurial event represents the beginnings of this research field (Shapero, 1984; Shapero and Sokol, 1982). Since the theory of planned behavior (TPB) (Ajzen, 1991; Bandura, 1982; Ajzen and Fishbein, 1980) was integrated into EI research, a vast number of models have been developed.

EI may be viewed as the first step in the process of venture creation and entrepreneurial activity. Entrepreneurship definitions in the literature differ – entrepreneurs, according to the Global Entrepreneurship Monitor (GEM), are defined as "adults, who are entrepreneurially active in the process of setting up a business they will (partly) own and/or are currently owning and managing an operating young business" (Reynolds et al., 2005: 209). An entrepreneurial experience, in a wider sense, includes a new-venture creation (whether growth-oriented or not), small businesses and micro enterprises that provide self-employment (Bhide, 2000), young and established businesses, creation of businesses and exits from entrepreneurship.

In case of absent EI, entrepreneurial action is unlikely (Lee and Wong, 2004). Hence, EI is crucial to the understanding of the overall process of entrepreneurship, since EI serves as the key initial conduit for subsequent actions and events that are related to organizational founding. According to the TPB (Ajzen, 1988; Ajzen, 1991), there are three antecedents to EI: personal attitude

toward behavior, subjective norm and perceived behavioral control. The actual entrepreneurial behavior depends also on several nonmotivational factors, such as the availability of opportunities and required funding (Ajzen, 1991; Douglas and Shepard, 2002).

EI is also shaped by culture. National culture consists of the underlying value systems that are specific to a group or a society and that motivate individuals to behave in a certain way (Hofstede, 1980). A great number of past researches also focus on the association between the level of entrepreneurial activity in the country and the level of development of that country's economic system. Many studies have explored EI, but from a cross-country point of view, this research field remains quite fragmented. An evident gap exists in studies of EI that would focus on regions, although some limited numbers of countries have been included in past research (Linan and Chen, 2009; Shinnar, Giacomin and Janssen, 2012). The present study contributes to narrowing this gap by focusing on the eight countries of the Danube region: Austria, Bosnia and Herzegovina, Croatia, the Czech Republic, Germany, Hungary, Romania, and Slovenia. These countries are historically quite different, but similar at the same time – some of them were also integral parts of the same states in the past. Their differences lie in Hofstede's cultural dimensions, regarding the Global Competitiveness Index and the GDP per capita based on purchasing power parity (PPP). They also differ regarding EI and the early-stage entrepreneurial activity levels, as well as several other aggregate measures that are used in the present research model at an individual level, with the purpose of contributing to the understanding of variations of EI in these countries.

Empirical analysis of early-stage entrepreneurship is often based on Global Entrepreneurship Monitor (GEM) research; GEM is a project carried out by a research consortium dedicated to understanding the relationship between entrepreneurship and national economic development (Reynolds et al., 2005). The GEM research database is also utilized in the present study.

The main purpose of this study is twofold: to establish the applicability of the model for cross-country analysis and to study the cultural and developmental factors and their effect on the EI in the Danube region.

2 Theoretical Background and Hypotheses

EI is usually defined as the desire of an individual to start a business or own one's own business (Bae et al., 2014). The beginnings of the EI research field may be traced back to the 1980s and the theory of entrepreneurial event (TEE) (Shapero, 1984; Shapero and Sokol, 1982). TEE suggests that persistence (inertia) shapes human behavior. Displacement of this inertia may take place after interruption due to some negative or positive event. It brings change to the individual's behavior based on a decision made which seeks the best opportunity out of the available set of alternatives.

This field of EI research has further increased by combining the TPB from social psychology (Ajzen, 1988; Ajzen, 1991; Bandura, 1982; Ajzen and Fishbein, 1980). According to this theory, EI indicates the intentions that the person will carry out entrepreneurial behavior.

A vast number of models in the field of EI research have been developed since then, which implemented perception and cognition into entrepreneurial behavior—the classical entrepreneurial potential model (Krueger and Carsrud, 1993). Krueger and Brazeal (1994) combined two dominant models of behavioral intentions, Ajzen's TPB (Ajzen, 1991) and Shapero's TEE models (Shapero, 1984; Shapero and Sokol, 1982), into the entrepreneurial potential model. Krueger, Reilly and Carsrud (2000) also compared the TPB and TEE models in terms of their ability to predict entrepreneurial behavior. They found that the results offered a strong statistical support for both models.

Additionally, an increasing number of studies based on the concept of EI have emerged, contributing to new applications and specifications as well as

to inconsistencies (Linan and Fayolle, 2015). Their in-depth research of EI publications, which was limited to journal articles from 2004–2013, revealed that there is a vast variety of main categories or issues which the publications address.

As Ajzen pointed out (Ajzen, 1991) antecedents must be assessed in relation to the particular behavior of interest. In the context of EI, *personal attitude toward start-up* (PA) refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of entrepreneurship. *Subjective norm* (SN) refers to the perceived social approval or pressure to perform or not to perform entrepreneurial behavior, while *perceived behavioral control* (PBC) refers to the perceived ease or difficulty of performing the entrepreneurial activity and the perception about the controllability of the behavior (Linan and Chen, 2009).

TPB considers that intentions describe a self-prediction to engage in a certain behavior. Many studies have supported the predictive validity of intentions on actual behavior (Sheeran, 2002). In general, the stronger the intention to engage in a behavior, the more likely the individual will actually perform; however, as Ajzen (1991) pointed out, the performance (actual behavior) also depends on several nonmotivational factors, like the availability to requisite opportunities and resources. Behavioral achievement therefore depends jointly on motivation (intention) and ability (behavioral control) – this idea is extremely important in the field of entrepreneurship. Douglas and Shepard (2002) stated that no actual entrepreneurship will occur without sufficient opportunities and the required funding, even in cases of the strongest EI.

EI has been studied in empirical analyses in the past, and several of them supported the applicability of TPB to entrepreneurship, despite some differences in the results between them (Autio et al., 2001; Linan and Chen, 2009; Shinnar, Giacomin and Janssen, 2012; Bae et al., 2014). Differences in results are at least partly due to measurement differences; some researchers used constructs (for example, Linan and Chen, 2009) and other single-item variables to describe the

three antecedents and EI. On the other hand, intentions were also measured differently; some studies used an unconditional measure of intentions (for example, Autio et al., 2001) and others used estimated likelihoods of EI (for example, Kolvereid and Isaksen, 2006).

Ajzen (1991: 189) reported that in the majority of empirical studies which utilized TPB from different fields, PA towards behavior, and PBC, were significant predictors of intentions, "while the results for subjective norm were mixed, with no clearly discernible pattern". A similar situation is found in the field of EI research, where several studies omitted the SN antecedent from the analysis and others revealed mixed findings regarding their effect on EI; Linan and Chen (2009) found that the main influence of SN in the TPB models is exerted through its effect on PA toward start-up and PBC, while the positive influence of SN on EI has not been confirmed.

Past behavior has been examined by several studies in the past, based on Ajzen's assumption (Ajzen, 1991: 202) that in the model, "past behavior is best treated not as a measure of habit but as a reflection of all factors that determine the behavior of interest" and that "if past behavior is found to have a significant residual effect beyond the predictor variables contained in the model, it would suggest the presence of other factors that have not been accounted for", reflecting therefore the influence of habit or other factors that are absent from the model. Past experience with a behavior is the most important source of information about behavioral control (Bandura, 1986). Quan (2012) identifies two types of EI, impulsive EI and deliberate EI, and shows that especially for deliberate EI, different types of prior experiences and active involvement in networks can be more important to potential entrepreneurs through helping them identify and configure various resources needed for subsequent entrepreneurial behaviors. Therefore, at least to some extent, past entrepreneurial experience may include the effect on EI that is not accounted for in other included factors.

The current study uses advances in the TPB; following the existing literature, we link the EI of individuals to variables describing several aspects of antecedents to EI. Our research, however, is limited by the availability of data, and we focused mainly on SN and PBC as described further in Chapter 3.1 of this article. The internal configuration of antecedents and EI in our research model reflects the above described findings in the literature: the influence PBC and SN on EI, as well as the influence of SN through its effect on PBA toward start-up intentions. Additionally, our model also incorporates past entrepreneurial experience (EE) as a factor that shapes one's anticipated impediments and obstacles and contributes to the formation of EI.

The following hypotheses are formed:

> *H1: Subjective norms influence entrepreneurial intentions.*
> *H2: Perceived behavioral control influences entrepreneurial intentions.*
> *H3: Entrepreneurial experiences influence entrepreneurial intentions.*
> *H4: Subjective norms influence perceived behavioral control.*
> *H5: Entrepreneurial experiences influence perceived behavioral control.*

Human capital and demographic variables have also proved to influence intentions and entrepreneurial behavior itself (Arenius and Minitti, 2005; Shinnar, Giacomin and Janssen, 2012). Linan and Chen (2009) linked age, gender and education variables with antecedents of intentions, but found that these variables had only a few significant effects on the antecedents of EI, and that they are small in magnitude. In fact, only the effect of gender on PA and on PBC has been observed – specifically, that being male had a positive influence. On the other hand, several studies have linked age, gender and education directly to dependent variables which describe entrepreneurial behavior, as we also did in the present research. Using logistic regression methodology, Arenius and De Clercq (2005) found that age and gender (being female) significantly negatively influenced opportunity recognitions, while positively influencing education; Arenius and Minitti (2005) similarly established that age and gender (being

female) are significantly negatively related and education is positively related to being a nascent entrepreneur.

Additional hypotheses were formed:

H6: Women express lower entrepreneurial intentions as compared to men.
H7: Older individuals express lower entrepreneurial intentions as compared to younger.
H8: Less educated individuals express lower entrepreneurial intentions as compared to more educated.

2.1 Cultural and Developmental Dimensions

Cultural and developmental differences were considered in the current study, as presented in Figure 1. According to Hofstede (Hofstede, 1980), culture is defined as the set of shared values, beliefs and expected behaviors. Thus, culture may motivate individuals in their engagements, which may differ from those in other societies. Several studies point to the moderating effect of culture on the relationship between the economic and institutional conditions on one side and entrepreneurship on the other (Hayton, George and Zahra, 2002: 45): "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".

Most researchers have followed Hofstede's cultural dimensions (Hofstede, 1980), power-distance, individualism, masculinity and uncertainty avoidance, when analyzing the association of entrepreneurship levels and culture characteristics. Entrepreneurship levels (on aggregate and individual levels) were hypothesized to be higher in cultures (in general) that are high in individualism, low in uncertainty avoidance and high in masculinity (Linan and Chen, 2009; Shinnar, Giacomin and Janssen, 2012). Mueller and Thomas (2000) found

that cultures high in individualism and uncertainty avoidance are supportive of entrepreneurship, while Shane, Kolvereid and Westhead (1991) reported on differences with variation in culture along the dimensions of individualism, power-distance and masculinity, to mention just a few of the previous studies. Although some studies used self-employment as a dependent variable, which may be quite different from entrepreneurial activity, it may be expected that a culture unfavorable to entrepreneurship may lead to lower entrepreneurial activity in the form of attempted start-ups, while supportive cultures, on the other hand, would lead to higher EI (Uhlaner and Thurik, 2007; Linan and Chen, 2009).

In this study, eight countries in the Danube region are considered: Austria, Bosnia and Herzegovina[1], Croatia, the Czech Republic, Germany, Hungary, Romania, and Slovenia. These countries are different regarding Hofstede's cultural dimensions. In Croatia, Romania, and Slovenia, high levels of power-distance (over 70) and low levels of individualism (below 35) are observed. High levels of individualism are, on the other hand, observed in Hungary and Germany (over 60) and in Austria and the Czech Republic (between 50 and 60). Uncertainty avoidance is high in Croatia, the Czech Republic, Hungary, Romania, and Slovenia (over 70) and lower in Austria and Germany (up to 70). Low levels of masculinity are found in Croatia, Romania, and Slovenia (below 45) and high levels in Austria, Hungary, and Germany (above 45). In terms of these four cultural dimensions, it can be concluded that countries are relatively different with regard to their cultural support for entrepreneurship, but a clear ranking of countries regarding their entrepreneurial support can certainly not be established. As we hypothesized later, cultures with higher levels of individualism in the society are expected to exert different (weaker) effects of subjective norms on EI, PA toward start-ups and PBC, as compared to more collectivistic countries (especially Croatia, Romania, and Slovenia). Linan and Chen (2009), when comparing Spain and Taiwan, showed that a high level of uncertainty avoidance is also expected to shape the effect of PBC on EI differently as compared to

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1   For Bosnia and Herzegovina, indices of cultural dimensions of society are not available.

societies where uncertainty avoidance is weak (in our study, especially Austria and Germany).

Other studies have focused on the viewpoint of economy development when researching the entrepreneurship level from the perspective of country difference. Economies, according to the phase of economic development, may be classified as factor-driven, efficiency-driven, and innovation-driven (Porter, 1990). These categories are included in the Global Competitiveness Report, which identifies these three phases of economic development based on GDP per capita and the share of exports comprising primary goods. The Global Competitiveness Report (Schwab and Sala-I-Martin, 2013) classifies Austria, the Czech Republic, Germany, and Slovenia as innovation-driven, Hungary and Croatia as in transition from efficiency-driven to innovation-driven and Bosnia and Herzegovina and Romania are classified as efficiency-driven economies.

In the context of economic development, early-stage entrepreneurship is often studied by the Total Early-Stage Entrepreneurial Activity Rate, which is defined as "the prevalence rate of individuals in the working age population who are actively (as owners and managers of firms) involved in business start-ups, either in the phase in advance of the birth of the firm (nascent entrepreneurs) or in the phase of spanning over 42 months after the birth of the firm (new entrepreneurs)" (Amoros and Bosma, 2014: 7), wherein the birth of a firm is considered as the time when a firm has been paying wages for more than three months. Based on GEM, researchers have reported that early-stage entrepreneurial activity in general declines as levels of GDP per capita increase, up to some point. This decline appears due to an increase in the availability of job opportunities as economies develop (Kelley, Bosma and Amorós, 2011). The cross-sectional analysis showed a U-shaped relationship between start-up rates of enterprise and levels of economic development (Wennekers et al., 2010). To some extent, then, the GDP per capita of a country allows us make predictions about the level (and type) of entrepreneurial activity likely to be prevalent in that country. With an increasing per capita income, a considerably large number of people find stable

employment within established enterprises that represent an alternative to being self-employed and bearing the risks of start-up firms. High-income countries are characterized by greater availability of resources and more affluent markets, which may stimulate an increase in opportunity-motivated entrepreneurship with lower levels of Total Early-Stage Entrepreneurial Activity Rates in general (Bosma et al., 2008). It can be considered that regarding these findings in the literature, Austria and Germany are especially expected to have relatively lower EI levels which are accompanied by lower entrepreneurship rates than other compared countries.

The Global Competitiveness Index and GDP per capita for the eight countries are presented in Table 1. Additionally, the Total Early-Stage Entrepreneurial Activity rates, as well as EI rates that are in GEM, defined as a prevalence rate of individuals in the working age population who intend to start a business in the next three years, are presented in Table 1.

Table 1: *Global Competitiveness Index, GDP Per Capita (PPP), Total Early-Stage Entrepreneurship Prevalence Rate and Entrepreneurial Intention Prevalence Rate*

Country	Global Competitiveness Index – overall 2013–2014 (rank)[a]	GDP per capita (PPP)[b]	Total early-stage entrepreneurship prevalence rate[c]	Entrepreneurial intention prevalence rate[c]
Austria	5.15 *(16)*	45,493	9.58	11.56
Bosnia and Herzegovina	4.02 *(87)*	9,536	10.34	25.24
Croatia	4.13 *(75)*	21,366	8.27	24.09
The Czech Republic	4.43 *(46)*	28,770	7.33	15.28
Germany	5.51 *(4)*	44,469	4.98	8.90
Hungary	4.20 *(63)*	23,482	9.68	17.35
Romania	4.13 *(76)*	18,991	10.13	26.82
Slovenia	4.25 *(62)*	28,996	6.45	14.68

[a] Source: Global Competitiveness report 2013–2014 (Schwab and Sala-I-Martin, 2013).

[b] Source: World Bank, International Comparison Program database: GDP per capita based on purchasing power parity (PPP) (current US dollar).

[c] For Austria, data refer to the year 2012 and for all other countries for 2013. Source: Global Entrepreneurship Monitor (GEM), Adult Population Surveys.
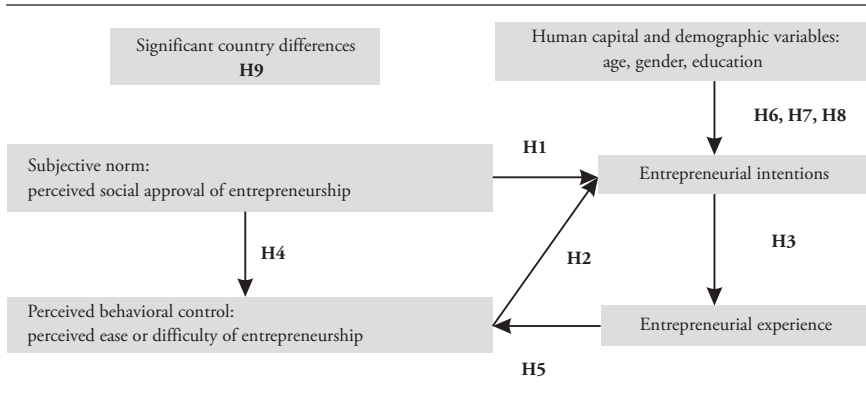
Based on the characteristics regarding cultural dimensions, the level and stage of economic development and historical legacy, the eight countries were divided into two groups: Group 1, consisting of Austria and Germany geographically representing the northern countries of the Danube region; and Group 2, consisting of Croatia, Bosnia and Herzegovina, the Czech Republic, Hungary, Romania, and Slovenia, geographically representing the Southeast countries.

Hypothesis H9 is formed:

H9: Significant country differences exist regarding the impact of subjective norms and perceived behavioral control on entrepreneurial intentions as well as regarding the subjective norms on perceived behavioral control.

A conceptual model of this research is presented by Figure 1.

Figure 1: *Conceptual Model*

Source: Authors.

3 Data and Methodology

This research is undertaken on representative samples of adult populations in the eight countries of the Danube region within GEM research. It was designed as a comprehensive assessment of the role of entrepreneurship in national economic

growth (Reynolds et al., 2005). The conceptual model includes a wide range of factors associated with national variations in entrepreneurial activity and major contextual features. Since 1999, GEM reports have been a key source of comparable data across countries on attitudes toward entrepreneurship, start-up and established business activities, and entrepreneurs' aspirations for their businesses.

GEM enables research and analyses of characteristics, relationships and dependencies at an individual level and on an aggregate country level. As conceptualized by the GEM research framework, the entrepreneurial process consists of several consecutive phases that are explored: EI phase, nascent, new and established entrepreneurs (established entrepreneurs are those who have been in existence for more than three and a half years), and the exit of individuals from entrepreneurial activity.

The variables and their measures which are included in the analysis are described in following paragraphs.

- *Dependent variable* is based on the *EI rate*. On a country level, this is defined as the prevalence rate of individuals in the working age population who intend to start a business in the next three years. On an individual level, this measure is a binary variable: an individual is assigned 1 if he/she intends to start a business in the next three years, 0 otherwise.

- *Age, gender and education variables* are:

  Age of an individual: in years.

  Gender is a binary variable: 0 for males and 1 for females.

  Education: since educational systems vary across countries, education was taken into account as a binary variable, having the value of 0 if an individual holds secondary degree or less and 1 if an individual holds a degree higher than a secondary degree. That is, we compared if those with levels of

education higher than secondary degrees were more or less likely to report future intentions for business start-up than those holding a secondary degree or less.

- *Antecedents of EI*

    SN and *PBC* antecedents of EI are included in the model by several variables intended to serve as proxy variables. Proxy variables in this study were used with the purpose of measuring an unobservable quantity of interest (Trenkler and Stahlecker, 1996), although the scarcity of comparable data brings several limitations.

    SN measures the perceived approval of the social environment for the decision to start up an entrepreneurial career. In the past, studies included this element differently (Kolvereid and Isaksen, 2006; Linan and Chen, 2009), while other studies omitted it (Krueger, 1993). SN depends on the expected societal support for entrepreneurship and the support of a role model or a mentor (Krueger, Reilly and Carsrud, 2000). Other entrepreneurs can function as role models and make entrepreneurship a more attractive career option for others. In this study, the measure of SN consists of two variables:

    – *High status in society:* respondents were asked whether they believed that successful new entrepreneurs had a high status and respect in the society in the country where they lived.

    – *Role models or mentors:* respondents were asked whether they personally knew someone who had started a business in the previous two years.

Both measures are binary variables (1 = Yes, 0 = No).

PBC refers to the perceived ease or the difficulty of performing entrepreneurial activity. This view is similar to Bandura's concept (1977, 1982) of perceived self-efficacy, which is "concerned with the judgments of how well one can execute courses of actions required to deal with prospective situations"

(Bandura, 1982: 122), but is different from Rotter's locus of control concept (Rotter, 1966). Locus of control is a generalized expectancy that remains stable across situations and forms of action, and PBC usually varies across situations and actions (Ajzen, 1991). From this point of view, we included PBC into the research model as two items measuring:

– *Confidence in one's skill:* respondents were asked if they believed to have the knowledge, skills and experiences required to start a business.

– *Fear of failure:* respondents were asked if a fear of failure would prevent them from starting a business.

Both measures are binary variables (1 = Yes, 0 = No).

• *Entrepreneurial past experience (EE).* Respondents were classified as individuals with past entrepreneurial experience (nascent, new or established entrepreneurs, or those who exited an entrepreneurial career in the past) or as non-entrepreneurs. This measure is also a binary variable: 1 = an individual with past EE, 0 = non-entrepreneur.

• *Sample Statistics*

The data used were collected within the 2013 GEM research cycle, except for Austria, which was collected in 2012. Representative samples of the adult populations were surveyed with respondents' weighting factors that take into account age and gender distribution of samples in order to match the standardized U.S. Census International Data Base. A detailed data collection design within GEM is reported by Reynolds et al. (2005). Sample characteristics are presented in Table 2.

Table 2: *Characteristics of National Samples*

Country	Sample size	Number of males in the sample	Number of females in the sample	Average age, in years
Austria	4,548	2,273	2,275	41.38
Bosnia and Herzegovina	2,004	1,020	984	40.52
Croatia	2,000	994	1,006	41.70
The Czech Republic	10,018	5,070	4,948	41.07
Germany	5,996	3,033	2,963	42.02
Hungary	2,000	995	1,015	40.96
Romania	2,021	1,004	1,017	40.10
Slovenia	2,002	1,028	974	41.28

Source: Global Entrepreneurship Monitor (GEM), Adult Population Surveys.

Aggregate country measures of variables used in this empirical study at the individual level are presented in Table 3.

Table 3: *Aggregate Country Measures, Adult Population Aged 18–65, in %*

Country	High social status	Role models	Entrep. skills	Fear of failure	Entrep. exper.
Austria	75.02	38.62	49.61	43.53	18.0
Bosnia and Herzegovina	71.92	33.67	50.50	39.47	17.4
Croatia	40.07	24.45	47.18	46.03	14.9
The Czech Republic	47.78	23.02	45.60	42.90	15.0
Germany	75.23	25.01	37.72	48.15	14.0
Hungary	74.91	28.01	37.50	47.80	18.1
Romania	72.67	28.31	45.87	45.98	16.8
Slovenia	68.10	39.30	51.50	41.98	12.9

Note: For Austria, data refer to the year 2012 and for all other countries to 2013.
Source: Global Entrepreneurship Monitor (GEM), Adult Population Surveys, 2013, 2012.

The structural equation modeling (SEM) technique allows for a set of complex relationships between one or more independent variables and one or more

dependent variables which can be either factors or measured variables (Tabachnick and Fidell, 2013). SEM proved to be an effective tool in the EI research models (Linan and Chen, 2009; Shinnar, Giacomin and Janssen, 2012). The hypotheses formed for this study require SEM.

One SEM model specification is the Bentler-Weeks method (Tabachnick and Fidell, 2013). This model, expressed in matrix algebra, is as follows:

$$\eta = B\eta + \Gamma\xi + \zeta$$

where

- η is a vector of endogenous dependent variables (vector m x 1);
- ξ is a vector of exogenous independent variables (vector k x 1);
- B is a (m x m) matrix of regression coefficients between dependent variables;
- Γ is a (m x k) matrix of regression coefficients between dependent and independent variables; and
- ζ is an (m x 1) error vector.

WarpPLS software was used to conduct the SEM by employing the partial least squares (PLS) method (Kock, 2013). To test the model, the following measures were applied: average path coefficient (APC), average adjusted R-square (AARS) and goodness-of-fit (GoF). Wetzels, Odekerken-Schroder and van Oppen (2009) proposed the following thresholds for the GoF: small if equal to or greater than 0.1, medium if equal to or greater than 0.25, and large if equal to or greater than 0.36.

For hypothesis testing, we used the path coefficient associated with a causal link in the model (β/γ), standard error and significance level ($p < 0.05$).

To test differences between the two subsets of countries, we used the parametric t-test.

3.1 Limitations

As already mentioned, GEM research provides a rich data source for international comparisons, which, on the other hand, limits the incorporation of a specific variable (or of different measurements of variables) into the standardized questionnaire, which is also an issue in the present research.

The dependent variable, EI, is, according to Ajzen (1991: 181), an "indicator of how hard people are willing to try or how much of an effort they are planning to exert" in order to perform entrepreneurial behavior. As already mentioned, EI has been measured differently in the past. Krueger (1993: 11) also used a dichotomous approach, using a yes/no variable with the question: "Do you think you'll ever start a business?" while others have used different approaches, such as an index of a few questions (Davidsson, 1995; Reitan, 1996), constructs (Linan and Chen, 2009; Autio et al., 2001) or estimated likelihoods of EI (Kolvereid and Isaksen, 2006). The dichotomous approach to EI measurement, although used in past research as well, represents the limitation of the present study, but it enables the analysis of the existence of EI, while not enabling the analysis of the strength of EI.

As already mentioned, due to limitations of the GEM data set, the effect of PA in the model was not possible to study. This certainly represents a limitation to the present study as well as possible future extensions of the research, as is also described in the conclusion of this paper. For the same reasons, the dichotomous proxy variables for SN and PBC were used in this study. Proxy variables are extremely important and frequently used in the social sciences because of the difficulty or impossibility of measuring quantities of interest (Trenkler and Stahlecker, 1996). GEM data has been commonly used in the past to study the venture creation process by utilizing the proxy variable approach, which has proven to be informative and interpretative by providing valuable information about the phenomena analyzed (De Clercq, Lim and Hoon Oh, 2013; Estrin, Korostelova and Mickiewicz, 2013; Arenius and Minniti, 2005; Hessels et al.,

2011). The multidimensional measures of SN and PBC, which limit the present study, represent a possible future extension of this research.

4 Results and Discussion

After processing the data, we found the majority of paths significant, as presented in Table 4, although small in magnitude. Results show that the perceived high social status of successful entrepreneurs does not have a significant impact on EI. As expected, role models' influence over EI is positive. These results are consistent with the results found in the literature. Role models and being part of networks reduce uncertainty and provide information about entrepreneurship. According to Bosma et al. (2012), role models are increasingly identified as a factor which has an influence on the choice of occupation and career. Some studies found a weak role for SN or found subjective norm to be even nonsignificant (Autio et al., 2001; Krueger, Reilly and Carsrud, 2000), while some studies simply omitted it. On the other hand, Linan and Chen (2009) showed that the role of SN in determining EI may be indirect, since SN may influence PA and PBC (we examine some aspects of these relations in H4). These results certainly call for further empirical research and H1 is only partly supported.

Both PBC variables are significant. As expected, confidence in one's skill is positively related to EI, while risk aversion is negatively related. Individuals face fears and doubts concerning entrepreneurial decisions, as well as EI, and it is therefore expected that risk aversion, expressed by the fear of failure, reduces the EI. This is also confirmed by our results. Reducing the perception of the likelihood of failure can increase the probability that an individual will start a new business (Weber and Milliam, 1997). Also, according to Henderson and Robertson (2000), EI may be limited due to doubts in one's own skills, necessary qualities for entrepreneurship, and the risk aversion attitude. H2 is therefore supported.

EE relates positively to future start-up intentions. EE, which was included into the model, follows the theory (Ajzen, 1991: 203) that "prior behavior has an impact of later behavior," since past behavior may be treated "as the reflection of all factors that determine the behavior of interest". Although there are doubts (Ajzen, 1991) as to whether the inclusion of the past behavior variable significantly improves the model, our results suggest that it is appropriate to include the variable in the model. H3 is supported.

Table 4: *Estimated Path Coefficients*

Hypotheses	Casual path	Expected sign	Path coefficient	Standard error	Significance
H1	status → intention	+	0.014	0.006	<0.01
	role model → intention	+	0.095	0.007	<0.01
H2	skill → intention	+	0.151	0.006	<0.01
	fear → intention	-	-0.040	0.005	<0.01
H3	experience → intention	+	0.099	0.006	<0.01
H4	status → skill	+	-0.053	0.005	<0.01
	role model → skill	+	0.166	0.005	<0.01
	status → fear	-	0.046	0.005	<0.01
	role model → fear	-	-0.064	0.006	<0.01
H5	experience → skill	+	0.282	0.005	<0.01
	experience → fear	-	-0.127	0.005	<0.01
H6	gender → intention	-	-0.039	0.005	<0.01
H7	age → intention	-	-0.176	0.005	<0.01
H8	education → intention	+	0.011	0.005	<0.01

Note: APC = 0.079, p < 0.001; AARS = 0.088, p < 0.001; GoF = 0.296.
Source: Authors' calculations.

Results regarding the formation of one's self-confidence in entrepreneurial skills are vague. While the positive influence of role models and prior entrepreneurial experience on self-confidence in possessing the necessary entrepreneurial skills is established, the perception of the high status of entrepreneurs in the society has a significant, yet negative influence on self-perception skills. These results are partly consistent with findings suggesting that SN has an impact on other

antecedents of EI (Linan and Chen, 2009), but the nature and magnitude of these impacts are not clearly revealed.

Fear of failure is negatively shaped (is diminishing) with the influence of role models and prior entrepreneurial experience as well as by perception of societal support for entrepreneurs, but the perception of the high status of entrepreneurs in the society significantly, yet positively, influences the fear of failure (increases it). We discuss this issue further when cultural and developmental aspects are analyzed, but H4 and H5, where subjective norms and entrepreneurial experience influence the perceived behavioral control, are supported.

Gender and age show a statistically significant negative relationship with EI prevalence, indicating that females are less likely than males to report start-up intentions in the following three years. These findings are consistent with findings in the literature showing that "entrepreneurship is a young man's game," (Arenius and Minniti, 2005: 238; Shinnar, Giacomin and Janssen, 2012); this obviously also holds true for EI. Education is positively related to the prevalence of EI. Therefore, H6, H7 and H8 are supported.

Country dummies have also been included (labeled Slovenia) to account for possible cultural country differences in order to initially identify the direct effect of these dummies on EI. All country dummies were significant (p < 0.01), indicating that significant cultural differences between the countries do exist. Slovenia is used as the reference country.

For the pooled model (Table 4), and for both subgroups of countries (Table 5 and Table 6), according to Wetzels, Odekerken-Schroder and van Oppen (2009), the medium GoF is between 0.290 and 0.315. On the other hand, the average path coefficients were small but significant (p < 0.001). The same holds true for AARS (p < 0.001) in the field of entrepreneurship. We are aware of limitations in the data, and thus the results, but nevertheless, valuable information about several factors shaping the future intentions for business start-up and their inner structure and relationships are obtained within this study. The low variance

explained is not an unusual result in empirical work in this field; for example, Arenius and De Clercq (2005) explain the low proportion of variance. They employed logistics regression when they analyzed a network-based approach on opportunity recognition; the Nagelkerke R square ranged from 0.9 percent to 6.8 percent for a single country and up to 18.7 percent for a pooled sample. Nevertheless, our result suggests further discussion and a need for future work. It is most likely that not all the important variables are included; limitations of the data availability were already discussed.

To study the differences between groups of countries, we ran two separate models for two subsamples of countries. Results are presented in Table 5 and Table 6.

Table 5: *Estimated Path Coefficients – Subsample of Germany and Austria (Group 1)*

Hypotheses	MODEL group1 Casual path	Expected sign	Path coefficient	Standard error	Significance
H1	status → intention	+	0.001	0.009	n.s.
	role model → intention	+	0.113	0.012	<0.01
H2	skill → intention	+	0.107	0.010	<0.01
	fear → intention	-	-0.051	0.009	<0.01
H3	experience → intention	+	0.137	0.012	<0.01
H4	status → skill	+	-0.043	0.009	<0.01
	role model → skill	+	0.151	0.009	<0.01
	status → fear	-	0.024	0.009	<0.01
	role model → fear	-	-0.046	0.009	<0.01
H5	experience → skill	+	0.335	0.008	<0.01
	experience → fear	-	-0.182	0.009	<0.01
H6	gender → intentions	-	-0.017	0.005	<0.01
H7	age → intentions	-	-0.141	0.007	<0.01
H8	education → intentions	+	0.045	0.008	<0.01

Note: APC = 0.099, p < 0.001; AARS = 0.099, p < 0.001; GoF = 0.315; n.s. – not significant.

Source: Authors' calculations.

Table 6: *Estimated Path Coefficients – Subsample of Bosnia and Herzegovina, Croatia, the Czech Republic, Hungary, Romania, and Slovenia (Group 2)*

Hypotheses	MODEL group 2 Casual path	Expected sign	Path coefficient	Standard error	Significance
H1	status → intention	+	0.025	0.007	<0.01
	role model → intention	+	0.089	0.007	<0.01
H2	skill → intention	+	0.177	0.008	<0.01
	fear → intention	-	-0.036	0.007	<0.01
H3	experience → intention	+	0.089	0.009	<0.01
H4	status → skill	+	-0.054	0.007	<0.01
	role model → skill	+	0.174	0.007	<0.01
	status → fear	-	0.042	0.008	<0.01
	role model → fear	-	-0.032	0.007	<0.01
H5	experience → skill	+	0.255	0.006	<0.01
	experience → fear	-	-0.099	0.007	<0.01
H6	gender → intentions	-	-0.044	0.007	<0.01
H7	age → intentions	-	-0.189	0.007	<0.01
H8	education → intentions	+	-0.006	0.008	n.s.

Note: APC = 0.094, p < 0.001; AARS = 0.084, p < 0.001; GoF = 0.290; n.s. – not significant.
Source: Authors' calculations.

Results of the testing of H9—which states that significant country differences exist regarding the impact of subjective norms and perceived behavioral control on entrepreneurial intentions, as well as regarding the subjective norms on perceived behavioral control—are presented in Table 7 (only significant relationships in both models were included into testing differences).

Table 7: *Comparison of Coefficients between the Two Groups of Countries – H9*

Casual path	Difference	Significance
role models → skill	-0.023	<0.01
role models → fear	-0.014	<0.01
skills → intentions	-0.070	<0.01
fear → intentions	-0.015	<0.01
role model → intentions	0.024	<0.01

Source: Authors' calculations.

We found support for H9; all coefficient differences are significant (p < 0.001). A link to role models exerts a stronger positive effect over EI in Group 1 as compared to Group 2. Since Group 2 consists of countries with a lower regard for individualism, one would expect that individuals in collectivistic countries are more susceptible to the others' opinions (Ajzen, 2001), which is a relationship that has been supported by some empirical studies in the past (Linan and Chen, 2009). But the relationship between SN and EI in the literature is not at all clear. We found that the approval of "reference people" regarding the decision to pursue an entrepreneurial career has a significant positive impact on EI in both country groups, but the effect is relatively stronger in less collectivistic countries.

A possible explanation may also lie in the different relationship and the impact role models have on self-perceived entrepreneurial skills on the one hand, and the impact of self-perceived entrepreneurial skills on EI, on the other hand. The causal effect role models→skills as well as the effect of skills→intentions is stronger in Group 2. Together, both findings offer at least two possible explanations: firstly, entrepreneurial skills by individuals in Group 2 are self-perceived and evaluated much more optimistically as compared to Group 1; secondly, the link to role models seems to be much more important to perceived entrepreneurial capability for individuals in Group 1, which altogether results in a higher positive effect in the process of role models→skills→intentions in Group 2.

Fear of failure also shapes EI in an interesting way. Fear of failure is negatively related to EI in both groups of countries, but exerts a stronger effect in Austria and Germany, although the uncertainty avoidance index in these two countries is, on average, lower than in Group 2 countries. Uncertainty avoidance, described as the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity regarding the future (Hofstede, 1980), is very likely understood and felt differently by individuals in society if a certain level of social security in that society is not guaranteed. Regarding the development of economic systems and the impact of economic crisis, it can be concluded that there is not much room to avoid uncertainty in Group 2 countries. This is

also indicated by the fact that the necessity motive to enter entrepreneurship is present to a greater extent in countries in Group 2, where on average 2.5 percent of the adult population is included in early-stage entrepreneurial activity that is necessity-driven, while in Austria and Germany it is less than one percent (0.975 percent) (p < 0.001). Despite the higher degree of uncertainty avoidance in Group 2, fear of failure does not exert a stronger effect over EI as compared to countries in Group 1; entrepreneurship intentions of individuals in countries in Group 2 are, to a higher extent, more of the survival-type, where one has no other/better options.

Among the characteristics that influence the differences in the process of EI creation, we can very likely see differences in the level of economic development in the countries analyzed. Not only are the GDP per capita and the competitiveness index in Germany and Austria much higher, but the economic crisis has left a powerful mark as well. The new members have especially been significantly affected – all countries in Group 2 are new member countries (except Bosnia and Herzegovina, which is not an EU member state), and even more, they all bear the legacy of a socialist past. While Germany and Austria are better at dealing with the crisis with domestic demand-driven recovery and even expansion, countries in Group 2 are facing only slight recovery, mixed with uncertainty and a downward trend (European Commission, 2014).

5 Conclusions

The first important result of the study is that the entrepreneurial intentions model is applicable across countries: the results of this study confirm that motivational antecedents have a significant impact on entrepreneurial intentions. Effects of perceived behavioral control variables are significant and stable across all countries: confidence in entrepreneurial skills influences future start-up intentions positively while the fear of failure exerts a negative influence. Results regarding subjective norms were mixed. Perceived high social status of successful

entrepreneurs does not have a significant impact on entrepreneurial intentions. As expected, role models' influence over entrepreneurial intentions is positive. Results are consistent with the previous studies which also found a weak role of subjective norms or found the subjective norm to be even nonsignificant (Ajzen, 1991; Autio et al., 2001; Krueger, Reilly and Carsrud, 2000). Entrepreneurial experience exerts an important influence over entrepreneurial intentions. Results are again consistent with the findings in the literature, showing that a recent entrepreneurial exit increases the probability of undertaking an entrepreneurial activity (Hessels et al., 2011).

Next, the internal effects among components of motivational antecedents exist, although not all hypothesized relationships are confirmed. Structural equation modeling which was applied, allowed for the analysis of the internal structure of motivational antecedents. Results regarding subjective norms' influence on perceived behavioral control components are vague. The positive influence of role models and entrepreneurial experiences on self-confidence in possessing the necessary entrepreneurial skills is established. On the other hand, perceived desirability of an entrepreneurial career in the population and the perceived reputation, which successful entrepreneurs enjoy in the society have a significant, yet negative, influence on self-perceiving skills. Results regarding the other perceived behavioral control component—fear of failure—show that it is negatively shaped (is diminishing) by the influence of role models and prior entrepreneurial experience and by perception of societal support for entrepreneurs. The perception of the high status of entrepreneurs in society significantly and positively influences the fear of failure (it is increasing it).

Given the described discussion and taking into account the strategic priorities of the Danube region (European Commission, 2010), several policy implications can be established. Policy intervention in the economic process should take into account both conditions of the socio-economic system and individual characteristics (Audretsch et al., 2002). Policy measures which may influence key determinants in the decision-making process of an individual starting an

entrepreneurial career should be aimed at strengthening the perceived knowledge, skills and experiences for entrepreneurship and at lowering individuals' fear of failure. Regarding the importance of perceived entrepreneurial knowledge and skills for entrepreneurial intentions creation, it is important to link different forms of formal (at all educational levels) as well as informal entrepreneurial education and training with educational methods, which includes team project work in a real entrepreneurial environment.

Since the fear of failure is diminishing with the influence of role models, the strengthening of networking among entrepreneurs and future entrepreneurs aimed at fostering the entrepreneurial culture is very important, although preferences of individuals are difficult to influence (Audretsch et al., 2002). The social system that "punishes" every mistake and entrepreneurial failure is certainly not supportive.

The third important result of the study refers to the cultural and developmental factors in the entrepreneurial intentions process in the Danube region. Based on the characteristics regarding cultural dimensions (Hofstede, 1980), level and stage of economic development, and the historical legacy, eight countries were divided into two groups: Austria and Germany, geographically representing the northern countries of the Danube region; and Croatia, Bosnia and Herzegovina, the Czech Republic, Hungary, Romania, and Slovenia, geographically representing the Southeast countries. Overall, our study suggests that the process which studied the range from perceptions to entrepreneurial intentions is similarly shaped in the eight countries of the Danube region, although there are several differences in the magnitude of causal effects, as well as differences regarding influential factors.

The complexity of cultural patterns is not easy to cope with in the analysis, but the importance and role of culture and economic system characteristics for entrepreneurial intentions creation is obvious from our results. Different perceptions of one's control over the entrepreneurial process is probably

shaped by the circumstances and motives for entrepreneurial intentions and, later, entrepreneurial behavior. If the high levels of uncertainty associated with unemployment and very limited possibilities for stable employment in established firms are present in the economy, it is then very likely that a different "fear of failure" is perceived by individuals as compared with societies where a certain level of social security is guaranteed. In terms of these characteristics, Austria and Germany are quite different from Croatia, Bosnia and Herzegovina, Hungary, Romania, and Slovenia.

Although past studies have examined the differences in entrepreneurial intentions from a cross-cultural perspective (for example, Linan and Chen (2009) have focused their study on the differences between Taiwan and Spain, Shinnar, Giacomin and Janssen (2012) focused on China, the United States, and Belgium), our study contributes to a better understanding of how cultural differences and differences in socio-cultural factors shape entrepreneurial intentions as well as their antecedents in the Danube region.

In the past, cross-cultural studies have focused merely on two broad topics: the application of intentions models and the influence of institutional variables (Linan and Fayolle, 2015). One data source offering a rich basis for international comparisons is the GEM research project, which is limited with regard to the incorporation of specific variables into the standardized questionnaire. As we utilized the GEM APS from countries in the Danube region, we faced certain limitations due to scarcity and restraints regarding the GEM data. A proxy variables approach—which has commonly been used in the past for studying the venture creation process using GEM APS (De Clercq, Lim and Hoon Oh, 2013; Estrin, Korostelova and Mickiewicz, 2013; Arenius and Minniti, 2005; Hessels et al., 2011)—was therefore also utilized in the present study.

As already mentioned, options for studying personal attitudes toward start-ups are very limited within GEM. The eclectic theory of entrepreneurship claims that personal attitudes and preferences of individuals toward entrepreneurship

are, to a large extent, determined by cultural background and are difficult to modify, but also that entrepreneurship values and attitudes can be, at least to a small extent, shaped by the introduction of entrepreneurial elements into the educational system and by paying attention to entrepreneurship in the media (Audretsch et al., 2002). In the past, several studies have analyzed the impact of entrepreneurial education and training on entrepreneurial activity of individuals, from different viewpoints and regarding different educational levels (Ibrahim and Soufani, 2002; Hegarty, 2006; Oosterbeek, van Praag and Ijsselstein, 2010; Širec and Rebernik, 2011; European Commission, 2015). The entrepreneurial education indicators are not available within the GEM database used. But, instead of omitting the personal attitudes variable from the model, we could decide to include the proxy variable which covers at least some aspects of this issue: *media attention for entrepreneurship*. Namely, according to the social cognitive theory of mass communication, media communication has an impact on social attitudes and behavioral intentions (Bandura, 2001), which also includes personal attitudes toward entrepreneurial intentions. Therefore, it can be expected that the mass media in a country contributes to the entrepreneurial culture in that country. The positive impact has been observed in past studies: "The entrepreneurial culture in a country affects the personal attitude that individuals have towards entrepreneurship" (OECD, 2012: 110). Additionally, attitudes toward start-ups tap the perception of the personal desirability of performing behavior and one's outcome expectations (personal wealth, stress etc.) and their perceived probability of occurring (Krueger, Reilly and Carsrud, 2000). Also, Levie, Hart and Karim (2010: 3) reported that "media has an important role to play in raising the level of desirability and future intention to engage in entrepreneurship", although they also stressed the importance of initiatives designed to develop skills and capacity building, which can contribute to the translation of entrepreneurial intentions into entrepreneurial outcomes aimed at business start-ups. Therefore, this issue calls for future research.

Several extensions of this study are possible. In our study, we did not focus on institutional variables, but on the impact of macroeconomic characteristics of the countries, influencing the relationships among antecedents of entrepreneurial intentions and the likelihood of reporting entrepreneurial intentions—remaining to be something worth the study in the future. An important viewpoint would also include the analysis of strength of entrepreneurial intentions together with the analysis of the influential factors in the transformation process from intentions to actual behavior, since the general rule, as Ajzen (1991) pointed out, is that the stronger the intention to engage in a behavior, the more likely its performance should be.

There is no doubt that cultural environmental factors affect entrepreneurial behavior. Even if this was not examined in our study, we can assume that in the process where entrepreneurial intentions are transformed into real entrepreneurial behavior, different social environments act differently. Prior researches have argued that actual entrepreneurial behavior also depends on several nonmotivational factors, such as the availability of opportunities and required funding (Ajzen, 1991; Douglas and Shepard, 2002). We believe that it would be very important in future research to explore the impact of the perception of business opportunities in the environment on the formation of entrepreneurial intentions, not only on actual entrepreneurial behavior itself. GEM results indicate a low level of perception of business opportunities in European countries (excluding Scandinavia) (Amoros and Bosma, 2014). Should they be confirmed by future empirical research in different environments, findings that the perception of promising business opportunities contributes to the development of stronger entrepreneurial intentions is to be regarded as very important information, not only for economic policy makers, but also for other institutions, infrastructure and, of course, the educational system, which can improve the motivational antecedents of individuals.

Results of this study also show that economic policy makers have to understand that entrepreneurial activity is not just a matter of an individual and his or

her eventual amateur affection toward the entrepreneurial activity, risk and responsibility, but that it also remains their task to create the conditions for a successful business. Entrepreneurial activity is therefore not only the result of individual's skills, attitudes, and ambitions, but it is also to the same extent a result of the environment in which one lives and works.

Appendix

Acronyms and initialisms key:

EI: entrepreneurial intention

TPB: theory of planned behavior

GEM: Global Entrepreneurship Monitor

TEE: theory of entrepreneurial event

PA: personal attitude toward start-up

SN: subjective norm

PBC: perceived behavioral control

EE: entrepreneurial experience

PPP: GDP per capita based on purchasing power parity

SEM: structural equation modeling

PLS: partial least squares (method)

APC: average path coefficient

AARS: average adjusted R-square

GoF: goodness-of-fit

Literature

Ajzen, Icek, 1988, *Attitudes, Personality, and Behavior*, Milton-Keynes: Open University Press and Chicago, IL: Dorsey Press.

Ajzen, Icek, 1991, "The Theory of Planned Behavior", *Organizational Behavior and Human Decision Processes*, 50, pp. 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Ajzen, Icek and Martin Fishbein, 1980, *Understanding Attitudes and Predicting Social Behavior*, Englewood Cliffs, NJ: Prentice Hall.

Amoros, Jose Ernesto and Niels Bosma, 2014, *GEM, 2013 Global Report*, Babson Park, MA and Santiago, Chile: Babson College and Universidad del Desarrollo.

Arenius, Pia and Dirk De Clercq, 2005, "A Network-Based Approach on Opportunity Recognition", *Small Business Economics*, 24(3), pp. 249–265. https://doi.org/10.1007/s11187-005-1988-6

Arenius, Pia and Maria Minniti, 2005, "Perceptual Variables and Nascent Entrepreneurship", *Small Business Economics*, 24(3), pp. 233–247. https://doi.org/10.1007/s11187-005-1984-x

Audretsch, David, Roy Thurik, Ingrid Verheul and Sander Wennekers, 2002, "An Eclectic Theory of Entrepreneurship" in David Audretsch, Roy Thurik, Ingrid Verheul and Sander Wennekers, eds., *Entrepreneurship: Determinants and Policy in a European-US Comparison*, pp. 11–82, Boston/Dordrecht: Kluwer Academic Publishers.

Autio, Erkko, Robert H. Keeley, Magnus Klofsten, George G. C. Parker and Michael Hay, 2001, "Entrepreneurial Intent among Students in Scandinavia and in the USA", *Enterprise and Innovation Management Studies*, 2(2), pp. 145–160. https://doi.org/10.1080/14632440110094632

Bae, Tae Jun, Shanshan Qian, Chao Miao and James O. Fiet, 2014, "The Relationship between Entrepreneurship Education and EI: A Meta-Analytic Review", *Entrepreneurship Theory and Practice*, 38(2), pp. 217–254. https://doi.org/10.1111/etap.12095

Bandura, Albert, 1977, "Self-Efficacy: Toward a Unifying Theory of Behavioral Change", *Psychological Review*, 84(2), pp. 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Bandura, Albert, 1982, "The Assessment and Predictive Generality of Self-Percepts of Efficacy", *Journal of Behavior Therapy and Experimental Psychiatry*, 13(3), pp. 195–199. https://doi.org/10.1016/0005-7916(82)90004-0

Bandura, Albert, 1986, *Social Foundations of Thought and Action: A Social Cognitive Theory*, Englewood Cliffs, NJ: Prentice Hall.

Bandura, Albert, 2001, "Social Cognitive Theory of Mass Communication", *Media Psychology*, 3, pp. 265–299. https://doi.org/10.1207/S1532785XMEP0303_03

Bhide, Amar, 2000, *The Origin and Evolution of New Business*. New York, NY: Oxford University Press.

Bosma, Niels, Jolanda Hessels, Veronique Schutjens, Mirjam Van Praag and Ingrid Verheul, 2012, "Personality and Entrepreneurship and Role Models", *Journal of Economic Psychology*, 33(2), pp. 410–424. https://doi.org/10.1016/j.joep.2011.03.004

Bosma, Niels, Kent Jones, Erkko Autio and Jonathan Levie, 2008, *GEM 2007 Executive Report*, Babson Park, MA: Babson College, London Business School, and GERA.

Davidsson, Per, 1995, "Determinants of Entrepreneurial Intentions", paper presented at the "RENT IX Workshop in Entrepreneurial Research", organized by EIASM, the European Institute for Advanced Studies in Management, Piacenza, Italy, November 23–45.

De Clercq, Dirk, Dominic S. K. Lim and Chang Hoon Oh, 2013, "Individual-Level Resources and New Business Activity: The Contingent Role of Institutional Context", *Entrepreneurship Theory and Practice*, 37(2), pp. 303–330. https://doi.org/10.1111/j.1540-6520.2011.00470.x

Douglas, Evan and Dean Shepard, 2002, "Self-Employment as a Career Choice: Attitudes, EI and Utility Maximization", *Entrepreneurship Theory and Practice*, 26(3), pp. 81–90.

Estrin, Saul, Julia Korostelova and Tomasz Mickiewicz, 2013, "Which Institutions Encourage Entrepreneurial Growth Aspiration?", *Journal of Business Venturing*, 28(4), pp. 564–580. https://doi.org/10.1016/j.jbusvent.2012.05.001

European Commission, 2010, *European Union Strategy for the Danube Region*, Brussels: European Commission.

European Commission, 2014, *European Economic Forecast – Spring 2014*, Brussels: European Commission.

European Commission, 2015, *Entrepreneurship Education: A Road to Success*, Brussels: European Commission.

Hayton, C. James, Gerard George and Shaker A. Zahra, 2002, "National Culture and Entrepreneurship: A Review of Behavioral Research", *Entrepreneurship Theory and Practice*, 26(4), pp. 33–52.

Hegarty, Cecilia, 2006, "It's Not an Exact Science: Teaching Entrepreneurship in Northern Ireland", *Education + Training*, 48(5), pp. 322–335.

Henderson, Roger and Martyn Robertson, 2000, "Who Wants to be an Entrepreneur? Young Adult Attitudes to Entrepreneurship as a Career", *Career Development International*, 5(6), pp. 279–287.

Hessels, Jolanda, Isabel Grilo, Roy Thurik and Peter van der Zwan, 2011, "Entrepreneurial Exit and Entrepreneurial Engagement", *Journal of Evolutionary Economics*, 21(3), pp. 447–471. https://doi.org/10.1007/s00191-010-0190-4

Hofstede, Geert, 1980, *Culture's Consequences: International Differences in Work Related Values*, Beverly Hills, CA: Sage Publications.

Ibrahim, A. Bakr and Khaled Soufani, 2002, "Entrepreneurship Education and Training in Canada: A Critical Assessment", *Education + Training*, 44 (8/9), pp. 421–430.

Kelley, Donna, Niels Bosma and Jose Ernesto Amorós, 2011, *GEM, 2010 Global Report*, Babson Park, MA and Santiago, Chile: Babson College and Universidad del Desarrollo.

Kock, Ned, 2013, *WarpPLS 4.0 User Manual*, Laredo, TX: ScriptWarp Systems.

Kolvereid, Lars and Espen Isaksen, 2006, "New Business Start-Up and Subsequent Entry into Self-Employment", *Journal of Business Venturing*, 21(6), pp. 866–885. https://doi.org/10.1016/j.jbusvent.2005.06.008

Krueger, F. Norris, 1993, "The Impact of Prior Entrepreneurial Exposure on Perceptions of New Venture Feasibility and Desirability", *Entrepreneurship Theory and Practice*, 18(1), pp. 5–21.

Krueger, F. Norris and Deborah V. Brazeal, 1994, "Entrepreneurial Potential and Potential Entrepreneurs", *Entrepreneurship Theory and Practice*, 19(3), pp. 91–104.

Krueger, F. Norris and Alan I. Carsrud, 1993, "EI: Applying the Theory of Planned Behavior", *Entrepreneurship and Regional Development*, 5(4), pp. 315–330. https://doi.org/10.1080/08985629300000020

Krueger, F. Norris, Michael D. Reilly and Alan I. Carsrud, 2000, "Competing Models of EI", *Journal of Business Venturing*, 15(5–6), pp. 411–432. https://doi.org/10.1016/S0883-9026(98)00033-0

Lee, Soo Hoon and Poh Kam Wong, 2004, "An Exploratory Study of Technopreneurial Intentions: A Career Anchor Perspective", *Journal of Business Venturing*, 19(1), pp. 7–28. https://doi.org/10.1016/S0883-9026(02)00112-X

Levie, Jonathan, Mark Hart and Mohammed Shamsul Karim, 2010, *Impact of Media on EI and Actions*, Glasgow: University of Strathclyde and Birmingham: Aston Business School.

Linan, Francisco and Yi-Wen Chen, 2009, "Development and Cross-Cultural Application of a Specific Instrument to Measure EI", *Entrepreneurship Theory and Practice*, 33(3), pp. 593–617. https://doi.org/10.1111/j.1540-6520.2009.00318.x

Linan, Francisco and Alain Fayolle, 2015, "A Systematic Literature Review on EI: Citation, Thematic Analyses and Research Agenda", *International Entrepreneurship and Management Journal*, 11(4), pp. 907–933. https://doi.org/10.1007/s11365-015-0356-5

Mueller, L. Stephen and Anisya S. Thomas, 2000, "Culture and Entrepreneurial Potential: A Nine Country Study of Locus of Control and Innovativeness", *Journal of Business Venturing*, 16, pp. 51–75. https://doi.org/10.1016/S0883-9026(99)00039-7

OECD, 2012, "Culture: Entrepreneurial Perceptions and Attitudes", *Entrepreneurship at a Glance 2012*, OECD Publishing. http://dx.doi.org/10.1787/entrepreneur_aag-2012-26-en

Oosterbeek, Hessel, Mirjam van Praag and Auke Ijsselstein, 2010, "The Impact of Entrepreneurship Education on Entrepreneurship Skills and Motivation", *European Economic Review*, 54, pp. 442–454. https://doi.org/10.1016/j.euroecorev.2009.08.002

Porter, Michael, 1990, *The Competitive Advantage of Nations*, New York, NY: The Free Press. https://doi.org/10.1007/978-1-349-11336-1

Quan, Xiaohong, 2012, "Prior Experience, Social Network, and Levels of EI", *Management Research Review*, 35(10), pp. 945–957. https://doi.org/10.1108/01409171211272679

Reitan, Bjornar, 1996, "Entrepreneurial Intentions: A Combined Models Approach", paper presented at the conference "9th Nordic Small Business Research Conference" organized by the Research Centre of Bornholm, Lillehammer, Norway, May 29–31.

Reynolds, Paul, Niels Bosma, Erkko Autio, Steve Hunt, Natalie De Bono, Isabel Servais, Paloma Lopez-Garcia and Nancy Chin, 2005, "GEM: Data Collection Design and Implementation 1998–2003", *Small Business Economics*, 24(3), pp. 205–231. https://doi.org/10.1007/s11187-005-1980-1

Rotter, B. Julian, 1966, "Generalized Expectancies for Internal Versus External Control of Reinforcement", *Psychological Monographs*, 80(1), pp. 1–28. https://doi.org/10.1037/h0092976

Schwab, Klaus and Xavier Sala-I-Martin, 2013, *Competitiveness Report 2013–2014*, Geneva: World Economic Forum.

Shane, Scott, Lars Kolvereid and Paul Westhead, 1991, "An Exploratory Examination of the Reasons Leading to New Firm Formation Across Country and Gender", *Journal of Business Venturing*, 6, pp. 431–446. https://doi.org/10.1016/0883-9026(91)90029-D

Shapero, Albert, 1984, "The Entrepreneurial Event" in C.A. Kent, ed., *The Environment for Entrepreneurship*, pp. 21–40, Lexington, MA: Lexington Books.

Shapero, Albert and Lisa Sokol, 1982, "Social Dimension of Entrepreneurship" in C.A. Kent, D.L. Sexton, K.H. Vasper, eds., *Encyclopedia of Entrepreneurship*, pp. 72–90, Englewood Cliffs, NJ: Prentice Hall.

Sheeran, Paschal, 2002, "Intention-Behavior Relations: A Conceptual and Empirical Review", *European Review of Social Psychology*, 12(1), pp. 1–36. https://doi.org/10.1080/14792772143000003

Shinnar, S. Rachel, Olivier Giacomin and Frank Janssen, 2012, "Entrepreneurial Perceptions and Intentions: The Role of Gender and Culture", *Entrepreneurship Theory and Practice*, 36(3), pp. 465–493. https://doi.org/10.1111/j.1540-6520.2012.00509.x

Širec, Karin and Miroslav Rebernik, 2011, "Izobraževanje za podjetnost in podjetništvo", *Didactica Slovenica*, 26(4), pp. 129–145.

Tabachnick, G. Barbara and Linda S. Fidell, 2013, *Using Multivariate Statistics*, Northridge, CA: Pearson.

Trenkler, Goetz and Peter Stahlecker, 1996, "Dropping Variables Versus Use of Proxy Variables in Linear Regression", *Journal of Statistical Planning and Inference*, 50(1), pp. 65–75. https://doi.org/10.1016/0378-3758(95)00045-3

Uhlaner, Lorraine and Roy Thurik, 2007, "Postmaterialism Influencing Total Entrepreneurial Activity Across Nations", *Journal of Evolutionary Economics*, 17(2), pp. 161–185. https://doi.org/10.1007/s00191-006-0046-0

Weber, U. Elke and Richard A. Milliam, 1997, "Perceived Risk Attitudes: Relating Risk Perception to Risk Choice", *Management Science*, 43, pp. 123–144. https://doi.org/10.1287/mnsc.43.2.123

Wennekers, Sanders, Andre van Stel, Martin Carree and Roy Thurik, 2010, "The Relationship between Entrepreneurship and Economic Development: Is It U-Shaped?", *Entrepreneurship*, 6(3), pp. 167–237.

Wetzels, Martin, Gaby Odekerken-Schroder and Claudia van Oppen, 2009, "Using PLS Path Modeling for Assessing Hierarchical Construct Models: Guidelines and Empirical Illustration", *MIS Quarterly*, 33(1), pp. 177–195.