

Entrepreneurial Orientation Scale: Adaptation to Spanish

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Abstract. Entrepreneurship is linked to the perception of opportunities, to orientation, to attitudes, to the fear of failure and to entrepreneurial motivations. Entrepreneurial orientation is a fundamental construct for understanding the phenomenon of entrepreneurship. What is more, it is multidimensional and has attracted considerable attention from researchers in recent years. The objective of this study was to adapt the original 12-item English scale to Spanish and to analyze its psychometric properties. The participants in the present study were 925 Spanish employees (48.2% men, 51.5% women, M age = 42.49 years, SD age = 11.25) from the Autonomous Communities of Catalonia and Castilla-León. After applying an ESEM (RMSEA = .06; CFI = .97 and TLI = .95) a structure was determined made up of four factors which corroborated the structure of the original scale: Autonomy (α = .71 and CI = .68 – .73), Innovativeness (α = .70 and CI = .67 – .73), Risk Taking (α = .72 and CI = .68 – .74) and Competitive Aggressiveness (α = .70 and CI = .67 – .73). The four factors displayed suitable reliability. The study also found evidences of validity in relation to a series of external correlates and various scales which refer to workaholism, irritation and burnout. The scale presented here may prove useful for satisfactorily identifying, in Spanish, the entrepreneurial orientation of the working population.

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The Global Entrepreneurship Monitor (GEM, 2013) report indicates that entrepreneurship is linked to the perception of opportunities, to orientation, to attitudes, to the fear of failure and to entrepreneurial motivations. Furthermore, the study suggests that the government authorities of the countries in the study should not only focus on providing enterprising people with external resources such as capital and easy financing terms, but they should also study their skills, their motivations and their experiences.

In the 1730s, Richard Cantillon used the French term “entrepreneur” to refer to people who undertake self-employment while also accepting an uncertain return. In subsequent years, entrepreneurs were also referred to as innovators of new ideas (Thomas Edison), individuals who find and promote new combinations of production factors (Bill Gates’ bundling of Microsoft’s products), and people who take advantage of opportunistic ideas to expand small enterprises (Mark Zuckerberg at Facebook). The underlying tenet of these conceptions

of entrepreneurs is doing something new, as well as a sense that these individuals can make something of opportunities that others cannot (Certo, Moss, & Short, 2009).

Venkataraman (1997) stated that entrepreneurship as a field of study may be described as understanding how opportunities to bring into existence ‘future’ goods and services are discovered, created, and exploited, by whom, and with what consequence. Implicitly, this definition indicates that entrepreneurship applies to individuals in a variety of contexts.

Within this framework, a fundamental construct appears which explains entrepreneurship, entrepreneurial orientation (hereafter, EO). Today, emphasis has been placed on the importance of other aspects, such as attitudes (Oliver & Galiana, 2015) and personal characteristics (Suárez, Pedrosa, García, & Muñiz, 2014). The present research study has made use of other variables such as workaholism (driven and work enjoyment), irritation (emotional and cognitive) and burnout (exhaustion, cynicism and personal efficacy), given that both EO and entrepreneurial motivation were found to be significant in a previous paper (Boada-Grau, Sánchez-García, & Boada-Cuerva, 2011). We have also used external constructs such as age, tenure in your present job, tenure in the profession,

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in line with what has already been proposed by Callaghan and Venter (2011).

The entrepreneurial orientation construct, which as Lumpkin and Dess (1996, 2001) point out is multi-dimensional, has drawn considerable attention from researchers in recent years. This can be seen in the comprehensive meta-analysis carried out by Rauch, Wiklund, Lumpkin, and Frese (2009), in the reviews of the literature on EO (for example, Covin & Wales, 2012; Edmond & Wiklund, 2010; Wales, Gupta, & Mousa, 2013) and in the special issue *Entrepreneurship Theory and Practice* (Covin & Lumpkin, 2011) published on the subject.

In this sense, Lumpkin and Dess (1996, pp. 136–137) consider that EO “refers to the processes, practices, and decision-making activities that lead to new entry” as characterized by one, or more of the following dimensions: “a propensity to act autonomously, a willingness to innovate and take-risks, and a tendency to be aggressive toward competitors and proactive relative to marketplace opportunities”. On the other hand, Pearce, Fritz, and Davis (2010, pp. 219) understand that EO to be “is conceptualized as a set of distinct but related behaviors that have the qualities of innovativeness, proactiveness, competitive aggressiveness, risk taking, and autonomy”.

So, it is clear that EO as a construct has been the source of a fair amount of controversy in the scientific literature, as it can be comprised of between two and nine different dimensions, depending on the researchers. Some consider EO to have two dimensions: Merz and Sauber (1995), and Knight (1997) conceptualized EO as including only innovation and proactiveness, while Avlonitis and Salavou (2007) conceptualized EO as being composed of proactiveness and risk taking.

On the other hand, the original EO framework was first introduced by Miller (1983), who put forward three dimensions (innovation, proactiveness and risk-taking) for measuring entrepreneurship. These dimensions were also adopted by authors in later studies (Kreiser, Marino, & Weaver, 2002; Tarabishy, Solomon, Fernald, & Saghkin, 2005).

However, other authors (Bolton & Lane, 2012; Callaghan & Venter, 2011; Hughes & Morgan, 2007; Lumpkin & Dess, 1996, 2001; Rauch et al., 2009) hold the view that EO has five independent dimensions that include autonomy, innovativeness, risk taking, proactiveness and competitive aggressiveness. Briefly, autonomy is defined as independent action by an individual or team with a view to coming up with a business concept (Lumpkin & Dess, 2001) and implementing it successfully (Bolton & Lane, 2012). Innovativeness is the predisposition to engage in creativity and experimentation through the introduction of new products/services (Lumpkin & Dess, 2001) as well as technological

leadership via R&D in new processes (Bolton & Lane, 2012). Risk taking involves a tendency to take bold actions such as venturing into new and unknown markets (Lumpkin & Dess, 2001) and committing significant company resources to ventures in uncertain environments (Bolton & Lane, 2012). Competitive aggressiveness has to do with the intensity of one’s efforts to beat one’s rivals (Bolton & Lane, 2012), and is characterized by a combative stance and a forceful response to the actions of competitors (Lumpkin & Dess, 2001). Finally, proactiveness has an opportunity-seeking, forward-looking perspective characterized by devising new products and services ahead of the competition and acting in anticipation of future demand (Rauch et al., 2009).

In keeping with the above, the present research study analyzes the adaptation into Spanish of Lee, Lim, and Pathak’s (2011) Entrepreneurial Orientation Scale. The present scale is made up of our dimensions: autonomy, innovativeness, risk-taking and competitive aggressiveness. These are the most widely used dimensions in previous EO studies such as by Covin and Slevin (1991), Gartner (1989), Khandwalla (1977) and Miller (1983). Furthermore, Belousova (2011) considers that these four dimensions are the ones that best define EO. Having said this, there are also other proposals such as, two dimension-based proposals (Avlonitis & Salavou, 2007; Knight, 1997; Merz & Sauber, 1995), three dimensions (Kreiser, Marino, & Weaver, 2002; Tarabishy et al., 2005) and five dimensions (Hughes & Morgan, 2007; Rauch et al., 2009). Therefore, the purpose of this research is to analyze the psychometric properties of the Spanish version of the Entrepreneurial Orientation Scale in a sample of Spanish employees, based on three objectives: (1) to analyze internal consistency, (2) to test the reliability of the instrument, and (3) to establish evidence of its validity.

Method

Participants

The study sample was made up of 925 employees from Spain. The characteristics of the sample are described in Table 1.

Instruments

The Entrepreneurial Orientation Scale (Lee et al., 2011) evaluates an individual’s orientation towards undertaking a professional or business activity. Based on the guidelines proposed by several different authors (Hambleton, Merenda, & Spielberger, 2005; International Test Commission, 2005), we first assessed the importance of the construct in a working population, given that no other scale currently exists in Spanish; second,

Table 1. Sociodemographic characteristics of the participants

		Participants (N = 925)
Gender	Men	48.5 %
	Women	51.5 %
Age (years)		M = 42.49 (SD = 11.25)
Marital Status	Married	60.8 %
	De facto union	6.9 %
	Single	23.8 %
	Divorced / separated	7.5 %
	Widowed	1.0 %
Tenure (years)	In their current	M = 9.5 (SD = 9.91)
	In their professions	M = 14.91 (SD = 14.41)
	In their current company	M = 11.59 (SD = 11.54)
Educational qualifications	No school certificate or academic qualifications	1.4 %
	Finished primary education	22.6 %
	Completed secondary education	39.0 %
	A three-year degree or engineering	18.4 %
	A five-year degree, higher engineering or architecture degree	12.6 %
	Master / doctorate	6.0 %
Work contract types	Permanent (full-time)	57.7%
	Permanent (part-time)	14.2%
	Temporary (full-time)	9.9%
	Temporary (part time)	10.7%
	Others	7.5 %
Economic viewpoint the company's situation over the last 12 months	Not at all stable	8.4%
	Somewhat stable	21.4%
	Quite stable	39.2%
	Very stable	18.1%
	Totally stable	12.9%
Employees work in the following sectors	Education	26.25%
	Construction	25.56%
	Transport	16.38%
	Healthcare	12.42%
	Industry	11.41%
	Retail	3.49%
	Hospitality	2.10%
	Others	2.39%

we selected several native-speaker and bilingual translators as well as expert lecturers in entrepreneurialism with linguistic abilities in both languages (Spanish and English); we then carried out independent direct and back translations of the scale and tested the first Spanish version in a pilot study with 50 employees. This first study demonstrated that the instrument could be implemented in less than four minutes and allowed us to rectify some minor language-related issues. Lastly, we obtained information that would serve as evidence of the reliability and validity of the adapted scale. Accordingly, we used the list of 25 questions as a quality control measure for the translation-adaptation of the items proposed by Hambleton and Zenisky (2011).

The English version has 12 items and 4 factors, each factor having 3 items. The factors are: 1.- Autonomy

($\alpha = .67$; for example, "I don't want any financial support from my parents because I am now a grown up"), 2.-Innovativeness ($\alpha = .63$; for example, "I enjoy working on new things, so I am usually up to date with recent trends and current fashions"), 3.- Risk Taking ($\alpha = .71$; for example, "I think that starting up a new venture is the only way to succeed in life.") and 4.-Competitive Aggressiveness ($\alpha = .73$; for example, "Even if I launch new ventures and fail over and over again, I will keep on trying until I succeed"). The response format was a Likert 1 to 5 scale (1 = *totally disagree* to 5 = *totally agree*).

The Workaholism Scale (WorkBAT; McMillan, Brady, O'Driscoll, & Marsh, 2002), in the Spanish version implemented by Boada-Grau, Prizmic-Kuzmica, Serrano-Fernández, and Vigil-Colet (2013) has 19 items and 2 subscales. The first subscale is "D (Driven)" (12 items;

$\alpha = .82$; for example, “I would often like not to be so involved with my work”), the second is “J (Work Enjoyment)” (7 items; $\alpha = .83$; for example, “My work is so interesting that it often doesn’t seem like work”). The response format is a Likert 1 to 5 scale (From 1 = *Totally disagree* to 5 = *Totally agree*).

The Irritation Scale (Irritation Scale; Mohr, Müller, Rigotti, Aycan, & Tschan, 2006), in its Spanish version (Merino, Carbonero, Moreno, & Morante, 2006) has 2 factors (8 items). The first factor is Emotional irritation (5 items; $\alpha = .86$; for example, “When other people talk to me I answer back rudely”). The second is “Cognitive irritation” (3 items; $\alpha = .87$; for example, “I find it hard to switch off after work”). Responses were registered on a 7-point Likert scale (from 1.-*Very much disagree* to 7.-*Very much agree*).

The Spanish version of the Maslach Burnout Inventory-General Survey (MBI-GS; Salanova, Schaufeli, Llorens, Peiró, & Grau, 2000) is made up of 15 items and 3 subscales. The responses were registered on a 6-point scale (ranging from “never” to “every day”). The subscales are: Professional Efficacy (6 items; $\alpha = .78$) for example, “I have accomplished many worthwhile things in this job”), Cynicism (5 items; $\alpha = .85$; for example, “I have lost enthusiasm for my job”) and Exhaustion (5 items; $\alpha = .87$, for example, “I am ‘burnt out’ by the job”).

Finally, we also used a number of external correlates in order to measure the convergent validity (Boada-Grau, Sánchez-García, Prizmic-Kuzmicka, & Vigil-Colet, 2012) in the form of questions which the respondents were required to answer concerning certain sociodemographic aspects (for example, “Tenure in the profession”, “Feeling healthy”, etc.), the reasons for setting up their own company (for example, “To achieve personal success”, “To become more independent”, etc.) and the likelihood of starting up their own company in the next five years (for example, “Does the idea of setting up your own company appeal to you?”, “Would your friends support you if you set up your own company”, etc.).

Procedure

The sample was obtained through non probabilistic sampling, also known as random-accidental sampling (Kerlinger, 2001). We first of all obtained permission from the managers of the companies and organizations where the employees worked. We then contacted the employees and asked them to take part in the study. And finally, the scales were administered during working hours on an individual basis, while guaranteeing the confidentiality and anonymity of the data we obtained.

Data analysis

A Confirmatory Factorial Analysis was performed (hereafter, CFA) using the factor structure of the English

version. This was done using the Exploratory Structural Equations Model (hereafter, ESEM) (Asparouhov & Muthén, 2009) on the FACTOR Program (Lorenzo-Seva & Ferrando, 2006). The ESEM is an alternative to the traditional CFA put forward by Marsh, Liem, Martin, Morin, and Nagengast (2011) due to the fit problems that one usually comes across when applying CFA to typical appraisal measures. This approach enabled us to incorporate the best features of the CFA, the structural equation models of Exploratory Factor Analysis (hereafter, EFA), and to combine them into a comprehensive framework thus adding flexibility to all their components (Marsh, Lüdtke, Nagengast, Morin, & Von Davier, 2013). Briefly summing up, the ESEM (Morin, Marsh, & Nagengast, 2013) uses a measurement model based on an EFA with its corresponding rotation, to which a structural equations model is then applied, which combines the flexibility of the EFA with the possibility of obtaining the usual fit indices of structural equation models (Mai & Wen, 2013). In this way it is possible to carry out analyses that confirm the factor structure proposed by a prior EFA, such as in the case we are dealing with, or even to perform more complex analyses such as for example factorial invariance analyses (Chahin, Cosi, Lorenzo-Seva, & Vigil-Colet, 2010). The scale’s consistency as well as the validity coefficients were analyzed using the SPSS 20.0 program.

We also wanted to establish if the scales have bias related to sex. One possibility to analyze the presence of differential item functioning (DIF) is the use of multiple group mean and covariance structure (MACS) to detect it (Hernández & Gonzalez-Roma, 2003). This approach proposes a set of steps that first establishes the separate model fit for each group, and then tests the configurational invariance (the same number of constructs with the same indicators) model as a baseline model and finally tests different nested and more restricted models: Weak Invariance, represented by the equality of factor loadings and Strong Invariance which means that the indicator intercepts are equal (Byrne, 2008; Meredith, 1993). If the successive nested models do not imply a considerable reduction in model fit, and strong invariance is achieved, then it can be considered that the test gives the same score to individuals with the same true level in the latent variable assessed independently of their group, so the test do not show bias related to the grouping variable. If strong invariance is not achieved the consequence is that the test shows bias related to the grouping variable and it is necessary to analyze modification indexes in order to determine which items are showing DIF (Condon, Morales-Vives, Ferrando, & Vigil-Colet, 2006). To assess that the successive nested models do not implies a relevant decrease in model fit, we considered that there

are not a decrease in model fit if the model do not implies a decrease in CFI greater than .01 in comparison with the previous tested model (Cheung & Rensvold, 2002).

Results

The CFA indices that were calculated were: *the root mean square error of approximation (RMSEA \leq .06)*, *the comparative fit index (CFI \geq .95)* and *the Tucker-Lewis index (TLI \geq .95)*. Our results showed a good fit for the four-factor model given that the values for all three indices (RMSEA = .06; CFI = .97 and TLI = .95) were within the appropriate range. The one, two and three-factor models were rejected because they did not show a good fit.

Table 2 shows the results obtained for the different models used to test the presence of bias related to sex in the EO. As can be seen the introduction of restrictions in the model (equal indicators, loadings and intercepts) do not imply a relevant decrease in the fit of the model so, it seems that the Entrepreneurial Orientation scale do not have bias related to sex.

The entire sample was used in the creation of Table 3, which shows the mean, standard deviation, reliability, confidence interval and correlations for the four factors of the scale that we administered along with three contrast scales and 27 external correlates for the purpose of providing information about the validity indices. It also displays the reliability results for the four subscales, and the validity indices in the form of the significant correlations between the four factors and other variables.

The items of the scale are shown in Table 4, which includes aspects like items, mean, standard deviation, item-total correlations, skewness and kurtosis.

Discussion

In the present study we present the psychometric properties of the entrepreneurial orientation scale (Lee et al., 2011), which consists of 12 items. This scale enables us to evaluate an individual's orientation towards undertaking a professional and/or start-up activity. Furthermore, this is the first time this scale has been presented in its Spanish language adaptation.

Table 2. Tests for invariance models of EOS for men and women

	χ^2	df	RMSEA	CFI	NFI
Men	54.24	24	.053	.966	.906
Women	47.8	24	.045	.977	.938
Configurational	102	48	.049	.972	.923
Weak	128	80	.036	.970	.959
Strong	166.4	88	.038	.965	.955

The first objective was achieved given that the CFA supports Lee et al.'s four-factor model (2011). This was confirmed by the resulting indices which showed a good fit of the model RMSEA = .06; CFI = .97 and TLI = .95). (Only an EFA was carried out in the original English version).

In the Spanish version, the first factor, Autonomy, is related to the rejection of parental and family support, a positive attitude towards problems, self-sufficiency in facing challenges and the contribution of one's own resources in order to set up a business venture. It is made up of three items (numbers: 1, 2 and 3). The second factor, Innovativeness is made up of items 4, 5 and 6. It has to do with aspects such as enjoying working with new things, having innovative ideas and making future predictions. The third factor is Risk-Taking. It has to do with facing difficulties and an interest in creating and founding one's own company. It consists of three items (numbers 7, 8 and 9). The last factor (Competitive Aggressiveness) is related to the conviction that one will be successful in setting up a company and to persevering despite previous failures. It is made up of items 10, 11 and 12.

We found the following he correlations between the four factors in the Spanish version: .27 (F1 and F2), .20 (F1 and F3), .23 (F1 and F4), .34 (F2 and F3), .39 (F2 and F4) and .46 (F3 and F4). This indicates that they are different dimensions because the association was moderate.

The third objective was also achieved because we found appropriate reliability for the four subscales in the Spanish version, which ranged from .70 to .72. Reliability, understood as consistency, is a measure of the homogeneity of the items in a test (DeVellis, 2003) In Lee et al.'s (2011) English version the reliability ranged from .69 to .71.

The three objective were verified given that we found indices of the scale's validity. The correlations of the four subscales with the three contrast scales and various external criteria such as sociodemographic aspects, the reasons for setting up one's own company and the likelihood of setting up one's own company in the next five years showed some evidence of validity. Hence, we found significant correlations in the expected direction although these correlation coefficients indicated a low or moderate association. However, the sizes of these effects are quite typical in this domain. Mischel (1968) Meyer et al. (2001) have observed that correlations among variables rarely exceed .30 in this field of study.

The four factor correlated positively with the external correlates we employed, for example, "having power and social prestige", "getting pleasure and fun", "a feeling of personal self-fulfillment" and "having more freedom at work". It should also be pointed out

Table 3. Factors of the OE scale: Descriptive statistics, reliability, confidence intervals plus correlations with external variables and the factors of the WorkBAT, Irritation and MBI-GS scales, as well as the correlations matrix between the four factors and the scale under study

		F1	F2	F3	F4
M		10.81	10.44	7.47	8.92
SD		2.25	2.27	2.51	2.42
Reliability		.71	.70	.72	.70
Confidence interval		.68–.73	.67–.73	.68–.74	.67–.73
External correlates	Age	.13**	-.12**	-.03	-.06*
	Tenure in your present job	.13**	-.06*	.06	.01
	Tenure in the profession	.11**	-.08*	-.01	-.02
	Tenure in this company	.11*	-.08*	.00	.01
	Feeling healthy	.17**	.14**	-.04	.04
	Feeling happy with your life	.16**	.15**	-.01	.08*
	Taking work home	.06	.10*	.13**	.09**
	When you are in a social gathering, how often have you thought or even told someone that you should be working?	.01	.05	.14**	.02
	On how many personal appointments (visits to the doctor, gatherings –cafés, lunches, dinners- with friends) did you arrive late because you stayed back working?	.01	.03	.09*	.09
	Number of overtime at work a year	.01	.12*	.04	.08
Reasons for setting up your own company	Having power and social prestige.	.07*	.08**	.17**	.13**
	Achieving personal success	.08*	.14**	.14**	.17**
	Getting pleasure and fun out of it.	.10**	.15**	.11**	.14**
	Having new developments and changes in life.	.09**	.17**	.15**	.16**
	Having greater independence.	.14**	.12**	.19**	.18**
	Getting away from routine work	.06	.09**	.15**	.18**
	Feeling of self-fulfillment	.18**	.21**	.21**	.25**
	Having greater freedom at work.	.12**	.10**	.22**	.21**
	Having job security	.08*	.05	.16**	.16**
	As a last resort, because I have no other options.	-.09**	-.07**	-.11**	-.11**
Likelihood of setting up your own company in the next five years	How feasible do you think it is to start up your own company?	.19**	.23**	.39**	.28**
	The idea of setting up your own company appeals to you	.13**	.21**	.44**	.28**
	Would your family or spouse support you if you created your own company?	.09**	.12**	.15**	.17**
	And would your friends support you to set up your own company?	.08**	.14**	.14**	.18**
	The degree of knowledge you have concerning the steps you need to follow to set up a company.	.18**	.26**	.28**	.21**
	To what extent are you aware of the market opportunities –or events- that take place around you and that permit you to set up your own company?	.20**	.29**	.32**	.27**
	Do you have an idea in mind for setting up a company?	.15**	.28**	.31**	.29**
WorkBAT	D-Driven	.21**	.18**	.25**	.22**
	J-Work Enjoyment	.18**	.29**	.15**	.22**
Irritation	Emotional	-.13**	-.06	.06	.00
	Cognitive	.04	.10*	.12**	.07
MBI-GS	Exhaustion	-.11*	-.08	.09	-.04
	Cynicism	-.14**	-.06	.04	-.07
	Personal efficacy	.20**	.14**	.04	.14**
F1		—	—	—	—
F2		.27	—	—	—
F3		.20	.34	—	—
F4		.23	.39	.46	—

(F1.-Autonomy; F2.-Innovativeness; F3.-Risk Taking; F4.-Competitive Aggressiveness)

** $p < .01$; * $p < .05$.

Table 4. The Spanish version of Entrepreneurial Orientation: Items, Mean, Standard Deviation (SD), item-total correlations (r_{jx}), skewness (Sk) and kurtosis (Kr)

Instrucciones: A continuación encontrarás algunas afirmaciones sobre LA ORIENTACIÓN A EMPRENDER UN PROYECTO PROFESIONAL PROPIO (empresa, microempresa, etc.) EN EL FUTURO. No hay respuestas correctas ni incorrectas, ni tampoco respuestas buenas o malas. Lee atentamente cada frase e indique por favor el grado de acuerdo o desacuerdo con respecto a las mismas.

1	2	3	4	5	Mean	SD	r_{jx}	Sk	Kr
Completamente en desacuerdo	Bastante en desacuerdo	Ni de acuerdo ni en desacuerdo	Bastante de acuerdo	Completamente de acuerdo					
1.-No quiero recibir ningún apoyo financiero de mis padres, familia, etc., porque ya soy adulto/a [I don't want any financial support from my parents because I am already an adult] (F1)					3.64	1.22	.27	-.50	-.10
2.-Siempre soy positivo/a sobre los problemas que surgen en mi vida, y los resuelvo yo mismo/a [I am always positive about problems arising in my life, and resolve them on my own] (F1)					3.80	.92	.29	-.70	.00
3.-Si creo una empresa, puedo aportar mis propios fondos y los recursos humanos [If I launch a new venture company, I can furnish my own funds and human resources] (F1)					3.39	1.12	.31	-.40	-.56
4.-Disfruto trabajando en cosas nuevas, por lo que normalmente estoy al día sobre tendencias y modas [I enjoy working on new things, so I am usually up to date with recent trends and current fashion] (F2)					3.51	1.02	.51	-.38	-.72
5.-Suelo tener ideas progresistas e innovadoras, más que ideas conservadoras [I usually have progressive and innovative ideas rather than conservative ideas] (F2)					3.64	.96	.51	-.47	-.08
6.-Me gusta hablar sobre el futuro y, cuando lo hago, puedo convencer a mis amigos para que estén de acuerdo con mis predicciones [I enjoy talking about the future, and when I do so, I can persuade my friends to agree with my predictions] (F2)					3.36	.93	.45	-.35	.17
7.-Prefiero vivir una vida difícil a una vida cómoda, aunque sé que tendré que afrontar muchas dificultades [I prefer to live a challenging life rather than a comfortable one, even though I know I may face many difficulties along the way] (F3)					2.55	1.10	.26	.33	-.77
8.-Me interesa más crear mi propia empresa que conseguir un trabajo [I am more interested in establishing my own venture company than getting a job] (F3)					2.80	1.19	.46	.21	-.96
9.-Creo que fundar una empresa es el único modo de tener éxito en la vida [I think that founding a new venture is the only way to succeed in life] (F3)					2.07	1.08	.42	.78	-.10
10.-Si tuviera que crear una nueva empresa, estoy convencido/a de que tendría éxito y generaría beneficios [If I were to launch a startup company, I am confident that I could make it successful and earn profits] (F4)					3.25	.91	.35	-.19	.00
11.-Aunque la gente rechace de plano mis peticiones, persisto sin importarme que piensen que soy un plomo [Even if I have people flatly refuse my request, I persist even if they might think of me as a pest] (F4)					2.89	1.10	.43	-.02	-.56
12.-Aunque cree nuevas empresas y fracase muchas veces, seguiré intentándolo hasta tener éxito [Even if I launch new ventures and fail many times, I will keep on trying until I succeed] (F4)					2.78	1.19	.51	-.50	-.72

that the four factor correlated positively with workaholism. What is more, other positive correlations were found with cognitive irritation and personal efficacy. However, one correlate (“as a last resort, because I have no other options”) displayed a negative association with the four factors. Other variables that showed a negative correlation were age and tenure. In addition, cynicism, burnout and emotional irritation correlated

inversely with Autonomy. It should be mentioned that Lee et al.’s version (2011) did not provide data on validity indices.

To sum up, after looking at the results of the present research study we can safely say that the Spanish version of the Entrepreneurial Orientation Scale presents acceptable psychometric properties and may prove useful for evaluating the construct in question in both

women and men. It is made up of 12 items and 4 factors, shows suitable reliability and has yielded strong evidence of validity.

The findings of this study have significant practical implications. The scale used here may be useful for public bodies in evaluating the entrepreneurial orientation of candidates in public competitions for setting up companies or initiating business activities. However, these findings need to be replicated with university students, entrepreneurs and business owners given that the present study was conducted with a sample of employees and workers. And finally, further research is also needed to look into whether variables such as creativity, proactiveness, risk-taking, and family culture, as well as other variables, may be moderators of entrepreneurial orientation.

This study has various limitations. In the first place, the use of the self report may have led to a higher association between the variables due to the variance from the common method (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Nevertheless, the self-reporting has been widely used in studies into entrepreneurial orientation (Lee et al., 2011; Lumpkin & Dess, 2001). In addition, a cohabitation sample was used. These types of cohabitation samples are very frequently used in creating scales in the psychological sciences (International Test Commission, 2005) and in entrepreneurial orientation research studies (Lee et al., 2011; Lumpkin & Dess, 2001). According to Highhouse and Gillespie (2008) the use of cohabitation samples does not constitute a substantial threat to the validity of the study. This type of sampling is often chosen due to practical, financial and logistical limitations. And finally, transcultural studies need to be undertaken (Lee et al., 2011) both in different Spanish speaking countries as well as in other population groups such as, for example, university students (Bolton & Lane, 2012).

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