FROM ENTREPRENEURIAL INTENTION TO ACTION: CROSS-COUNTRIES EMPIRICAL EVIDENCES

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Abstract

As research on entrepreneurship matured, the activators and inhibitors of entrepreneurial intention has been widespread. However, the implementation of ideas and development of new innovative enterprises is more than intent. It requires action. Therefore, to clarify what is known about the intention of entrepreneurship and shed light on important issues that could help entrepreneurs and policy makers to develop a more comprehensive understanding of why some countries tend to be more entrepreneurial than others, the intent of this study is to use existing theories and change the ratio of the fundamental variables. The main variables were compared directly using a probit model applied to a sample of 10,267 entrepreneurs from twenty-seven countries. The results of the study offer a different perspective from previous research in our understanding of entrepreneurship beyond the entrepreneurial intention and therefore, provides insight into the decision in creating new.

Keywords: Entrepreneurial action; entrepreneurship intention; business formation

Introduction

Entrepreneurship has been recognized has a stimuli to innovation, the revival of certain regions, economic growth, rejuvenation of productive structure, and employment (Pendiuc & Lis, 2013; Veit & Gonçalves, 2008; Verlegh, 2007).

Contrarily to the typical focus on intention, we focus our attention on actual entrepreneurial action. As stated by Shaver (2012), entrepreneurial action has various antecedents, both exogenous and endogenous to the entrepreneur, which compel the action itself. Following the suggestion for more "action" research, the present study explores entrepreneurial actions in Europe, North America, South America, Asia and Middle East.

The model links individuals' entrepreneurial antecedents and country factors to entrepreneurship initiative. To identify differences in entrepreneurial action we used a framework that considers: (i) theory of planned behavior (Ajzen, 1991), that suggests that individual attitudes, subjective norms (SNs), and perceived behavioral control (PBC) influence intentions, together with entrepreneurial event theory (Shapero & Sokol, 1982); and, (ii) the concept of entrepreneurship as a "generically social, a collective phenomenon" (Johannisson, 2000, p. 306[7]) that can´t be understood only through the attributes of individuals, and needs to consider exogenous context, such as the country where the opportunity occurs. The model is tested with a probit analysis.

This paper is structured as follows. In the first section we review the literature, in the second we define the empirical analysis, in the third section we explain the methodology, the

sample and measures used, and then present the major findings. The presentation of findings is followed by a discussion section highlighting the implications for theory and practice.

Literature Review

When looking at the plethora of studies on entrepreneurship it is possible to categorize most of them into three categories: the effect of entrepreneurship education on entrepreneurial propensity; what drives entrepreneurship intention; and what happens when entrepreneurs act. However, as Corbett and Katz (2012) recall, for a field defined by an action, it's surprisingly the reduce number of studies analyzing how they act.

Developing an intention venture into an entrepreneurial career can be the first step in the often long process of business creation. Several theories can be used when analyzing entrepreneurial intentions.

Looking at the different models and its applications in the entrepreneurial domain, the TPB has been shown to predict entrepreneurial intentions most consistently (Hajer & Habib, 2013; J. N. F. Krueger & Carsrud, 1993; Krueger Jr, Reilly, & Carsrud, 2000; Lee, Wong, Foo, & Leung, 2011; Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011).

Table 1 – Different theoretical approaches (1/2)

Authors	Theory	Variables	Country
Abebe (2012)	TPB	SN	United States
Ali, Lu, and Wang (2012)	EEM	PD, PF	Mixed
Almobaireek and Manolova (2012)	TPB/EEM	SN, PD, PF	Arab nations
Altinay, Madanoglu, Daniele, and Lashley (2012)	TPB/EEM†	ATB, PA	United Kingdom
Ang and Hong (2000)	EEM†	PA	Mixed
Autio, Keeley, Klofsten, Parker, and Hay (2001)	TPB	ATB, SN, PBC	Mixed
Basu (2010)	TPB	ATB, SN, PBC	United States
Borchers and Park (2010)	EEM†	ESE, PA	United States
Brännback, Krueger, Carsrud, and Elfving (2007)	EEM	PD, PF	Finland
Byabashaija and Katono (2011)	EEM	ESE, PD, PF	Uganda
Carr and Sequeira (2007)	TPB	ATB, SN, ESE	United States
Chen, Greene, and Crick (1998)	EEM†	ESE, PA	United States
Chowdhury, Shamsudin, and Ismail (2012)	TPB	ATB, SN, PBC	Various
Chuluunbaatar, Ottavia, and Kung (2011)	EEM	PD, PF	Mixed
Criaco (2012)	EEM	PD, PF	Mixed
De Clercq, Honig, and Martin (2013)	EEM	PD, PF	Canada
De Pillis and Reardon (2007)	TPB/EEM†	ATB, PA	Various
De Pillis and DeWitt (2008)	TPB/EEM†	ATB, PA	United States
Devonish, Alleyne, Charles-Soverall, Marshall, and Pounder (2010)	EEM	PD, PF	Barbados
Dohse and Walter (2010)	TPB	ATB, SN, PBC	Germany
Drennan and Saleh (2008)	TPB/EEM	SN, PD, PF	Bangladesh
Emin (2004)	TPB/EEM	SN, PD, PF	France
Engle et al. (2010)	TPB	ATB, SN, ESE	Various
Espíritu-Olmos and Sastre-Castillo (2012)	EEM†	PA	Spain
Ferreira, Raposo, Rodrigues, Dinis, and do Paço (2012)	EEM†	PA	Portugal
Fini, Grimaldi, Marzocchi, and Sobrero (2009)	TPB	ATB, SN, PBC	Italy
Fitzsimmons and Douglas (2011)	EEM	PD, PF	Mixed
Frank, Lueger, and Korunka (2007)	EEM†	PA	Austria
Garg, Matshediso, and Garg (2011)	EEM†	PA	Botswana
Gird and Bagraim (2008)	TPB	ATB, SN, PBC, PA	South Africa
Godsey and Sebora (2010)	EEM	PD, PF	United States
Goethner, Obschonka, Silbereisen, and Cantner (2009)	TPB	ATB, SN, PBC	Germany
Göksel and Belgin (2011)	EEM†	PA	Turkey
Griffiths, Kickul, and Carsrud (2009)	EEM	PD, PF	Mixed
Grundstén (2004)	TPB/EEM	SN, PD, PF	Finland
Gurel, Altinay, and Daniele (2010)	EEM†	PA	Various
Hack, Rettberg, and Witt (2008)	TPB	SN, PBC	Germany
Hmieleski and Corbett (2006)	EEM†	ESE, PA	United States
Hulsink and Rauch (2010)	TPB	ATB, SN, PBC	The Netherlands
Iakovleva, Kolvereid, and Stephan (2011)	TPB	ATB, SN, PBC	Mixed
Iakovleva and Kolvereid (2009)	EEM/TPB	ATB, SN, PBC, PD/PF	Russia
Izquierdo and Buelens (2011)	TPB	ATB, ESE	France
Katono, Heintze, and Byabashaija (2010)	TPB	ATB, SN, PBC	Uganda
Kautonen, Kibler, and Tornikoski (2010)	TPB	ATB, SN, PBC	Finland
Kennedy, Drennan, Renfrow, and Watson (2003)	TPB/EEM	SN, PD, PF	Australia
Kolvereid (1996)	TPB	ATB, SN, PBC	Norway
Kolvereid and Isaksen (2006)	TPB	ATB, SN, ESE	Norway
Kristiansen and Indarti (2004)	TPB/EEM†	ATB, ESE, PA	Various
Krueger (1993)	EEM	PD, PF, PA	United States
Krueger and Kickul (2006)	EEM	PD, PF	Mixed
Krueger et al. (2000)	TPB/EEM	ATB, SN, PD, PF	United States
Leffel and Darling (2009)	TPB	ATB, SN, PBC	United States
Lepoutre, Tilleuil, and Crijns (2011)	TPB/EEM	ATB, PD, PF	Belgium
Leroy, Maes, Sels, Debrulle, and Meuleman (2009)	TPB	ATB, SN, PBC	Belgium
Liñán and Chen (2006)	TPB	ATB, SN, PBC	Various
Lucas and Cooper (2012)	TPB/EEM	ESE, PD, PF	United Kingdom
Lüthje and Franke (2003)	TPB/EEM†	ATB, SN, PA	United States
Mokhtar and Zainuddin (2011)	TPB/EEM†	ATB, SN, PBC, PA	Malaysia
Moriano et al. (2012)	TPB	ATB, SN, ESE	Various
Mueller (2011)	TPB	ATB, SN, PBC	Mixed
Mushtaq, Hunjra, Niazi, Rehman, and Azam (2011)	TPB/EEM	SN, PD, PF	Pakistan
Nistorescu and Ogarcă (2011)	TPB	ATB, ESE	Rumania
Nwankwo, Kanu, Marire, Balogun, and Uhiara (2012)	TPB	ESE	Nigeria
Oruoch (2006)	TPB/EEM	SN, PD, PF	Kenya
Plant and Ren (2010)	TPB	SN, PBC	Mixed
Pruett, Shinnar, Toney, Llopis, and Fox (2009)	TPB	SN, ESE	Mixed
Rasheed and Rasheed (2003)	EEM†	PA	United States
Rittippant, Kokchang, Vanichkitpisan, and Chompoodang (2011)	TPB/EEM	ATB, SN, PBC, PD, PF	Thailand
Sánchez, Lanero, Villanueva, D'Almeida, and Yurrebaso (2007)	TPB/EEM†	ATB, ESE, PA	Spain

Table 1 – Different theoretical approaches (2/2)

Authors	Theory	Variables	Country
Santos and Liñán (2010)	TPB	ATB, SN, PBC	Mixed
Scherer, Brodzinski, and Wiebe (1991)	TPB/EEM†	ATB, ESE, PA	United States
Schwarz, Wdowiak, Almer-Jarz, and Breitenecker (2009)	TPB	ATB, SN	Austria
Segal, Borgia, and Schoenfeld (2005)	TPB/EEM	ESE, PD, PA	United States
Shiri, Mohammadi, and Hosseini (2012)	TPB/EEM	SN, PD	Iran
Shook and Bratianu (2010)	TPB/EEM	SN, ESE, PD, PF	Romania
Solesvik (2013)	TPB	ATB, SN, PBC	Ukraine
Solesvik et al. (2012)	TPB/EEM	ATB, SN, ESE, PBC, PD, PF	Ukraine
Souitaris, Zerbinati, and Al-Laham (2007)	TPB	ATB, SN, PBC	Mixed
Thompson (2009)	EEM†	PA	Various
Thun and Kelloway (2006)	TPB	SN, ESE	Canada
Tkachev and Kolvereid (1999)	TPB	ATB, SN, PBC	Russia
Urbig, Weitzel, Rosenkranz, and Witteloostuijn (2013)	EEM	ESE	The Netherlands
Van Gelderen et al. (2008)	TPB	ATB, SN, PBC	The Netherlands
Van Praag (2011)	EEM†	PA	The Netherlands
Varamäki, Tornikoski, Joensuu, Viljamaa, and Ristimäki (2011)	TPB	ATB, SN, PBC	Finland
Vazquez, Naghiu, Gutierrez, Lanero, and Garcia (2009)	EEM	ESE, PD, PF	Spain
Wagner (2011)	TPB	ATB	Various
Wagner (2012)	TPB	ATB	Germany
Wang, Wong, and Lu (2002)	TPB/EEM	ATB, ESE, PD, PF	Singapore
Wang, Lu, and Millington (2011)	EEM	PD, PF	Mixed
Wilson, Kickul, and Marlino (2007)	TPB	ESE	United States
Wurthmann (2013)	EEM	PD, PF	United States
Yan (2010)	EEM†	PA	United States
Yang, Hsiung, and Chen (2011)	TPB	ATB, SN, ESE	Taiwan
Zali, Ebrahim, and Schøtt (2011)	TPB	ESE	Mixed
Zapkau, Schwens, Steinmetz, and Kabst (2011)	TPB	ATB, SN, PBC	Germany
Zellweger, Sieger, and Halter (2011)	EEM†	ESE, PA	Mixed
Zhang, Duysters, and Cloodt (2013)	EEM	PD, PF	China

Note: Studies with various countries provided individual country data, while studies with mixed data sets used a pooled data set including several countries. In the theory category all EEM marked with an † indicate those studies that used locus of control, which is assumed to be a measure of the propensity to act.
Source: Adapted from Schlaegel & Koenig (2014)

As mentioned by Krueger, et al. (2000) the TPB model offers a comprehensive and commonly applicable theoretical framework, which has originated a considerable number of contributions in various fields of business and influence on behavior. Unlike other models, it explains almost every type of human behavior taking into account not only personal but also social factors (Krueger Jr, et al., 2000). As referenced in the work of Liñán et al (2011), the TPB and the EET are complementary models as observed in table 2.

Table 2 *Correspondences between TPB and EET*

Theory of Planned Behavior (Ajzen, 1991)	Entrepreneurial Event Theory (Shapero & Sokol, 1982)
Perceived behavioral control	Perceived feasibility
Attitude toward behavior	Perceived desirability
Subjective norm	

Looking closely to perceived feasibility and perceived behavioral control, their common ground is the fact that both regard the individual's perception concerning his/her own capacity and control to perform a behavior. However, some considerations needs to be made: the related concepts of self-efficacy and feasibility (Shapero & Sokol, 1982) do not totally correspond to perceived behavioral control, because it includes not only the feeling of being able to perform something, but also the perception of behavior control (Ajzen, 2002). Nonetheless, the alignment of both models was initially proposed by Krueger et al (2000). Krueger's subsequent work emphasized the critical role of past experiences in forming

entrepreneurial beliefs and cognitive structures towards entrepreneurship (N. Krueger, Liñán, & Nabi, 2013).

Models of entrepreneurial intention arise in this context as they can predict the entrepreneurial behavior of individuals. Several authors have shown that entrepreneurial intentions are crucial to comprehending the entrepreneurial process (Bird, 1988; Lee, et al., 2011; Liñán, et al., 2011; Pendiuc & Lis, 2013).

However, even considering that entrepreneurial intention is the most often expressed factor studied antecedent of venture creation, we can forget that entrepreneurship has too many facets: a process of business creation or a career option, among others. For these reasons, is relevant to understand how opportunities of entrepreneurship take form. This is a popular topic, as the works of Arend (2013) and Alvarez and Barney (2013) showed.

In 2000, Shane and Venkataraman suggested that one of the key traits of a entrepreneur was his/her [30]ability to recognize good business opportunities when they appear. It is interesting to note that depending on the entrepreneurial facet chosen, the acceptance of opportunity will vary: (i) opportunities already existing in the market; (iii) new combinations, innovations or transformations; (iii) opportunities created from stakeholders' interaction and network systems (Alvarez & Barney, 2013; Arend, 2013; Popescu, 2013; Shane & Venkataraman, 2000). Indeed, recognizing opportunities is an important dimension in the entrepreneurial action process and requires looking outside the dimension of entrepreneur behavior. In this sense, Johannisson (2000) suggested that entrepreneurship needs to be consider as a "generically social, a collective phenomenon." Moreover, the country where the opportunity appears or the action occurs is a cornerstone.

Many scholars have developed models that consider the influence of exogenous variables in entrepreneurship intention: access to capital (Lüthje & Franke, 2003); government (Pendiuc & Lis, 2013); education and training (Kumar & Kumar, 2013; Liñán, et al., 2011; Rasmussen, 2011); access to physical structures (Verlegh, 2007); spin-offs ventures (Rasmussen, 2011); culture and competitiveness (N. Krueger, et al., 2013). In general, these factors Have a direct effect on an individual's perceptions of desirability and feasibility, and consequently on his or her entrepreneurship intention.

Empirical analysis

This paper answers the question: *What drives entrepreneurs to invest so much effort in the long journey to success?* The models presented above claim that any entrepreneurial behavior is preceded by the intention to develop such behavior; this intention is influenced by different endogenous factors. Therefore, to understand "what actually happens" the framework needs to consider the following elements: (i) entrepreneurial activities, independently of the definition of entrepreneurship adopted, are carried out by individuals; (ii) the individual personal frame (personality, background, skills, etc.) is relevant to determine the motivation to engage into entrepreneurial activities; (iii) contextual variables are also relevant, enhancing opportunities as well as promoting environmental settings conducive or not to entrepreneurship approaches.

As referred in the work of Rasmussen (2011), most research on this field is not designed to examine the different levels of activity that constitute the entrepreneurial process or what impulses someone to become an entrepreneur.

Therefore, the approach drawn here relies on a well-established body of literature linking intention to subsequent actions (Ajzen, 1991, 2002), including a set of variables from TPB and EET that have been proposed several times as the best predictor of entrepreneurial behavior (Krueger Jr, et al., 2000; Schlaegel & Koenig, 2013; Shapero & Sokol, 1982).

In this article, we provide a contrasting view of these previous models, questioning if the exogenous variables can directly influence directly entrepreneurship behavior, instead of

affecting only entrepreneurship intention through the individual's perceptions of desirability and feasibility.

The empirical analysis performed let data decide which of the variables identified in the theoretical literature above exerts a stronger influence on the creation of a new venture, considering as the preliminary assumption that all the dimensions of the individual personality as well as the environmental factors directly affect entrepreneurial behavior.

Methodology And Results

The data used in this work was obtained from the Flash Eurobarometer (Commission, 2012)(Commission, 2012)(Commission, 2012)354 on "Entrepreneurship in the EU and beyond." This database includes information from 27 countries from the European Union and 15 non-European Union countries, among which Brazil, Israel, India and Russia are included for the first time.

This data base includes over 42.000 respondents from different social and demographic groups that were interviewed via telephone (except for India, where interviews were conducted face-to-face). For this work we selected the respondents who replied to the questions in the variables used, eliminating the cases that did not answer or did not know what to answer, ending with a total of 10.267 observations.

The dependent variable is the effective start of a business activity and is divided into three levels (No, yes you are taking steps to start/took over a business and yes you started/took over a business). In table 2 we can see that that the majority of participants, 69% of the total did not start any business, 19.8% were taking steps to start a business, and 11.1% had started a business.

The explanatory variables used were individual characteristics: age and gender; individual environment, including business antecedents and income; perceptions, specifically feasibility, desirability, benefits and social norm and contextual elements, namely education and country variables, specifically innovation index and grouping by continent. The statistical distribution of these variables can be seen in table 2.

Table 2 *Descriptive statistics of the variables used*

Variables	Dimesions	N	Marginal Percentage
Start Business	No	7089	69.05
	Yes, you are taking steps to start/take over a business	1143	11.13
	Yes, you started/took over a business	2035	19.82
Gender	Male	4814	46.89
	Female	5453	53.11
Antecedents	Self-employed	3037	29.58
	White-collar employee in the private sector	1609	15.67
	Blue-collar employee in the private sector	2803	27.30
	Civil servants	2162	21.06
	Not in paid employment	656	6.39
Income	Live comfortably on current income	2469	24.05
	Get by on current income	4748	46.25
	Find it difficult to manage on current income	1998	19.46
	Find it very difficult to manage on current income	1052	10.25
Feasibility	Very feasible	1514	14.75
	Fairly feasible	2764	26.92
	Not very feasible	2166	21.10
	Not feasible at all	3823	37.24
Desirability	Very desirable	2719	26.48
	Fairly desirable	3564	34.71
	Not very desirable	1509	14.70
	Not at all desirable	2475	24.11
Continent	Europe	8108	78.97
	North America	1062	10.34
	South America	300	2.92
	Asia	677	6.59
	Middle East	120	1.17
Education	Yes	2724	26.53
	No	7543	73.47
Total		10267	100

Considering that the dependent variable used to analyze the entrepreneurial activity is defined on an ordinal scale we estimated an Ordered Probit model to test the hypothesis. The results for the model fit information are presented in table 3 and confirm that the model is valid with a high significance.

Table 3 *Model Fit Information*

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	16852.7			
Final	15109.7	1743.0	24	0

The results estimates show that the coefficients of all variables analyzed were significant, except for two that refer to the level of income and country innovation index. The variables coefficients were significant at the 1% level for age, gender, desirability, feasibility, social norm, education and continent and were significant at the 5% level for antecedents and benefits.

Analyzing the coefficient signs for the significant variables, we can observe that age has a positive effect on the start of business activity. Another significant variable is gender and women show less business activity than men.

In terms of antecedents, we can observe that this variable is significant, but only in the case of “white collar employees in the private sector” that are less probable to start a business than the reference category that is “not in paid employment individuals.”

Analyzing the perceptions, we can observe that they are positively related to starting a business in term of perceived desirability and feasibility and also in the case of perceived social norms. In terms of desirability, the results show that the individuals who consider it very desirable to have a business are more probable to act than does that don´t consider at all desirable. When we analyze the feasibility we can observe that individuals that consider very feasible and fairly feasible are more liquidly to act than those that consider not feasible at all.

For the perception of benefits, we considered an indicator that includes the dimensions of “personnel independence and self-fulfillment," “exploit business opportunities," “better income perspectives," “freedom to choose the place and time or work” and “avoid the uncertainties related to paid employment." The results show a positive relation between this indicators and starting a business.

For the perceptions of social norm, we divided the variable into two indicators. The first is the positive view of entrepreneurs in terms of the creation of products/services and also jobs; the second, related to a negative view of entrepreneurs, is taking advantage of other people and thinking only of their own pockets. The results show a positive relation of starting a business with the positive view and a negative relation with the negative view of entrepreneurs.

Table 4 *Coeficients Estimates*

Variables	Estimate	Std. Error	Wald	df	Sig.	
	Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound	
Age	0,02	0,00	572,80	1,00	0,000	***
Benefits	0,03	0,01	4,73	1,00	0,030	**
Innovation	0,00	0,00	0,37	1,00	0,543	
Social Norm +	0,05	0,01	15,81	1,00	0,000	***
Social Norm -	-0,07	0,01	27,40	1,00	0,000	***
Male	0,32	0,03	143,69	1,00	0,000	***
Female	0,00	.	.	0,00	.	
Self-employed	0,09	0,06	2,31	1,00	0,129	
White-collar employee in the private sector	-0,15	0,06	5,37	1,00	0,020	**
Blue-collar employee in the private sector	-0,08	0,06	1,70	1,00	0,192	
Civil servants	0,06	0,06	1,02	1,00	0,312	
Not in paid employment	0,00	.	.	0,00	.	
Live comfortably on current income	-0,03	0,05	0,30	1,00	0,583	
Get by on current income	-0,07	0,05	2,37	1,00	0,123	
Find it difficult to manage on current income	-0,08	0,05	2,42	1,00	0,119	
Find it very difficult to manage on current income	0,00	.	.	0,00	.	
Very feasible	0,72	0,05	243,18	1,00	0,000	***
Fairly feasible	0,46	0,04	125,31	1,00	0,000	***
Not very feasible	0,00	0,04	0,00	1,00	0,965	
Not feasible at all	0,00	.	.	0,00	.	
Very desirable	0,29	0,05	39,13	1,00	0,000	***
Fairly desirable	0,07	0,04	2,53	1,00	0,111	
Not very desirable	-0,04	0,05	0,73	1,00	0,393	
Not at all desirable	0,00	.	.	0,00	.	
Europe	0,05	0,13	0,18	1,00	0,668	
North America	0,34	0,13	6,74	1,00	0,009	**
South America	-0,65	0,16	16,35	1,00	0,000	***
Asia	-0,12	0,14	0,72	1,00	0,395	
Middle East	0,00	.	.	0,00	.	
Yes	0,27	0,03	83,26	1,00	0,000	***
No	0,00	.	.	0,00	.	

*Significant at 10%, ** significant at 5% and *** significant at 1%

Another variable that was included in the model is entrepreneurial education. This variable showed a positive relation to starting a business, demonstrating that the contacts with contents that reinforce the development of business project and turning an idea into action have a positive influence on entrepreneurship.

In terms of continents, we can see that North Americans have a higher probability of starting a business. South Americans have less probability than do Middle Easterners, which was the reference category. There were no differences between Europeans and Asians to the reference category.

Discussion And Conclusion

For seeking what stimulates someone to become an entrepreneur, the literature points to several theories about intention-behavior. The two most widely used theories, the Theory of Planned Behavior and Entrepreneurial Event Theory have been used to study entrepreneurship intention behavior (Krueger Jr, et al., 2000). In the work of Liñán and Chen (2009) certain contextual and personal factors were consider as influencing entrepreneurial intention and leading entrepreneurial behaviors into practice.

The research findings provide evidence for a positive relationship between age and entrepreneurship. These results are not similar to the ones found in the most of the research analyzing entrepreneurship intention (Lee, et al., 2011). Another positive relation is between being male and higher business starts. This result is in line with previous studies, but reveals that in a large sample of countries, (male) gender is still a relevant factor in business creation (N. Krueger, et al., 2013; Malach-Pines & Schwartz, 2008).

A positive relation is also encountered between family antecedents and business creation. In this case the estimates show that when the father is a white-collar employees in the private sector it leads to less action in terms of business creation, than in the case of non-paid employment. This finding implies that professional careers tend to be interesting and rewarding alternatives to business creation.

Among the external variables, income was a variable that did not show relevance in the business start action. This result shows no significant relation in this large sample between family income and entrepreneurship. However the variables used do not allow for a distinction between a low prospective entrepreneurship in terms of subsistence from a high value entrepreneurship in terms of value creation.

Another external variable in this study is education. The results show that entrepreneurial education can have a positive impact on business creation (Liñán, et al., 2011). That result stresses the importance of entrepreneurial education in fostering business creation by developing competencies and increasing awareness.

Central to the TPB model are the dimensions of attitude, subjective norm and perceived behavior control (Ajzen, 2002). The results demonstrate that attitude is positively related to business creation, namely the perception of benefits and desirability. This result reinforces the importance of the image and concept of the advantages of owning a business in the action to invest.

Another element of the model is subjective norm, which is the way a society or community considers entrepreneurship. The results support this perspective since we found a positive relation of business creation to positive evaluation of entrepreneurship and a negative association to a negative perspective of entrepreneurship.

The control dimension is the perspective individuals have of the feasibility in starting a business. The results show a positive relation; people who feel capable of starting a business are much more likely to invest.

These results support the proposed model and reveal that it can provide an integrated explanation of the level of business creation. These results are relevant because they are based on a large-scale and broad sample.

In addition to these dimensions we included in the model a set of variables to measure country effects in order to control the results. The results show that the region was a significant variable and that Middle Easterners have a lower level of entrepreneurship than North Americans; in South America occurs the opposite, with less entrepreneurial activity. The implication is that country or region variables have to be taken in account when analyzing the factors that affect business creation.

Based on these results, we consider that the model used shows that external variables are important in business creation and that in addition to personal characteristics and antecedents, education has a crucial role.

That means there is a need for investment in entrepreneurial education, showing the advantages of investing in a business and developing competencies. Governments have to integrate this aspect of entrepreneurial education in their policies.

The way attitude, social norm and control are relevant factors reinforces the need of government to communicate to students and develop a culture of business creation and investment, since that culture will be instrumental in establishing a positive attitude toward entrepreneurship and in creating a culture that nurtures and values business initiative.

The feasibility of creating a business is a question of competencies, experiences, and perception, showing the need for public policies to promote the development of competencies and emphasize the possibility of success.

Any empirical study of this kind has limitations and in this case the results are relevant, but could vary by country, gender or social group. The findings therefore must be

addressed with these considerations in mind. Another limitation is the fact that the methodology used to test the model results does not allow for indirect effects and other relations among the variables that would be interesting to evaluate.

Based on these results, future research should analyze the differences in variables of gender, age and occupation and country, considering economic and cultural variables. Another suggestion is to test with other methodologies that can relate variables in sequence and determine indirect effects, namely structural equation models.

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