

STUDENT'S ENTREPRENEURIAL INTENTION: ESCE AND FEA COMPARISON

INTENÇÃO EMPREENDEDORA DOS ESTUDANTES: UMA COMPARAÇÃO ENTRE A ESCE E A FEA

Pedro Mares¹, Teresa Costa², Simone Galina³

Abstrat

The decision to become an entrepreneur involves an elaborate mental process. Understand this process during the formation of possible entrepreneurs that means during its educational process is important since entrepreneurship is actually a possible career for an increase number of students.

The present study tries to understand the mental process related to students become an entrepreneur following the cognitive approach through the application of Entrepreneurial Intentions Questionnaire (EIQ) to students from College of Business and Administration (ESCE), Polytechnic Institute of Setubal (IPS) and students from Economics and Management College (FEA), University of São Paulo (USP). Consequently the aim of the study is to understand the student's entrepreneurial intention, considering the influence of social and skills perceptions in determining entrepreneurial intentions.

This study allowed the confirmation of the findings of previous studies concerning the relationship between the entrepreneurial intention and the attitudes towards entrepreneurship and perceived behavioural control.

KEYWORDS: Entrepreneurship, education, entrepreneurial intention, Theory of Planned Behavior

Resumo

A decisão de se tornar um empreendedor envolve um elaborado processo mental. Entender este processo durante a formação de possíveis empreendedores, ou seja, durante o seu processo educacional, é importante uma vez que o empreendedorismo é atualmente uma possibilidade de carreira para um crescente número de alunos.

O presente estudo procura entender o processo mental dos estudantes para se tornarem empreendedores seguindo a abordagem cognitiva através da aplicação do Questionário das Intenções Empreendedoras (Entrepreneurial Intentions Questionnaire – EIQ) a estudantes da Escola Superior de Ciências Empresariais (ESCE), do Instituto Politécnico de Setúbal (IPS) e a estudantes da Faculdade de Economia e Administração (FEA) da Universidade de São Paulo (USP). Consequentemente, o estudo tem como objetivo entender a intenção empreendedora dos estudantes, considerando a influência das percepções sociais e competências para determinar as intenções empreendedoras.

¹ pedro.mares@esce.ips.pt, Instituto Politécnico de Setúbal, Escola Superior de Ciências Empresariais.

² teresa.costa@esce.ips.pt, Instituto Politécnico de Setúbal, Escola Superior de Ciências Empresariais.

³ svgalina@usp.br, Universidade de São Paulo, Faculdade de Economia, Administração e Contabilidade de Ribeirão Preto.

Este estudo permitiu a confirmação dos resultados de estudos anteriores sobre a relação entre a intenção empreendedora e as atitudes em relação ao empreendedorismo e ao controlo comportamental percebido.

PALAVRAS-CHAVE: Empreendedorismo, educação, intenção empreendedora, Teoria do Comportamento Planeado

1. INTRODUCTION

It seems to be consensual that entrepreneurship is the result of a cognitive process. However the decision to become an entrepreneur is very complex, and results from an elaborate mental process. Thus, educational initiatives have been considered as an important tool that can increase the supply of potential and nascent entrepreneurs (increasing people aware and interest on entrepreneurial career option as well on starting a new venture).

However, there is a lack of agreement on the variables that influence the individual's decision to start a venture. Cognitive approaches have involved considerable interest (Baron, 2004; Krueger, 2003). In fact, several studies refer the importance of the entrepreneurial intentions concerning the decision to start a new firm and cognitive variables are considered crucial for the understanding of personal decision related with the creation of enterprises (Baron, 2004; Shaver & Scott, 1991). According with these authors this cognitive focus offers further insights that can help understanding the complex process of entrepreneurship.

This study follows the cognitive approach through the application of an entrepreneurial intention model. The main purpose of this study is to understand the student's entrepreneurial intention. Specifically the study tries to understand the influence of social and skills perceptions in determining entrepreneurial intentions according with the entrepreneurial intention model of Liñán (2004).

The present study is divided into two parts. On the first part, after the introduction of the subject is presented a brief literature review concerning entrepreneurial intentions. On the second part, after the explanation of the methodology, and the presentation of the hypotheses, the results are discussed and conclusions presented.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. Entrepreneurial Intentions

In the entrepreneurship literature, many studies have focused on intentions (Bird, 1988; Krueger, Reilly & Carsrud, 2000). Intentions have been proved to be the best predictors of individual behaviors when the behavior is rare, hard to observe or involves unpredictable time lags (Krueger & Brazeal, 1994).

Bird (1988) identifies two dimensions responsible for the formation of entrepreneurial intentions: individual domains (e.g. personality, motivation and prior experience) and contextual variables (e.g. social context and economics). Concerning the first dimension, Zhao, Seibert and Hills (2005) show that psychological characteristics together with developed skills and abilities influence entrepreneurial intentions. Regarding the contextual variables, other authors demonstrate that environmental influences and environmental support have impact on entrepreneurial intentions.

In the psychological literature exist a different approach to entrepreneurial intentions where the intentions have been studied in terms of process models (intentions models). Among these

models, the most popular are the Entrepreneurial Event Theory (Shapero & Sokol, 1982) and the Theory of Planned Behavior (Ajzen, 1991).

According with Shapero's model (1982) the phenomenon of the entrepreneurial intentions is influenced by perceptions of desirability, which means by the value system and social system related with each individual, and feasibility, that depends on the financial support and potential partners of the entrepreneur. This model was empirically applied and developed later on by Krueger *et al.* (2000), Peterman and Kennedy (2003).

The Ajzen's model (1991) tries to explain the influence of cultural and social environment in human behavior. This model is based on the individual's intention, which is the result of three factors (Ajzen, 1991): 1) the attitude towards entrepreneurship, 2) the subjective norms and 3) perceived control over the firm-creation behavior. Also this model was adopted by several authors in their studies (Kolvereid, 1996a; Kolvereid, 1996b; Tkachev & Kolvereid, 1999; Krueger *et al.*, 2000; Liñán, 2004; Fayolle & Gailly, 2005; Veciana *et al.*, 2005; Fayolle and DeGeorge, 2006; Krueger, 2007; Engle *et al.*, 2010).

Both models have been extensively used to study entrepreneurship. Results have always been consistent with the applicability of the theory of planned behavior (TPB). However, some authors refer some difficulties related to differences in measures used, since there are not standard measurement instruments for entrepreneurial intention and its antecedents (Armitage & Conner, 2001; Liñán & Chen, 2009).

Also Krueger (2000) considered that demographic variables operate indirectly on intentions, only if they change the decision-maker's attitudes. Consequently, for this author some models did not include these type of variables. For other authors (Gnyawali & Fogel, 1994; Davidsson & Henkson, 2002) these models disregard some combinations of environmental factors relevant in entrepreneurship, such as legal, institutional and socioeconomic conditions, entrepreneurial and business skills, financial or non-financial assistance.

Consequently Liñán (2004), supported on Ajzen's model (1991) proposed an entrepreneurial intentional model in order to understand the influence of social and skills perceptions in determining entrepreneurial intentions. Also according with this author the decision of creating an enterprise depends on three motivational factors: 1) the personal preference of the entrepreneur or its attraction towards entrepreneurship (that means the positive or negative personal valuation about being an entrepreneur), 2) the perceived behavioral control of the entrepreneur (that means the perceived acceptance or difficulty of becoming an entrepreneur), and 3) the perceived subjective norms of the entrepreneur (that means the perceived social pressure from family, friends or other "relevant people" and their perception concern the approve or not approve of the decision to become an entrepreneur).

Over the last years some entrepreneurship researchers have empirically applied the TPB to students' entrepreneurial intentions and confirmed the theory's predictions regarding the impact of attitude, subjective norm, and perceived behavioral control on their intentions (e.g. Kolvereid, 1996a; Krueger *et al.*, 2000; Autio *et al.*, 2001; Engle *et al.*, 2010).

2.2. Entrepreneurship Education and Entrepreneurial Intentions

Actually, entrepreneurship has become one of the main options for students when they conclude their courses (Peterman & Kennedy, 2003). Being an entrepreneur offers several advantages, such as creating their own business and being able to have more significant financial rewards, self-fulfilment, independence and other desirable outcomes (Segal *et al.*, 2005).

Several researches in entrepreneurship area have focused on students intentions to become entrepreneurs, and the intent is the key word for understanding the students' entrepreneurial spirit. Thus, it seems consensual the determinant role that education system plays in entrepreneurial cause (Lundström and Stevenson, 2002). Some authors (Bai, Qian, Miao, & Field, 2014; Martin,

McNally & Kay, 2013) have proven the existence of a, albeit small, positive relation between entrepreneurial education and entrepreneurial intentions.

It has been argued that entrepreneurship education should start as early as possible (Birdthistle *et al.*, 2007; Cheung, 2008). One of the arguments put forward to justify this view is related to the fact that the sooner you begin to inculcate in young people the values and entrepreneurial thinking, the results will be more effective.

The positive role of Higher Education Institutions (HEIs) in the development of entrepreneurial intention and the existence of important factors that influence students' entrepreneurial behavior are confirmed by a number of studies (Fayolle *et al.*, 2005, Lüthje & Franke, 2003).

These studies help to explain the emergence of entrepreneurial intention among target groups, as well as the stimulation of entrepreneurship education that can influence students' attitudes and intentions towards entrepreneurship.

Concerning entrepreneurial intention Packham *et al.* (2010) and Mushtaq *et al.* (2011) also reported that several variables, including education are significantly correlated to intention to create new venture.

According to Wu & Wu (2008) the potential impacts of higher education on students include three aspects: 1) students personal development, including changes in attitudes and values; 2) students changes in their abilities; and 3) possible social impacts. These aspects are related and coherent with the components of the TPB model. Other authors (Lee & Wong, 2004; Liñan and Chen, 2009) show that backgrounds in the TPB model are affected by situational factors and demographic variables. Among this factors, educational background is one of the most important factors.

2.3. Personal Factors and Entrepreneurial Intentions

Concerning personal traits, some authors argued that optimism (Cooper, Woo and Dunkelberg, 1988), tenacity (Gartner, Gatewood & Shaver, 1991), overconfidence (Busenitz, 1999) and passion (Locke, 1993) may have an impact on entrepreneurial intention.

In addition to personality traits, several additional individual difference variables have been found to predict entrepreneurship. Demographic factors affecting entrepreneurial behaviours are age, ethnicity, education level, gender, labor experience, previous experience in self-employment, etc. (Reynolds *et al.*, 1994; Storey, 1994; Delmar and Davidsson, 2000; Grilo & Thurik, 2005; Hatak, Harms & Fink, 2015). Dealing with age, Boyd (1990) shows that it is positively correlated to entrepreneurial intention. This can be explained by the fact that young people are less likely to engage in enterprising (Kalantadiris & Labrianidis, 2004). Previous studies have also shown that the probability of an individual becoming an entrepreneur increases with age to a certain point (between 35 and 44 years), and decreases thereafter (Bates, 1995; Lévesque & Minniti, 2006). Hatak, Harms and Fink (2015) have conducted a study with Austrian adult workforce that reveal that as employees age they are less inclined to act entrepreneurially and that their entrepreneurial intention is lower the more they identify with their job.

Concerning gender, several studies supported the argument that males had significantly higher entrepreneurial intention than females (e.g., Kolvereid, 1996b; Mazzarol *et al.*, 1999; Reynolds *et al.*, 2002). Reynolds *et al.* (2002) show that adult man in the U.S. are twice as likely as women to be in the process of starting a new business. Furthermore, marital status has been studied as an antecedent of entrepreneurial intention.

Kolvereid (1996b) states that those with prior experience in entrepreneurial activities have higher entrepreneurial intention compared to those with no prior experience. Furthermore, Mazzarol *et al.*, (1999) report that previous working experience was also found to affect entrepreneurial intention. Kolvereid (1996b) also reports that the types of experience also affect entrepreneurial

intention. He found that respondents with entrepreneurial experience have higher entrepreneurial intention than those without such experience. Employment status is another characteristic that affect entrepreneurial intention. According to Ritsila and Tervo (2002) there is a positive effect of personal unemployment on the intention of an individual to get engaged in entrepreneurial activities.

The literature review presented allowed the formulation of the following hypotheses:

H1: The entrepreneurial intentions depends on three motivational factors

H1a: Attitude towards entrepreneurship are positively related to ESCE and FEA students' entrepreneurial intentions.

H1b: Subjective norms are positively related to ESCE and FEA students' entrepreneurial intentions

H1c: Perceived behavioural control with respect to entrepreneurship, are positively related to ESCE and FEA students' entrepreneurial intentions

3. METHODOLOGY

3.1. Data

The research holds a quantitative method to empirical support for the hypotheses.

The empirical analysis was carried out with a survey on data collected through 379 completed questionnaires from business undergraduate students of two Higher Education Institutions (HEIs) from two different regions: College of Business Administration (ESCE), Polytechnic Institute of Setubal (Portugal) and Economics and Management College (FEA), University of São Paulo (Brazil). The absolute sample includes 379 cases: 95 students from ESCE and 284 students from FEA. The sample are made up of students who attended the subject of entrepreneurship in the academic year 2014-2015.

Student samples are very common in entrepreneurship research (Liñán & Chen, 2009) especially given evidence that university graduates between 25 and 34 years of age show the highest propensity toward starting up a firm (Reynolds *et al.*, 2004).

To collect data, the research used the Entrepreneurial Intentions Questionnaire (EIQ) designed and validated by Liñán and Chen (2009) with additional demographic questions.

3.2. Questionnaire And Measures

This research uses the part of the questions developed in Entrepreneurial Intentions Questionnaire (EIQ), designed by Liñán and Chen (2009), to collect the data from the students who attended the subject of entrepreneurship in ESCE and FEA. The EIQ is an instrument to measure entrepreneurship intentions (EI) and other variables such as attitude towards entrepreneurship (ATE), subjective norm (SN), and perceived behavioural control (PBC).

Reliability and validity of the questionnaire were already verified by Liñán and Chen (2009) to ensure that each set of questions is related to same subject and each subject corresponds to the required measure. The questionnaire used in the research is divided into 2 sections. The first section identifies the profile of the respondents. In this section the main characteristics identified are: (1) the gender; (2) the age; (3) the labor experience and (4) the self-employment experience. Section 2 comprehends the questions taken from the EIQ to measure, through a 7 Likert-type scale, the different constructs of the entrepreneurial intention model (ATE, SN, PBC and EI).

3.3. Sample Characterization

Concerning the sample characterization, table 1 presents the differences between ESCE and FEA sample. As shown in table 1, in the ESCE sample the percentage of females is higher than in FEA (62.1% vs. 43.7%) and students are older.

Table 1 – Students' profile

	ESCE %	FEA %	
Gender			
Male		37.9%	56.3
Female		62.1%	43.7
Age			
Mean		22.4	20.8
Labor experience			
Yes		57.9%	52.1%
No		42.1%	47.5%
N.A.		-	0.4%
Self-employment experience			
Yes		8.4%	9.2%
No		91.6%	90.5%
N.A.		-	0.4%

With regard to labor experience, both in the ESCE and FEA samples the majority reported having experience (57.9% and 52.1%, respectively), however in the two samples a small percentage of students claimed to have self-employment experience (8.4% and 9.2%, respectively).

4. Results and Discussion

For the purpose of testing the presented hypothesis, a factor analysis was performed for each set of questions in order to obtain a latent variable.

To test the relevance of factor analysis for the data set, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was applied. The average KMO values for the data set (Table 2) are high, showing that factor analysis is feasible for data analysis. The Bartlett Test of Sphericity is also highly significant, suggesting that factor analysis can be applied to the data set since it is unlikely that the correlation matrix of the variables is an identity.

Table 2 – Kaiser-Meyer-Olkin (KMO) Measure and Bartlett's Test

Factor	ESCE		FEA	
	KMO	Bartlett's Test	KMO	Bartlett's Test
ATE	0,820	257,913	0,890	1273,253
SN	0,520	97,402	0,642	271,650
PBC	0,812	288,466	0,882	1138,780
EI	0,845	610,734	0,915	2086,424

It was employed the orthogonal method with Varimax rotation to ensure that the factors extracted are independent and unrelated to each other. The objective of factor analysis is to group variables having large loadings (correlations) for the same factor. A variable with a high communality (loading) of 0.8, for example, indicates a high correlation between that variable and other variables sharing a common factor. Following Kaiser's criterion only factors having eigenvalues greater than 1 are considered significant in this study.

Construct reliability is assessed using the Cronbach's Alpha. As we can see in Table 3, in both samples the factors have a Cronbach's Alpha higher than 0.7, showing internal consistency.

Table 3 – Reliability Coefficients

Factor	Alpha Scores		Number of Items
	ESCE	FEA	
ATE	0.871	0,937	5
SN	0.727	0,768	3
PBC	0.875	0,912	6
EI	0.934	0,960	6

For the purpose of testing the relationships between entrepreneurial intentions and its antecedents (Hypothesis 1a, 1b and 1c), we used a correlation analysis for each sample, as summarized in tables 8 and 9.

Table 4 – Bivariate Pearson correlation – ESCE students

Variable		ATE	SN	PBC
EI	Pearson Correlation	,634**	,293**	,529**
	Sig. (2-tailed)	,000	,004	,000
	N	95	95	95

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

Table 5 – Bivariate Pearson correlation – FEA students

Variable		ATE	SN	PBC
EI	Pearson Correlation	,834**	,098	,528**
	Sig. (2-tailed)	,000	,100	,000
	N	281	281	279

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

The results revealed that in both samples students' entrepreneurial intention (EI) was significantly influenced by attitudes towards entrepreneurship (ATE) and perceived behavioural control (PBC). Therefore, Hypothesis 1a and 1c were accepted for the two samples with a significance level of $p < 0.01$.

In the ESCE sample the subjective norm have a lower correlation with entrepreneurial intention. On the other hand, in the FEA sample don't verified the correlation between these two variables. This is not a surprising finding, once several studies demonstrate that subjective norms often fail to predict intentions (Armitage & Conner, 2001).

Therefore, for ESCE students, Hypothesis 1a, 1b and 1c were accepted with a significance level of $p < 0.01$. For FEA students, Hypothesis 1a and 1c were accepted with a significance level of $p < 0.01$. This findings are consistent with the findings of previous studies referred in literature review (Kolvereid 1996A; Kolvereid, 1996b; Tkachev & Kolvereid, 1999; Krueger *et al.*, 2000; Liñán, 2004; Fayolle & Gailly, 2005; Veciana *et al.*, 2005; Fayolle & DeGeorge, 2006; Krueger, 2007; Engle *et al.*, 2010).

Bellows (Table 6) it's possible to see the resume of the confirmation or not confirmation of the hypotheses previously formulated.

Table 6 – Hypotheses confirmation

Hypotheses	Confirmation	
	Portugal	Brazil
H1: The entrepreneurial intentions depends on three motivational factors:		
H1a: Attitude towards entrepreneurship are positively related to ESCE and FEA students' entrepreneurial intentions.	Yes	Yes
H1b: Subjective norms are positively related to ESCE and FEA students' entrepreneurial intentions	Yes	No
H1c: Perceived behavioural control with respect to entrepreneurship, are positively related to ESCE and FEA students' entrepreneurial intentions	Yes	Yes

5. CONCLUSIONS

The present study offers a literature review concerning the phenomenon of the entrepreneurial intentions with reference to several models. Also emphasises the importance of entrepreneurship as a career option for students.

This study aimed to analyse the relationship between student's entrepreneurial intentions and its antecedents (attitudes toward entrepreneurship, subjective norms and perceived behavioural control) in two different cultures.

Using the EIQ, designed by Liñán and Chen (2009), this study allowed the confirmation of the findings of previous studies that have demonstrated that entrepreneurial intention is predicted by attitudes toward entrepreneurship, subjective norms, and perceived behavioural control. The results achieved contribute to reinforce the application of the theory of planned behavior (Ajzen, 1991) and confirm the influence of cultural and social environment in human behavior.

These results related with ESCE confirm the findings of previous studies that have demonstrated that entrepreneurial intention is predicted by attitudes towards entrepreneurship, subjective norms and perceived behavioural control. The results concerning FEA demonstrated that entrepreneurial intention is predicted by attitudes toward entrepreneurship, and perceived behavioural control, but not by subjective norms.

There are some limitations in this study. First, the study did not apply a random sampling technique. Study participants were students from two different HEIs, but not randomly chosen. Second, cultural and demographic variables might be considered in a future research to have a broader view of the different determinants influencing the entrepreneurial intention.

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