Measuring and Understanding the Psychological Effects of Entrepreneurial Intentions: Multigroup Analysis

João J. Ferreira, Cristina I. Fernandes, and Mário L. Raposo

Abstract This study aims to measure and understand the psychological effects of entrepreneurial intentions among university students from two countries (Portugal and Spain).

Following a review of the literature, there is a lack of studies incorporating an integrative model that deploys self-efficacy, risk-taking propensity and proactive personality as psychological effects on entrepreneurial intentions. Here, we seek to meet this gap through proposing and developing an integrative psychological model about the formation of entrepreneurial intentions, including all these variables as the main preceding factors to entrepreneurial initiatives and their influence on entrepreneurial intentions. Taking a sample of 293 university students from both countries, we apply multigroup analysis to empirically test the influence these hold over the preferences expressed in terms of becoming an entrepreneur.

Our results reveal differences between these two countries regarding entrepreneurial intentions. In terms of the motivations present for launching a business, the higher these are, then the greater the preference for the option to work for third parties. In addition, and in terms of the perceived ease of launching a company variable, the higher this rises, the lower the level of preference for working for third party entities. Furthermore, the greater the level of perception in terms of the social value of entrepreneurship, the greater the preference in favour of becoming an entrepreneur.

Keywords Entrepreneurial intention • Entrepreneurial behaviour • Psychological traits • University students • Multigroup analysis

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1 Introduction

Audretsch (2007) proposes entrepreneurship as vital to the success of contemporary societies that are otherwise facing enormous economic and social challenges. Furthermore, entrepreneurs stand out as the leading driver of economic development as this is today understood. The majority of conceptions around this entrepreneurial figure (Knight 1921; Schumpeter 1934; Kirzner 1973) emphasise the role played in promoting the economy above and beyond the other, better understood roles such as business manager or property owner.

From the 1970s onwards, many Western countries have shared the same experience: the larger companies established there are no long able to provide for net increases in employment. This resulted in constantly high levels of unemployment and/or the growing relative importance of small and new businesses as the means to create new jobs (Aiginger and Tichy 1991; Davidsson et al. 1995). This sets out the broad backdrop to the great current political interest in the small and medium sized company sector and the generalised hopes and expectations that small and new companies may resolve the problem of unemployment and low economic growth.

Souitaris et al. (2007) maintain that education for entrepreneurship constitutes a source of entrepreneurial attitudes and implants in students the intention of becoming future entrepreneurs. Samydevan et al. (2015) argue that education reflects one of the fundamental factors contributing towards the attitudes of students in relation to entrepreneurship with the quality of business education susceptible of driving higher levels of business start-up intentions among students. Dyer (1994) suggests that entrepreneurial courses and programs bestow confidence and courage on their participants and their entrepreneurial intents. As there is a strong correlation between education for entrepreneurship and entrepreneurial intentions, many countries have correspondingly introduced education for entrepreneurship to raise the prevailing levels of entrepreneurial intent with Ahmad (2013) identifying how education for entrepreneurship may reduce unemployment among graduates.

However, this education for entrepreneurship needs embarking on at an age earlier than that for beginning university and with analysis on how the psychological and behavioural aspects might shape entrepreneurial intentions.

In past literature, some intention models have been developed and trying to explain entrepreneurial intentions as a variable within larger psychological models: behaviour theory (Ajzen 1991); self-efficacy and social learning theory (Bandura 1997); economic-psychological model (Davidsson 1995). However, there is a lack of studies applying an integrative model which employs self-efficacy, risk-taking propensity and proactive personality as psychological effects on entrepreneurial intentions. Here, we seek to fill this gap by developing an integrative psychological model about the formation of entrepreneurial intentions, including all these variables as the main preceding factors to entrepreneurial initiative and correspondingly evaluating their influence on entrepreneurial intentions.

2 Literature Review

Schumpeter (1934, 1939, 1942) defends how entrepreneurs represent the main driving force behind advancing economic development. Indeed, they are capable of coming up with the innovations that enable the return of profits while assuming the risks inherent to these "creations". According to this author, development equates to the introduction of new combinations of circular flows into economic life, thus entrepreneurs prove able to launch these innovative actions in such a fashion as to cause cyclical discontinuities in the economy. These combinations, when introduced by these new actors (the business owners), bring about new forms of production, new products, new technologies, new forms of organisation, new markets and new resources for their production processes and correspondingly defining economic development and the future of capitalism.

Entrepreneurship theory has advanced substantially over the last three decades (Samydevan et al. 2015). The main reason derives from the central role that the scientific community currently attributes to human capital and to the growth of different regions in the world economy (Wennekers and Thurik 1999; Galindo and Alvarez 2004). A large number of studies on the qualitative features of entrepreneurs have focused on the psychological characteristics and personality traits that differentiate the successful entrepreneurs from their less successful peers in addition to business managers in comparison with the rest of the population (Borland 1975; Samydevan et al. 2015).

Many authors have sought to identify the existence of certain personality characteristics that might be associated with entrepreneurial activities (McClelland 1961, 1985). Lumpkin and Erdogon (2004) studied and strongly backed the psychological attributes not only in terms of the importance of levels of perception and awareness but also as the theoretical foundation stone for predicting entrepreneurial behaviours and potentials when adults. According to Morris (1998), the risk taking propensity over entrepreneurial intentions refers to the extent to which individuals differ in their willingness to accept new situations when these are unknown. Koh (1996) affirms that entrepreneurs are prudent managers of risk. Timmons (1999), in turn, refers to the propensity of a person to assume risks under uncertain circumstances. Entrepreneurs therefore commonly get involved in risky behaviours and seem more willing to run risks (Norton and Moore 2002).

The relationship between self-efficacy and entrepreneurship is justified people avoid careers and environments which they believe exceed their capacities (without considering the benefits that they might obtain), and undertake careers for which they consider themselves able (Sánchez 2011). Correspondingly, Fig. 1 details our conceptual model.

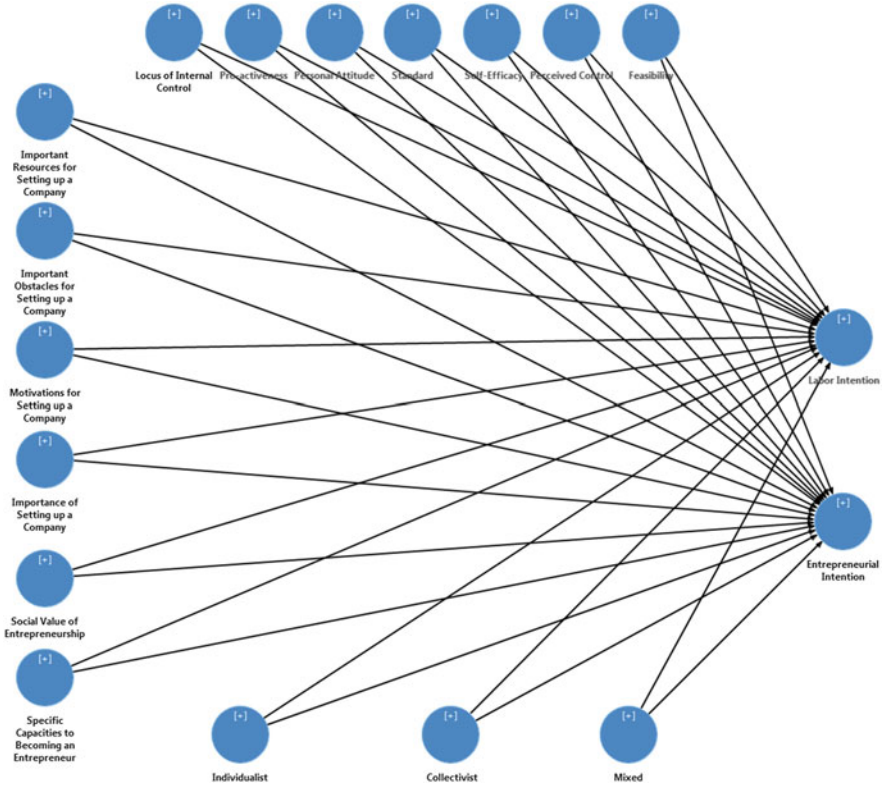

Fig. 1 Conceptual model

3 Methodology

3.1 Measuring Instruments

The instrument applied was the Sánchez (2010) Entrepreneurial Orientation Questionnaire (EOQ). The dimensions, measured by a Likert scale of 1–7 were the following (Ferreira and Fernandes 2017): Internal Locus of Control (11 items), Self-efficacy (9 items), Proactiveness (10 items), Personal Attitude (5 items), Perceived Control (6 items), Standard (3 items), Feasibility (9 items), Entrepreneurial Intention (9 items), Labor Intention (4 items), Motivations for Setting up a Company (10 items), Important Resources for Setting up a Company (13 items), Important Obstacles for Setting up a Company (10 items), Importance of Setting up a Company (8 items), Social Value of Entrepreneurship (8 items) and Specific Capacities to Becoming an Entrepreneur (6 items), Individualist (2 items), Collectivist (5 items) and Mixed (3 items).

3.2 Methods

Firstly it was evaluated the validity of the constructs, correspondingly analysing the reliability, the factorial validity, the convergent validity and the discriminant validity. In this research, construct validity was assessed by: (1) composite reliability (CR), (CR > 0.70); (2) factorial validity; (3) convergent validity (AVE > 0.50); and (4) discriminant validity (Hair et al. 2010; Hulland 1999).

Following the validation of the instrument and within the objective of validating the hypotheses incorporated into the conceptual model, we turned to structural equation modeling (SEM), estimated through the partial least squares method (PLS). The application of PLS-SEM as an alternative to SEM based on covariance (CB-SEM) stemmed from the high number of indicators included in the study and the limited size of the sample (n = 293), with more robust results obtained through PLS-SEM in such cases given fewer identification problems with smaller scale samples than those obtained through recourse to CB-SEM. Furthermore, another factor advocating the utilisation of PLS-SEM emerged from the existence of non-normal data and the assumptions of data distribution under CB-SEM (Hair et al. 2010, 2012).

As there are no overall fair adjustment measures for models estimated through PLS as in the covariance based structural equation methodologies, the evaluation of the structural models estimated through PLS takes place by analysis of the R^2 determined coefficient values for the endogenous constructs and the value of the Standardized Root Mean Residual (SRMR) (Hair et al. 2011; Hulland 1999). In order to evaluate the constructs potentially driving multicollinearity, the variance inflating factors (VIF) were subject to evaluation.

In estimating the structural models, for determining the t-statistics and the respective statistical significance, we deployed 1000 sample replicas.

Finally, we sought to analyse the differences in the parameters in relation to the two countries included in the sample (Spain and Portugal). To this end, we made recourse to multigroup analysis given that any differences might arise out of non-observed heterogeneity, thus not susceptible to attributing to any one or more pre-specified variables (Sarstedt et al. 2011). In order to determine the statistically significant differences between the path coefficients for the Portugal and Spain models, we applied Henseler's approach (Sarstedt et al. 2011).

For all of these statistical calculations, we applied the SmartPLS software version 3.0.

4 Results

Table 1 presents the results produced by the calculations of AVE, CR, VIF, the Pearson correlations between the constructs and the AVE squared root to evaluate the validity of the constructs and the multicollinearity between these and the

Table 1 Average variance extracts (AVE), composite reliability (CR), Variance inflating factors (VIF) and Pearson correlations between the constructs (in the diagonal with the *bold* figure detailing the AVE squared root)

	Construct	AVE	CR	VIF	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Collectivist	0.561	0.789	1.860	**0.749**																	
2	Entrepreneurial intention	0.719	0.953		0.414	**0.848**																
3	Feasibility	0.545	0.920	5.050	0.404	0.832	**0.738**															
4	Importance of setting up a company	0.568	0.839	1.588	0.266	0.268	0.271	**0.754**														
5	Important obstacles for setting up a company	0.529	0.763	1.234	0.057	−0.131	−0.135	0.240	**0.727**													
6	Important resources for setting up a company	0.543	0.855	1.573	0.357	0.242	0.311	0.444	0.113	**0.737**												
7	Individualist	0.584	0.709	1.258	−0.033	0.279	0.230	0.125	−0.069	0.076	**0.764**											
8	Labor intention	0.551	0.743		0.077	−0.215	−0.124	0.025	0.242	−0.001	0.008	**0.742**										
9	Locus of internal control	0.530	0.899	1.896	0.403	0.368	0.369	0.155	−0.084	0.271	0.098	0.027	**0.728**									
10	Mixed	0.541	0.702	1.288	−0.293	−0.186	−0.234	−0.297	−0.049	−0.292	−0.186	−0.102	−0.237	**0.736**								
11	Motivations for setting up a company	0.543	0.892	1.856	0.419	0.442	0.514	0.456	0.198	0.367	−0.003	0.053	0.193	−0.228	**0.737**							
12	Perceived control	0.718	0.938	3.454	0.384	0.733	0.722	0.224	−0.166	0.293	0.265	−0.098	0.375	−0.156	0.387	**0.847**						
13	Personal attitude	0.728	0.929	2.968	0.394	0.759	0.701	0.221	−0.012	0.295	0.255	−0.099	0.343	−0.191	0.460	0.656	**0.853**					
14	Pro-activeness	0.514	0.894	2.933	0.539	0.499	0.465	0.218	−0.053	0.441	0.195	−0.091	0.644	−0.270	0.326	0.514	0.487	**0.717**				
15	Self-efficacy	0.521	0.907	3.413	0.497	0.602	0.615	0.268	−0.037	0.409	0.204	−0.018	0.592	−0.300	0.373	0.653	0.614	0.720	**0.722**			
16	Social value of entrepreneurship	0.628	0.869	1.516	0.289	0.540	0.491	0.285	0.002	0.156	0.223	−0.015	0.224	−0.158	0.308	0.469	0.373	0.329	0.354	**0.792**		
17	Specific capacities to becoming an entrepreneur	0.593	0.897	2.695	0.576	0.608	0.584	0.211	−0.088	0.329	0.136	0.073	0.506	−0.183	0.389	0.605	0.547	0.631	0.700	0.420	**0.770**	
18	Standard	0.723	0.887	1.284	0.153	0.298	0.396	0.185	0.007	0.218	0.182	−0.030	0.166	−0.203	0.257	0.296	0.292	0.169	0.249	0.290	0.151	**0.850**

estimates returned for SEM. All of the constructs utilised report acceptable levels of reliability (FC $\geq$ 0.709). Regarding their validity, the standardised factorial loads were equal to or greater than 0.530, thus correspondingly attaining factorial validity, the AVE results were greater than or equal to 0.529 and with the squared roots also always higher than the correlation returned between the respective construct and the remainder and therefore conclusively confirming both the convergent and the discriminant validity.

4.1 Structural Equation Modeling

The VIF values were below or equal to 5.05 thus reporting the absence of multicollinearity in the estimations made. The SEM based modeling returned an acceptable level of adjustment given that the SMRM = 0.062 and the R^2 results were 0.770 and 0.160 for the endogenous constructs Entrepreneurial Intention and Labor Intention respectively.

Table 2 and Fig. 2 detail the results stemming from the estimated structural model. This thus conveys how the Feasibility ($\beta = 0.45$; $p < 0.001$), Personal Attitude ($\beta = 0.25$; $p < 0.001$) and Social Value of Entrepreneurship ($\beta = 0.14$; $p < 0.001$) constructs generate a statistically significant impact on the construct Entrepreneurial Intention in which the higher the score for the Feasibility, Personal Attitude and Social Value of Entrepreneurship constructs, the higher the score of the Entrepreneurial Intention construct. Regarding the Labor Intention construct, the Feasibility ($\beta = -0.21$; $p = 0.042$), Important Obstacles for Setting up a Company ($\beta = 0.24$; $p < 0.001$), Pro-activeness ($\beta = -0.32$; $p = 0.001$) and Specific Capacities to Becoming an Entrepreneur ($\beta = 0.29$; $p = 0.003$) all generate a statistically significant effect. In this case, the higher the scores for the Feasibility and Pro-activeness constructs, the lower the score for the Labor Intention construct and the higher the score for the Important Obstacles for Setting up a Company and Specific Capacities to Becoming an Entrepreneur constructs, the higher the scores for the Labor Intention construct.

4.2 Multigroup Analysis

Finally, multigroup analysis served to test for statistically significant differences between these two countries in relation to their respective standardized path coefficients. Table 3 (Entrepreneurship intentions) and Table 4 (Labour intentions) summarise the analytical results.

In terms of entrepreneurial intensity (Table 3), in the Portuguese sample, the constructs generating a statistically significant positive impact on entrepreneurial intention are the following: Feasibility ($\beta = 0.53$; $p < 0.001$), Personal Attitude ($\beta = 0.15$; $p = 0.045$), Social Value of Entrepreneurship ($\beta = 0.21$; $p < 0.001$) and

Table 2 Standardized path coefficients of estimated SEM and standardized coefficients, standard error, T statistics and p-value of bootstraping estimation

	Entrepreneurial intention ($R^2 = 0.770$)					Labor intention ($R^2 = 0.160$)				
	Original sample	Sample mean	Standard error	T statistics	p	Original sample	Sample mean	Standard error	T statistics	p
Collectivist	0.03	0.03	0.05	0.70	0.488	0.08	0.07	0.08	1.02	0.310
Feasibility	0.45	0.45	0.07	6.31	0.000**	−0.21	−0.21	0.10	1.98	0.042*
Importance of setting up a company	0.06	0.06	0.04	1.46	0.145	−0.08	−0.09	0.10	0.82	0.411
Important obstacles for setting up a company	−0.05	−0.05	0.03	1.47	0.143	0.23	0.24	0.06	3.81	0.000**
Important resources for setting up a company	−0.08	−0.07	0.04	1.82	0.070	0.00	0.00	0.10	0.01	0.994
Individualist	0.05	0.05	0.04	1.24	0.215	0.09	0.08	0.11	0.87	0.383
Locus of internal control	−0.01	−0.01	0.04	0.18	0.855	0.13	0.13	0.09	1.50	0.133
Mixed	0.03	0.02	0.04	0.78	0.437	−0.12	−0.12	0.08	1.46	0.144
Motivations for setting up a company	0.00	0.00	0.04	0.07	0.944	0.10	0.09	0.08	1.15	0.252
Perceived control	0.06	0.07	0.06	1.13	0.261	0.01	0.02	0.12	0.13	0.900
Personal attitude	0.25	0.25	0.06	4.37	0.000**	−0.10	−0.09	0.10	1.02	0.308
Pro-activeness	0.05	0.05	0.06	0.91	0.365	−0.33	−0.32	0.10	3.29	0.001**
Self-efficacy	0.00	0.00	0.06	0.01	0.991	0.02	0.02	0.11	0.19	0.852
Social value of entrepreneurship	0.14	0.14	0.04	3.58	0.000**	0.00	0.00	0.07	0.01	0.995
Specific capacities to becoming an entrepreneur	0.08	0.08	0.05	1.54	0.124	0.29	0.29	0.09	3.04	0.003**
Standard	−0.03	−0.03	0.03	1.08	0.281	0.00	0.00	0.06	0.00	0.999

*$p < 0.05$; **$p < 0.01$

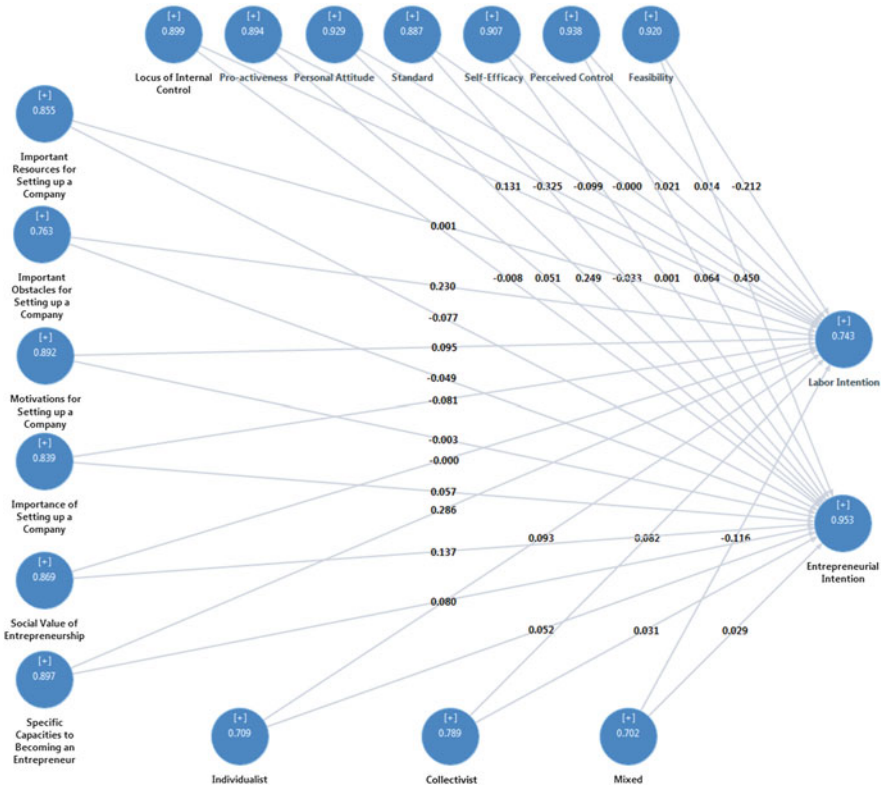

Fig. 2 Standardized SEM estimated path coefficients

Pro-activeness ($\beta = -0.19$; $p = 0.009$). As regards the Spanish student group, the constructs with a statistically significant positive impact on entrepreneurial intention are Feasibility ($\beta = 0.37$; $p < 0.001$), Importance of Setting up a Company ($\beta = 0.21$; $p = 0.009$), Perceived Control ($\beta = 0.16$; $p = 0.034$), Personal Attitude ($\beta = 0.25$; $p = 0.001$), Social Value of Entrepreneurship ($\beta = 0.21$; $p < 0.001$) and Pro-activeness ($\beta = 0.20$; $p = 0.005$).

As regards labour intention (Table 4), in the Portuguese student sample, the Pro-activeness ($\beta = 0.245$; $p = 0.009$) construct returns a statistically significant negative impact while in the Spanish students group Feasibility ($\beta = -0.15$; $p < 0.001$) returns a statistically significant impact on labour intention.

Table 5 conveys the summary results for the comparison of the Path Coefficients estimated between Spain and Portugal. In terms of entrepreneurial intention, there are statistically significant differences between the Path Coefficients for the constructs of Self-efficacy and Social Value of Entrepreneurship, with these values proving significantly higher among Portuguese students. As regards labour intention, we may report that the Feasibility construct had a far higher statistically significant negative impact on the Spanish students than on their Portuguese counterparts.

Table 3 Entrepreneurship intention: Standardized path coefficients of estimated SEM and standardized coefficients, standard error, T statistics and p-value of bootstraping estimation, by country

	Portugal ($R^2 = 0.799$)					Spain ($R^2 = 0.789$)				
	Original sample	Sample mean	Standard error	T statistics	p	Original sample	Sample mean	Standard error	T statistics	p
Collectivist	0.08	0.09	0.07	1.26	0.210	−0.03	−0.02	0.07	0.47	0.639
Feasibility	0.53	0.54	0.10	5.22	0.000**	0.37	0.37	0.09	4.32	0.000**
Importance of setting up a company	−0.02	0.00	0.05	0.43	0.665	0.21	0.18	0.08	2.61	0.009**
Important obstacles for setting up a company	−0.03	−0.05	0.05	0.54	0.593	0.07	0.06	0.06	1.18	0.238
Important resources for setting up a company	−0.09	−0.10	0.09	0.96	0.335	−0.12	−0.06	0.08	1.58	0.115
Individualist	0.02	0.05	0.05	0.33	0.743	0.09	0.07	0.06	1.52	0.130
Locus of internal control	0.06	0.07	0.07	0.88	0.381	−0.03	−0.03	0.06	0.50	0.618
Mixed	−0.04	−0.03	0.05	0.96	0.338	0.04	0.04	0.06	0.62	0.538
Motivations for setting up a company	−0.11	−0.08	0.06	1.69	0.093	0.09	0.09	0.06	1.53	0.126
Perceived control	0.01	−0.01	0.08	0.09	0.925	0.16	0.15	0.07	2.13	0.034*
Personal attitude	0.15	0.13	0.07	2.01	0.045*	0.25	0.25	0.07	3.41	0.001**
Pro-activeness	0.19	0.15	0.07	2.63	0.009**	0.20	0.19	0.07	2.81	0.005**
Self-efficacy	0.15	0.12	0.08	1.90	0.058	−0.08	−0.08	0.08	1.02	0.308
Social value of entrepreneurship	0.21	0.20	0.05	3.83	0.000**	0.06	0.08	0.06	1.02	0.308
Specific capacities to becoming an entrepreneur	0.15	0.14	0.09	1.66	0.098	−0.01	−0.02	0.07	0.13	0.898
Standard	−0.01	−0.03	0.04	0.15	0.884	−0.03	−0.04	0.05	0.62	0.537

*$p < 0.05$; **$p < 0.01$

Table 4 Labor intention: Standardized path coefficients of estimated SEM and standardized coefficients, standard error, T statistics and p-value of bootstraping estimation, by country

	Portugal ($R^2 = 0.575$)					Spain ($R^2 = 0.530$)				
	Original sample	Sample mean	Standard error	T statistics	p	Original sample	Sample mean	Standard error	T statistics	p
Collectivist	0.15	0.11	0.14	1.10	0.270	0.04	0.02	0.11	0.35	0.725
Feasibility	0.54	0.35	0.33	1.62	0.105	0.34	−0.26	0.15	2.32	0.021*
Importance of setting up a company	−0.12	−0.05	0.12	1.00	0.320	0.13	0.12	0.10	1.29	0.198
Important obstacles for setting up a company	0.13	0.03	0.13	0.94	0.349	0.13	0.10	0.15	0.85	0.395
Important resources for setting up a company	−0.01	0.00	0.18	0.07	0.948	−0.05	−0.02	0.14	0.40	0.691
Individualist	0.02	0.02	0.22	0.11	0.914	0.05	0.02	0.08	0.61	0.542
Locus of internal control	0.04	0.03	0.13	0.35	0.726	0.03	0.02	0.14	0.18	0.859
Mixed	0.04	0.01	0.12	0.34	0.734	−0.05	−0.06	0.11	0.49	0.622
Motivations for setting up a company	0.01	0.00	0.21	0.04	0.970	0.03	0.04	0.09	0.29	0.773
Perceived control	−0.09	−0.06	0.16	0.53	0.597	0.02	0.01	0.11	0.15	0.878
Personal attitude	0.15	0.08	0.14	1.08	0.282	0.24	0.20	0.14	1.69	0.092
Pro-activeness	−0.45	−0.25	0.18	2.52	0.012*	0.17	0.20	0.17	1.04	0.298
Self-efficacy	0.26	0.13	0.16	1.67	0.096	−0.10	−0.10	0.11	0.96	0.338
Social value of entrepreneurship	0.00	0.02	0.10	0.02	0.988	0.03	0.04	0.09	0.34	0.737
Specific capacities to becoming an entrepreneur	0.19	0.09	0.22	0.88	0.380	0.01	−0.03	0.14	0.06	0.953
Standard	0.03	0.01	0.12	0.24	0.809	0.16	0.13	0.08	2.03	0.043*

*$p < 0.05$

Table 5 Henseler's multigroup analysis

	Entrepreneurship intention		Labor intention	
	Path coefficients diff (| Portugal—Spain |)	p (Portugal vs. Spain)	Path coefficients diff (| Portugal—Spain |)	p (Portugal vs. Spain)
Collectivist	0.12	0.115	0.11	0.251
Feasibility	0.16	0.114	0.80	0.005**
Importance of setting up a company	−0.23	0.982	−0.25	0.943
Important obstacles for setting up a company	−0.10	0.893	0.00	0.535
Important resources for setting up a company	0.03	0.386	0.04	0.403
Individualist	−0.07	0.825	−0.03	0.529
Locus of internal control	0.10	0.162	0.02	0.475
Mixed	−0.08	0.863	0.10	0.284
Motivations for setting up a company	−0.20	0.987	−0.02	0.528
Perceived control	−0.15	0.925	−0.10	0.707
Personal attitude	−0.10	0.835	−0.09	0.673
Pro-activeness	−0.01	1.000	−0.63	0.990
Self-efficacy	0.23	0.018*	0.37	0.028*
Social value of entrepreneurship	0.15	0.033*	−0.03	0.601
Specific capacities to becoming an entrepreneur	0.16	0.088	0.18	0.236
Standard	0.02	0.357	−0.14	0.832

*$p < 0.05$; **$p < 0.01$

5 Final Considerations

The literature review posits that entrepreneurs display certain essential attributes or psychological characteristics and that, in turn, these produce specific personality traits (Samydevan et al. 2015). The need to achieve, a tolerance of ambiguity, the assumption of risks and the locus of control were subject to analysis in relation to entrepreneurial characteristics and furthermore identified as duly correlating with being or wishing to be an entrepreneur.

This approach recognises, as suggested by Ferreira and Fernandes (2017), the essential need to study the contextual variables, the personal and social factors that affect business intentions in persons, especially in university students given the

position these institutions hold in the creation of knowledge and the necessity for such knowledge to reach the market and be positioned in the service of society.

This study therefore chose to study the explanatory variables for entrepreneurial intention based on the psychological traits, motivations and individual and collective values of university students. To this end, we selected a sample of students attending Portuguese and Spanish universities in order to also evaluate the differences prevailing in these respective international ambiences.

The results, on the one hand, demonstrate the influence of the different explanatory variables used to predict and explain entrepreneurial intentions among university students. On the other hand, this also reported the existence of statistically significant differences between Portuguese and Spanish students.

As regards the psychological variables, we may report significant differences between these two countries across the variables Locus of Internal Control, Self-efficacy, Proactiveness, Personal Attitude, Perceived Control and Viability. In all of these cases, the Portuguese students return higher levels of results. For the different motivations around embarking on business activities, we may report the existence of significant differences in the constructs applied and identifying how Portuguese students return significantly higher levels across all constructs with the exception of Labor Intention, in which the Spanish students attain a higher value. In relation to the individual values, we once again encountered statistically significant differences between the constructs for Stimulation, Effort and Individualist and correspondingly reporting that the Portuguese students obtained significantly higher rankings in these constructs.

Portuguese students express lower levels of preference over working for third parties. In relation to the factors influencing preferences over becoming entrepreneurs, the Portuguese student sample reported a significantly higher option over becoming entrepreneurs. The main contributions of this paper stem from the results of its empirical attempt to complement the existing, mainly conceptual, literature on the role of psychological approaches in explaining entrepreneurial intentions. These results may generate a significant impact upon the knowledge about how psychological theory contributes towards understanding entrepreneurial intentions. This study has also demonstrated the feasibility of measuring and understanding the psychological effects on entrepreneurial intention in university students and furthermore able to take into account a number of other influences on the entrepreneurial intentions of these students within different national contexts.

Our research model might be further improved by eliminating some constructs that proved to be non-significant and a number of additional constructs could certainly be introduced by wider application during further research. We would propose future research develops a more coherent multidimensional construct for entrepreneurial intention. We correspondingly suggest extending this methodology to other samples (countries) in order to evaluate what are the most important psychological dimensions explaining the respective entrepreneurial intentions as well as analyse in a deeply way some potential differences in terms of culture aspects.

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