

# **Why does she start up? The role of personal values in women's entrepreneurial intentions**

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**Abstract:** This paper aims at shedding light on the role of personal values in the formation of women's entrepreneurial intentions (EIs). This should help explain whether (and why) women interpret the (entrepreneurial) reality around them differently from the way men do. To do so, this paper follows the theory of planned behaviour (TPB), combined with Schwartz's values theory. The model is then tested on a sample of 2923 highly-educated individuals from Spain. The results confirm the importance of value priorities in determining the EI, even after controlling for their motivational antecedents (as the TPB states). They also show that average value priorities are different both between women and men and between high- and low-intention women. The results are compatible with a post-structural feminist perspective. Therefore, the convenience of promoting a more gender-neutral entrepreneurship stereotype is highlighted.

**Keywords:** gender; personal values; entrepreneurial intention; entrepreneurship stereotypes.

## **1 Introduction**

Research on women entrepreneurship has substantially evolved over time (Henry et al., 2016) and different approaches have been adopted (Neergaard et al., 2011). Initially, studies tended to focus on the underrepresentation of women in entrepreneurship or on the differences in the size of their firms, their growth or their performance (Ahl, 2006). The proportion of the adult female population participating in entrepreneurship is lower than that of men for almost all countries (Kelley et al., 2012; Shane et al., 1991). Yet, there is considerable debate regarding whether the comparison of male and female behaviour is appropriate to understand gender differences in entrepreneurship better (de Bruin et al., 2007). Social feminist theories argue that most comparisons use a male stereotype of entrepreneurship which women are compared with (Camelo-Ordaz et al., 2016; Marlow and Swail, 2014). This may result in a 'negative' approach to women entrepreneurship, trying to explain why they are less inclined to start or grow a venture (Hirschi and Fischer, 2013; Marlow and Swail, 2014). In this sense, the feminist standpoint theory argues that there are essential differences between women and men (Neergaard et al., 2011).

More recently, however, research has frequently been aligned with the post-structural feminism perspective, assuming that gender is a social and cultural construction (Henry et al., 2016). From this perspective, societies develop culturally conditioned stereotypes of what is being a male or a female (Gupta et al., 2009; Mueller and Dato-on, 2008). These stereotypes have a conditioning effect on members of that society (Shinnar et al., 2012) who perceive stronger or weaker barriers to entrepreneurship depending on their self-identified gender role (Marlow and Swail, 2014). Contemporary research calls for the use of alternative approaches (Marlow and McAdam, 2013), considering the influence exerted by the cultural context. In this sense, Shinnar et al. (2012) explain how commonly shared cultural beliefs shape the opportunities and incentives that individuals experience in pursuing certain occupations. Thus, different interpretations of the world arise from the respective gendered perspectives (Bird and Brush, 2002). These may be caused by gender-specific socialisation (Camelo-Ordaz et al., 2016; Hirschi and Fischer, 2013).

Socialisation is reflected in the different value priorities (Fischer and Schwartz, 2011). Values guide people's lives towards what is important for them (Rokeach, 1973; Schwartz, 1992) and influence motivations and intentions (Bardi and Schwartz, 2003). In particular, research in social psychology has shown that values may cause behaviour (Verplanken and Holland, 2002) and influence the decision-making process (Schnebel, 2000).

Recent research has been carried out on values and entrepreneurship (Tipu and Ryan, 2016). Specifically, the combination of the theory of planned behaviour (TPB) and Schwartz's theory of human values (Liñán et al., 2016; Yang et al., 2015) has been explored. Notwithstanding, very little research, if any, has yet considered the existence of gender differences in the value-priorities associated with entrepreneurial intention (EI).

Additionally, there has lately been an increased interest in the entrepreneurial activity of highly-educated individuals. There is considerable evidence of the importance of higher education in the survival and performance of 'high quality' entrepreneurial initiatives (Millán et al., 2014). Human capital plays an even more important role in the case of opportunity-driven new ventures (Baptista et al., 2013). Similarly, the returns from education are greater for opportunity entrepreneurs, compared to necessity entrepreneurs (Fossen and Büttner, 2013). This is even more important in dynamic environments characterised by uncertainty (Hmieleski et al., 2015). For these reasons, our study focuses on highly-educated individuals.

This paper consequently aims at analysing the role of value-priorities in the formation of EIs with a gender perspective. We do this by developing three sets of hypotheses. The first relates to the role of values in the formation of EIs. The second focuses specifically on the existence of differential value priorities between women and men. By comparing the value priorities of women and men on an equal basis, we mean to avoid taking male entrepreneurship as a reference. Finally, the third set of hypotheses analyses the different values of high- and low-intention women. That is, the paper will also study the personal-

value differences between ‘low-’, ‘average-’ and ‘high-intention’ women. This will help understand the extent to which the value priorities of women intending to start a venture differ from those of the rest of women.

The results from this study will go one step further than simply analysing women entrepreneurship through a male lens. By identifying the value priorities that are characteristic of high- vs. low-intention women, we will be contributing to the development of a women-specific entrepreneurial profile. This will help us to understand how entrepreneurship is seen from a women’s perspective.

## **2 Theoretical background**

### **2.1 Personal values and EIs**

EIs have long been recognised as a key precursor of new venture creation (Krueger et al., 2000). The TPB (Ajzen, 1991) has frequently been applied to entrepreneurship (Kautonen et al., 2015; Moriano et al., 2012).

The TPB considers EIs to be directly influenced by three perceptions (Ajzen, 1991; Krueger et al., 2000). The entrepreneurial personal attitude (PA) is the degree of attraction towards becoming an entrepreneur (Botsaris and Vamvaka, 2016), while the entrepreneurial perceived behavioural control (PBC) refers to the ability to develop entrepreneurial behaviour. Finally, the perceived subjective norm (SN) refers to the perceived approval - or not - by their significant others of the individual’s decision to create a firm. This social-norm element captures the influence of the society on the individual (Ajzen, 1991; Meek et al., 2010).

Despite its frequent use, the TPB is not without criticism (Krueger, 2009). The testing of different specifications has been called for (Fayolle and Liñán, 2014). EI research has frequently included additional variables in the model (Liñán and Fayolle, 2015). In particular, personal values are relevant in this respect (Hirschi and Fischer, 2013), since they orientate behaviour (Verplanken and Holland, 2002; Yang et al., 2015). Values can be defined as desirable and trans-situational goals that motivate actions and guide people’s lives (Rokeach, 1973; Schwartz, 1992). Even in more complex decisions, highly valued goals induce a stronger motivation to plan thoroughly and a higher likelihood to form action plans that can lead to their expression in behaviour (Gollwitzer, 1996). Planning enhances people’s beliefs in their ability to attain the valued goal and increases persistence in the face of obstacles and distractions. By promoting planning, value importance increases value-consistent behaviour (Schwartz, 2006).

So, values shape the individual’s motivational goals (Schwartz, 1992; Tipu and Ryan, 2016). Schwartz proposes a circular structure of ten basic values representing the dynamic relationships between values according to principles of compatibility and logical contradiction. Following this circular structure, the pursuit of adjacent values (e.g., power and achievement, or stimulation and self-direction) is compatible, whilst the pursuit of opposing values (e.g., power and universalism) would generate conflict (Schwartz et al., 2001). The conflicts and congruities among all the ten basic values yield an integrated

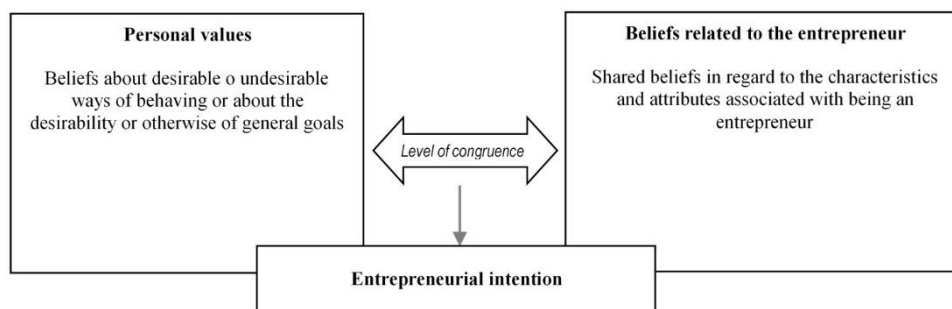
structure of values along two orthogonal dimensions. The first is a conflict between openness to change and conservation, where novelty and personal autonomy values (stimulation and self-direction) oppose those leading to stability, certainty and social order (tradition, conformity and security values). The second is a conflict between self-enhancement and self-transcendence, which confronts value types referring to the pursuit of self-promotion (achievement and power) with value types promoting the welfare of both close and distant others (benevolence and universalism). Hedonism shares elements of both openness and self-enhancement. Thus, following recent work in the field, we have excluded it from further analysis (Hirschi and Fischer, 2013; Yang et al., 2015).

In general, career choice theories suggest that individuals express career intentions, such as entrepreneurship, if they perceive that it fits with their motivational value orientation (Hirschi and Fischer, 2013). Accordingly, individuals choose jobs and activities that are perceived as requiring characteristics similar to their own (Gupta et al., 2009). Nevertheless, each career has specific beliefs and stereotypes linked with its respective professional activities. As a result, implicit cultural norms affect the selection of individual careers and, specifically, entrepreneurship (Thornton et al., 2011; Welter, 2011). The congruence between the personal values and the stereotypes (beliefs) connected with each specific career will influence the individuals' level of intention towards this professional option (Nosek et al., 2007), in this case entrepreneurship (see Figure 1). For that reason, specific beliefs held about activities and situations related to entrepreneurship will condition the intention to create a company (Hirschi and Fischer, 2013; Yang et al., 2015).

Cultural norms may be reflected in different socialisation patterns for women and men (Welter, 2011). This influences people in each sex to develop personal values that are more aligned with the society's gender prototypes (Gupta et al., 2013; Shinnar et al., 2012). Hence, a difference in value priorities may be expected between women and men. Nonetheless, there is consistent evidence showing that entrepreneurs score higher in individualistic values, irrespective of gender, such as independence and achievement (Moriano et al., 2007; Yang et al., 2015). Similarly, Hirschi and Fischer (2013) found that self-enhancement and openness to change values positively relate to EIs.

In particular, previous studies in Spain have shown that highly-educated adults tend to find significant differences between the male and the female stereotypes (Mueller and Dato-on, 2013). The value priorities associated with EIs in highly educated individuals are of relevance (Hmieleski et al., 2015) since education and human capital are especially important in opportunity entrepreneurship (Baptista et al., 2013).

Figure 1 Personal values, beliefs related to the entrepreneur, and their influence on EI



### 2.1.1 Self-enhancement vs self-transcendence values

People stressing self-enhancement (achievement and power values) are often prepared to invest time and effort to demonstrate competence and success in their endeavours (Bardi and Schwartz, 2003). Similarly, they tend to enjoy the power derived from the control of resources and employees offered by running a business (Holland and Shepherd, 2013). They also understand that building a successful venture can result in a positive public image and influential positions in social circles (Mcgrath et al., 1992).

On the other hand, self-transcendence values seem to not fit well with entrepreneurial stereotypes (Hirschi and Fischer, 2013). Self-transcendence values motivate people to care about the welfare of persons in their immediate environment (Holland and Shepherd, 2013), such as personal acquaintances, colleagues, communities (benevolence), and also in the world in general (universalism) (Schwartz, 1992). Individuals who place emphasis on these values are motivated by enriching the lives of associates and enjoy the personal psychological benefits derived from such prosocial behaviours (Lyons et al., 2007).

In this sense, Berings and Adriaenssens (2012) found that business students give more importance to the values of achievement and power, whereas altruism and universalism are comparatively more stressed by students in more socially-oriented domains (health, education and social work). Traditionally, the female stereotype is linked with empathy, care and humbleness (Gupta et al., 2013). Hence, to the extent that women are more likely to develop personal values in line with the female stereotype (Laguía et al., 2019), they should underscore self-transcendence values more than men do, while the reverse should be true for men. Nevertheless, there will be a variability in value priorities between women, as will also be the case between men (Liñán et al., 2016). Irrespective of their gender, therefore, a higher emphasis on self-enhancement values by a given individual ought to be connected with stronger EIs. Similarly, a higher emphasis on self-transcendence values would be associated with lower EIs.

Based on these arguments, the following hypotheses are proposed:

*H1a. Self-enhancement values (achievement and power) will be positively related to EIs for the highly educated.*

*H1b. Self-transcendence values (universalism and benevolence) will be negatively related to EIs for the highly educated.*

### *2.1.2 Openness to change vs conservation values*

Openness to change consists of the values of stimulation and self-direction. Individuals valuing openness appreciate independent thought and action and enjoy the excitement and challenge of life (Schwartz, 1992). They explore new ways of doing things and are not afraid of opposing conventional roles or systems (Holland and Shepherd, 2013). Using their intellectual capacity to develop new products and services stimulates them (Shane et al., 1991). An important facet of entrepreneurs, following the Schumpeterian tradition, is the expectation that they will challenge the status quo and introduce novelty into the field (Shane and Venkataraman, 2000). Berings and Adriaenssens (2012) found that the values of innovation and creativity have a positive influence on students' enterprising interest.

In contrast, people emphasising conservation value the stability of society, the preservation of traditions, and moderation in action (Schwartz, 1992). They will be afraid of 'standing out' and violating social expectations. They will be more inclined to preserve the status quo, sticking with traditional roles while seeking harmony in relationships (Lyons et al., 2007). They will also be motivated by societal norms and feel a sense of duty to meet obligations. As a result, strong conformity and traditional values are less likely to be linked with favourable attitudes towards entrepreneurship. Individuals who highly value conservation will tend to underscore self-control and prudence in their actions. They will prefer to avoid potentially risky situations, such as those usually faced by entrepreneurs (Yang et al., 2015).

As before, the association between the masculine stereotype and the prototypical figure of the entrepreneur in the Spanish culture (Mueller and Dato-on, 2013, Sullivan and Meek, 2012) suggests that men may tend to stress openness to change values more than women do. Related to this, higher education is an important avenue to open up new personal perspectives and develop openness to change values (Schwartz, 2006). Since our sample is made up of individuals with higher education, we should expect them to emphasise openness to change over conservation values. Additionally, the variability that is inevitably present in value priorities within any population (Liñán et al., 2016) leads us to assume that, irrespective of gender, a higher emphasis on openness to change will be connected with stronger EIs. The opposite will be true for conservation values.

Based on these arguments, we propose the following hypotheses:

*H1c. Openness to change (self-direction and stimulation) values will be positively related to EIs for the highly educated.*

*H1d. Conservation values (tradition, conformity and security) will be negatively related to EIs for the highly educated.*

## 2.2 Personal value priorities and gender

Both at the aggregate and individual levels of analysis, research has shown that there are gender differences in EIs and perceptions, regardless of the level of economic development (Camelo-Ordaz et al., 2016; Minniti and Nardone, 2007; Verheul et al., 2006). Similarly, there are gender differences in the manner in which self-beliefs and attitudes about entrepreneurship are processed and developed (Kickul et al., 2008).

In this sense, cognitive elements have recently been proposed to explain the gender gap in entrepreneurial activity (Powell and Butterfield, 2015; Ruizalba et al., 2015; Santos et al., 2016). The cognitive differences in entrepreneurial behaviours have been explained by gender stereotypes and socially-conditioned perceptions of what it means to be masculine or feminine (Bird and Brush, 2002; Gupta et al., 2009; Mueller and Dato-on, 2008). These stereotypes condition the perception of stronger or weaker barriers to entrepreneurship depending on one's self-identified gender role (Bird and Brush, 2002; Marlow and Swail, 2014). So, gender-specific socialisation leads to gendered perspectives in the different interpretations of the world (Camelo-Ordaz et al., 2016; Hirschi and Fischer, 2013).

Rokeach (1973) argued that society socialises women and men in a different way, making them play different gender roles. This explains gender-based differences in value priorities (Hirschi and Fischer, 2013; Powell and Butterfield, 2015; Rokeach, 1973). Different studies have indeed demonstrated that there are differences in values depending on sex (Caricati, 2007; Kessels, 2013; Lyons et al., 2007).

In general, the masculine stereotype based on aggressiveness and competitive behaviour has been assigned to men (Bird and Brush, 2002; Kickul et al., 2008). In contrast, the feminine stereotype underscores empathy, caring and humbleness (Gupta et al., 2013). Using social role theory, Schwartz and Rubel-Lifschitz (2009) reached similar conclusions. These stereotypes are clearly aligned with the self-enhancement vs. self-transcendence dimension. In an analysis with German students, Kessels (2013) found that men scored significantly higher on power values than women. Caricati (2007) noted that Italian women scored significantly higher in benevolence and men score higher in power. In a sample of 979 Canadian knowledge workers, women scored higher in universalism (Lyons et al., 2007).

Based on these arguments, the following hypotheses are proposed:

H2a. Self-enhancement (achievement and power values) will be more strongly prioritised by men compared to women.

H2b. Self-transcendence (universalism and benevolence values) will be more strongly prioritised by women compared to men.

Regarding the values related to openness to change (i.e., self-direction, stimulation), they tend to be valued higher by men than by women (Caricati, 2007; Lyons et al., 2007). Specifically, the masculine stereotype includes risk-taking as a defining feature, which is

clearly associated with entrepreneurship (Bird and Brush, 2002; Hirschi and Fischer, 2013; Kickul et al., 2008). In this sense, Schwartz and Rubel-Lifschitz (2009) suggest that men are inherently more willing to take risks. Conversely, the values related to conservation (i.e., tradition, conformity, security), tend to be favoured more highly by women (Caricati, 2007; Lyons et al., 2007). Along the same lines, the concept of innovation is highly gendered; an example being the strong association between masculinity, science and engineering, and innovation (Marlow and McAdam, 2013).

For this reason, the following hypotheses are formulated:

H2c. Openness to change (stimulation and self-direction values) will be more strongly prioritised by men compared to women.

H2d. Conservation (tradition, conformity and security values) will be more strongly prioritised by women compared to men.

### 2.3 The value priorities of high- and low-intention women

Following a post-structural feminism perspective, gender is assumed to be a social and cultural construction (Henry et al., 2016). From this perspective, women cannot be considered as a homogenous whole, but rather as a complex set of differentiated individuals (Marlow and Swail, 2014; Mueller and Dato-on, 2013). There are so many different variables and forces involved in the socialisation process that a considerable variability in personal values necessarily exists within any social group (Fischer and Schwartz, 2011). Gender role identification is not a deterministic consequence of sex. It is part of the identity formation process resulting from the interaction of personal values and perceptions during the socialisation process (Eccles, 2009). Although a larger share of women will probably identify with a feminine gender role orientation (GRO) (Gupta et al., 2009; Mueller and Dato-on, 2013), many others will identify with alternative role orientations (masculine, androgynous or undifferentiated).

Several authors have argued that women are inherently more ethical and caring (e.g., Moore and Buttner, 1997). However, this needs not be the case for all women, since it will depend on their specific GRO and associated value priorities. A lower share of women probably exhibits a masculine stereotype that is more related with the entrepreneurship stereotype (Bird and Brush, 2002; Hirschi and Fischer, 2013). In contrast, a larger proportion of women presents a feminine stereotype and likely feels entrepreneurship is not the expected option for them, perceiving more barriers to pursue an entrepreneurial activity (Brush et al., 2002; Marlow and Swail, 2014). Women with an androgynous stereotype could have an alternative view of entrepreneurship (Mueller and Dato-on, 2013). Research suggests that androgynous individuals tend to be more flexible and adaptive than is the case for people with masculine or feminine GROs (Vonk and Ashmore, 1993). Androgyny is also linked with a higher probability of participating in creative activities and showing creative skills (Norlander et al., 2000; Jonsson and Carlsson, 2000). In this case, entrepreneurship-related social norms and informal



institutions (Shinnar et al., 2012; Welter, 2011) may be very relevant in determining whether androgynous women consider developing an entrepreneurial career or not.

Hence, based on the reasoning above, a lower EI is not an essential characteristic of women, as the feminist standpoint theory would argue (Henry et al., 2016). In turn, the lower (higher) EI of women will be a consequence of their less (more) favourable motivational attitudes towards entrepreneurship (Kickul et al., 2008; Santos et al., 2016). This, in turn, is influenced by the lower (higher) priority attached to values connected with being an entrepreneur (Bird and Brush, 2002; Gupta et al., 2009; Mueller and Dato-on, 2008). One can therefore expect that high-intention women will present value-priorities emphasising self-enhancement and openness to change, while the opposite will be true for low-intention women.

This leads to the formulation of the following hypotheses:

*H3a High-intention women will exhibit significantly higher levels of openness to change and self-enhancement values when compared to average-intention women.*

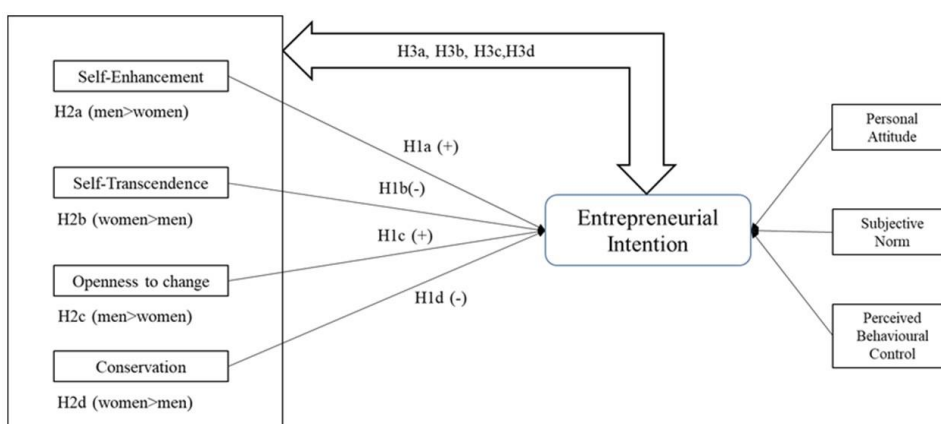
*H3b High-intention women will exhibit significantly lower levels of conservation and self-transcendence values when compared to average-intention women.*

*H3c Low-intention women will exhibit significantly lower levels of openness to change and self-enhancement values when compared to average-intention women.*

*H3d Low-intention women will exhibit significantly higher levels of conservation and self-transcendence values when compared to average-intention women.*

Figure 2 summarises the research model and the hypotheses to be tested through the empirical analysis.

Figure 2 Research model and hypotheses



### 3. Methodology

A questionnaire measuring the values, motivations and intentions of potential entrepreneurs in several Spanish regions has been used (Liñán et al., 2016). Adults with a university education were our target population. All 77 universities in Spain were contacted and 15 of them collaborated in the study. They sent invitations to their alumni to participate by completing an online questionnaire. Participation in the study was voluntary. The participants were reminded that there were no right or wrong answers and of the importance of providing honest responses. All questionnaires were completed anonymously to ensure confidentiality. The final sample was composed of 2,923 highly-educated adults (holding university degrees) (mean age 28.20; SD = 4.93; 43.2% male and 56.8% female).

Spain is a suitable context to perform this study. Previous research in the Spanish context has confirmed entrepreneurs being described by an association with a masculine stereotype (Hancock et al., 2014; Mueller and Dato-on; 2013). In the case of Spain, Noguera et al. (2015) argue that higher education may serve women to compensate for possible discrimination or other barriers. As a result, our sample and context seem to be adequate to test our research model.

The research instrument includes a TPB questionnaire (Liñán et al., 2016) and Schwartz's portrait value questionnaire (PVQ) (Schwartz et al., 2001). The TPB questionnaire, unlike other questionnaires used in the field (Krueger et al., 2000), strictly follows Ajzen's (2002a) methodological recommendations using composite measures of attitudes and SNs. All items in the questionnaire were measured on a 7-point Likert-type scale (from 0 to 6). The TPB questionnaire has already been validated (Rueda et al., 2015).

The dependent variable, EI, was measured using a five-item scale in which each item assesses the perceived likelihood of an individual choosing an entrepreneurial career (e.g., 'it is very likely that I will start a venture someday'). Higher scores reflect stronger EIs. To prevent acquiescence bias, the third item (f3) was reversed.

As per the TPB antecedents, the attitude towards entrepreneurship was measured through two sets of six items, assessing the expected outcomes of an entrepreneurial career (e.g., 'being an entrepreneur would involve ... facing new challenges') and the desirability of these outcomes (e.g., 'to what extent is facing new challenges generally desirable in your life?'), respectively. Following Ajzen (2002a), outcome expectations were multiplied by their desirability and then the six scores were averaged. SNs were measured with two sets consisting of three items each. They measure the respondents' expected support by significant others (e.g., 'to what extent would your parents and siblings agree if you decided to become an entrepreneur?'), as well as their motivation to comply with these reference people (e.g., 'how do you value the opinion of your parents and siblings in this regard?'). These two sets were multiplied and then averaged. Perceived behavioural control has been measured through a six-item scale, combining

elements of self-efficacy and controllability (e.g., ‘to what extent would you be able to effectively perform the definition of your business idea and a new business strategy?’), in line with the theory (Ajzen, 2002b, 1991) and previous research on EIs (Krueger et al., 2000; Moriano et al., 2012, 2007). In all cases, higher scores indicate a higher (more positive) level of the variable. Reliability indicators (Cronbach alphas) were satisfactory for all measures, as shown in Table 1

Personal values have been measured through Schwartz’s PVQ (Schwartz, 2006; Schwartz et al., 2001). This includes 40 statements describing different profiles of people (e.g., ‘thinking up new ideas and being creative is important to her/him. (S)he likes to do things in her/his own original way’). Respondents are to state their level of identification with these profiles. The mean rating for each individual has been computed and differences from that mean are used to indicate value priorities (Schwartz, 2006). The ten basic human values are computed as the average priority assigned to the items comprising them, and these basic values are averaged again into the four value dimensions (openness to change, conservation, self-enhancement, and self-transcendence). In all cases, a positive score denotes a relatively prioritised value, whereas a negative score indicates a relatively unimportant value for the individual. Again, the Cronbach alphas were satisfactory for the four value dimensions (see Table 1).

A number of variables were included to control for some previously established influences on intention and thus avoid model misspecification. Age has been identified as negatively affecting intention (Hatak et al., 2015), due to the opportunity cost of time (Levesque and Minniti, 2006). We have measured age in years. Research has also found that in most developed countries, a higher socioeconomic level is positively linked with EI (Liñán, 2004; Kelley et al, 2012). This variable has been measured in three categories (low, middle and high status). Similarly, immigrants have consistently been found to exhibit higher EI than natives (Davidsson, 1995; Kushnirovich et al., 2018). Immigrant status has been measured as a dichotomy variable. These three variables were included as controls, together with a dummy to measure gender.

## **4 Results**

Table 1 presents the descriptive statistics, reliabilities and correlations between the variables used in the model. These correlations are in line with hypotheses H1a-H1d. Consequently, self-enhancement and openness to change are positively related to EI, and also to personal attitude and perceived behavioural control. With regard to collectivistic values (self-transcendence and conservation), they are also in line with the hypotheses. Openness to change is positively related to SNs as well, while conservation is negatively so. In contrast, SN relations to self-enhancement (negative) and self-transcendence (positive) are opposed to our expectations.

To fully test hypothesis H1, a hierarchical linear regression has been computed and is presented in Table 2. Model 1 only includes the control variables. It shows that males

tend to exhibit a higher EI than is the case for females, as previous research has consistently found. This effect, however, partially wears off as motivational antecedents and personal values are included in subsequent models. Something similar happens with the immigrant status. It initially increases intention (even when these immigrants have received a degree in their host country, Spain). In the case of age, the EI of older people is lower, as we expected. No significant result is found for the socioeconomic level.

Model 2 includes the motivational antecedents of intention. The three of them are significant and the model explains 39.2% of the variance in EIs. There are some relevant changes in the coefficients for the control variables as well. The immigrant status is no longer significant, since its effect is most probably fully mediated by the motivational antecedents. The socioeconomic level, in turn, becomes negative and significant. This suggests that higher status families tend to exhibit more positive motivational antecedents but, in contrast, they are less inclined to entrepreneurship (possibility because they have more alternatives available). In the case of age and gender, the relationship is maintained, but weaker, indicating that it is partly due to males and younger people exhibiting more positive antecedents.

Model 3a introduces self-enhancement and self-transcendence values, with results supporting Hypotheses H1a and H1b. In Model 3b, H1c is supported, but conservation (H1d) is not related to EI. Model 4 includes the four value dimensions together. Yet, some evidence of multicollinearity was found (the highest variance inflation factor = 2.667 and the highest condition index = 18.481), meaning that the  $\beta$  coefficients and significance levels are not completely reliable. This is caused by the four values being related to each other in a circumplex structure (Yang et al., 2015). For that reason, Model 3c left out conservation (the non-significant value dimension in Model 3b). No evidence of multicollinearity is present in Model 3c, and Hypotheses H1a, H1b and H1c are supported.

The  $\beta$  coefficients for the personal-value dimensions are in every case smaller in absolute value than is the case for motivational antecedents, which serves as an indirect confirmation of the applicability of the TPB. Self-enhancement and openness to change are values more strongly related to EI, and they both have a positive effect, while self-transcendence has a weak but significant negative relationship with EI. We performed robustness checks by repeating the analysis on the female and male subsamples separately. The results are essentially similar. Interestingly, personal attitude is a stronger predictor of EI for men, while the SN is more important for women. The results are available from the authors upon request.

Table 1. Descriptive statistics, reliability and correlations

	Mean	Std. dev.	1	2	3	4	5	6	7	8	9
1 Gender <sup>a</sup>	0.432	0.495	1								
2 Entrep. intent.	2.978	1.228	0.174***	1							
3 Personal attitude	3.384	1.059	0.043*	0.504***	1						
4 Subjective norm	3.316	1.343	-0.026	0.358***	0.360***	1					
5 Per. beh. control	3.850	1.169	0.129***	0.540***	0.542***	0.343***	1				
6 Self-enhancement	-0.612	0.681	0.189***	0.224***	0.111***	-0.054**	0.197***	1			
7 Self-transcend.	0.675	0.464	-0.198***	-0.175***	-0.044*	0.046*	-0.148***	-0.651***	1		
8 Openness change	0.357	0.445	-0.069***	0.094***	0.186***	0.097***	0.103***	-0.154***	0.067***	1	
9 Conservation	-0.401	0.423	0.032	-0.141***	-0.214***	-0.062**	-0.142***	-0.245***	-0.252***	-0.724***	1

Note: <sup>a</sup>Gender coded as follows: 0 = female, 1 = male. N = 2923. \* = p < 0.05; \*\* = p < 0.01; \*\*\* = p < 0.001.

Table 2. Linear regression models on EI

<i>Variables</i>	<i>Model 1</i> $\beta$	<i>Model 2</i> $\beta$	<i>Model 3a</i> $\beta$	<i>Model 3b</i> $\beta$	<i>Model 3c</i> $\beta$	<i>Model 4</i> $\beta$
Gender	0.178***	0.126***	0.102***	0.129***	0.104***	0.104***
Age	-0.062**	-0.046**	-0.031*	-0.044**	-0.026†	-0.026†
Socioeconomic level	0.013	-0.034*	-0.045**	-0.033*	-0.045**	-0.044**
Immigrant	0.048**	0.022	0.020	0.018	0.014	0.013
Attitude to entrepreneurship	---	0.265***	0.261***	0.257***	0.248***	0.253***
Subjective norm	---	0.150***	0.168***	0.150***	0.171***	0.173***
PBC	---	0.332***	0.306***	0.330***	0.300***	0.302***
Self-enhancement	---	---	0.097***	---	0.105***	0.129***
Self-transcendence	---	---	-0.043*	---	-0.048*	-0.025
Openness to change	---	---	---	0.044*	0.065***	0.085***
Conservation	---	---	---	0.005	---	0.039†
R <sup>2</sup>	0.037	0.392	0.407	0.393	0.411	0.411
Adjusted R <sup>2</sup>	0.035	0.390	0.405	0.392	0.409	0.409
$\Delta R^2$	0.037***	0.355***	0.015***	0.002*	.019***	.020***

Notes:  $N = 2923$ . Standardised coefficients reported: † =  $p < 0.1$ ; \* =  $p < 0.05$ ; \*\* =  $p < 0.01$ ; \*\*\* =  $p < 0.001$ .  $\Delta R^2$  for Models 3a, 3b and 3c based on Model 2.

Table 3. Descriptive statistics and mean differences by sex

	<i>Female (N = 1,661)</i>		<i>Male (N = 1,262)</i>		<i>Mean difference</i>
	<i>Mean</i>	<i>Std. dev.</i>	<i>Mean</i>	<i>Std. dev.</i>	
Entrep. intention	2.792	1.248	3.223	1.156	-0.432***
Personal attitude	3.344	1.079	3.436	1.029	-0.092*
Subjective norm	3.346	1.372	3.276	1.303	0.070ns
Per. beh. control	3.719	1.199	4.024	1.105	-0.305***
Self-enhancement	-0.724	0.678	-0.464	0.657	-0.260***
Self-transcendence	0.755	0.455	0.570	0.454	0.186***
Openness to change	0.384	0.445	0.322	0.443	0.062***
Conservation	-0.413	0.424	-0.386	0.421	-0.027 ns

Notes: t-test for mean differences. Significance levels: ns = not significant. \* $p < 0.05$ . \*\* $p < 0.01$ . \*\*\* $p < 0.001$ .

Regarding Hypotheses H2, Table 3 offers partial support for them. Thus, for the first value dimension (self-enhancement vs self-transcendence) women prioritise self-transcendence more than men do (H2b supported). H2a is also supported, although self-enhancement is not prioritised by either gender (-0.724 for females and -0.464 for males). Meanwhile, along the other axis (openness to change vs conservation), contrary

to our expectations, openness to change is more strongly prioritised by women than men (H2c not supported), although the difference here is smaller. Finally, conservation is relatively more emphasised by men, although the difference is not significant (H2d not supported).

Finally, to test hypotheses H3, the female subsample was divided into three groups, based on their EI levels. High-intention women (those with EIs above 4.5 in a 0-6 response range) were compared to their average-intention counterparts (with EIs between 1.5 and 4.5), and this second group was then compared to low-intention women (with EIs below 1.5). T-tests were used for the analysis. As may be seen in Table 4, high-intention women exhibit more positive motivational antecedents (PA, SN, PBC), a higher emphasis on self-enhancement and openness to change, and less emphasis on self-transcendence and conservation values. That is, higher intention is connected with a relatively greater emphasis on individualistic values, while the emphasis on collectivistic values (self-transcendence and conservation) tends to be lower.

Table 4. Value differences by intention level for women

	<i>High intention (N = 206)</i>	<i>Average intention (N = 1,126)</i>	<i>Low intention (N = 329)</i>	<i>Hi-Av difference<sup>†</sup></i>	<i>Av-Lo difference<sup>†</sup></i>
Personal attitude	4.236	3.388	2.637	0.849***	0.751***
Subjective norm	4.116	3.424	2.597	0.692***	0.827***
Perc. beh. control	4.735	3.795	2.822	0.940***	0.973***
Self-enhancement	-0.539	-0.709	-0.893	0.170***	0.184***
Self-transcendence	0.645	0.757	0.819	-0.112**	-0.062*
Openness to change	0.473	0.389	0.311	0.084*	0.078**
Conservation	-0.502	-0.427	-0.309	-0.075*	-0.118***

Notes: High intention (EI  $\geq$  4.5); Average intention (4.5 > EI > 1.5); Low intention (EI < 1.5). t-test for mean differences: †A positive mean difference indicates a higher value for the group with higher intention women (high intention in the first comparison, average intention in the second one). Significance levels: \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

When the average-intention and the low-intention women are compared, the results are essentially repeated. In both comparisons, the movement is stronger along the self-enhancement/self-transcendence axis. Accordingly, even if self-enhancement is not prioritised in any group, the high-intention women stress these values substantially more than is the case for other women. In contrast, along the openness to change/conservation axis, the movement is less important (although always significant). High-intention women underscore openness to change more than other groups, but the distance is relatively smaller. Thus, full support is found for all sub-hypotheses in H3. There is a clear and strong association between personal value priorities and EI.

## 5 Discussion

The results from the present study contribute to the entrepreneurship stream of research by shedding light on the role of value priorities in women's EIs. They offer insights regarding the general relationship between values and EIs, about gender differences in EIs, and also concerning the values of women with different levels of EIs. Firstly, the present study has confirmed earlier work associating EI with individualistic values (Hirschi and Fischer, 2013; Moriano et al., 2007; Yang et al., 2015). Self-enhancement and openness to change values are positively related to EI. This relationship is very clear and strong when we analyse the average levels in women (Table 4). The relation still holds (although weaker) even after controlling for the effects of PA, SN and PBC on the EI (H1a and H1c supported). This is a clear indication that motivational antecedents partially mediate the relationship between individualistic personal values and EIs (Liñán et al., 2016). So, the importance of these values is clearly substantial.

At first sight, these values could help explain the higher EI of men with respect to women (Kelley et al., 2012; Shane et al., 1991). This represents our second area of contribution, since our results confirm that men stress self-enhancement values more than women do, which would be the cause of their higher EI. In this sense, when values are included in the analysis, the regression coefficient for sex becomes lower. Nonetheless, this does not explain why their value profiles are as such. The cause may be some essential difference between women and men, as the social standpoint theory would argue (Henry et al., 2016). In turn, it may also be the consequence of the cultural norms, gender stereotypes and socialisation processes (Gupta et al., 2013; Laguía et al., 2019; Marlow and Swail, 2014). Our results could be interpreted to support this later explanation. In fact, we find that high-intention women do underline individualistic values more strongly than the rest of women (while the opposite is true for collectivistic values). Thus, the lower mean level of EIs for women could mean that norms, and stereotypes contribute to make fewer women develop such entrepreneurially-related values.

Based on the literature, we also argue in favour of the latter. In particular, GROs represent an important concept to understand these differences (Bem, 1974). Individuals develop their GRO influenced by cultural norms, gender stereotypes and biological sex (Gupta et al., 2008, 2009). Even though more women identify with the feminine GRO than is the case for men, a majority of them typically present other alternative GROs (masculine, androgynous or undifferentiated) (Mueller and Dato-on, 2008, 2013). Additionally, once individuals have developed their GRO, they are confronted with entrepreneurial stereotypes in society. To the extent that entrepreneurship is associated with typically masculine features, women lacking a masculine role orientation will not see it as a viable career option for them (Laguía et al., 2019). This may be the case even for androgynous women (exhibiting both a feminine and a masculine orientation), presenting higher levels of creativity (Norlander et al., 2000) and flexibility (Vonk and Ashmore, 1993). They may still avoid entrepreneurship as an option if it is too strongly linked with a masculine stereotype (Laguía et al., 2019). In this sense, this association still seems to be strong in Spain (Mueller and Dato-on, 2013).



Our results also show that the traditional distinction between individualistic values (that would be connected with men) and collectivistic values (that would be associated with women) has turned out to be too simplistic. It holds true for one axis (women stress self-transcendence values more than men do). In contrast, women underscore openness to change more, while men emphasise conservation. In this sense, the literature has traditionally found conflicting values linked with being a woman, being a professional and being an entrepreneur (Marlow and McAdam, 2013; Shinnar et al., 2012). The fact that our sample is made up of highly-educated individuals may partly help explain this. Higher education contributes to developing openness to change values (Schwartz, 2006). Women with higher education would not only stress these values to a greater extent but may also be more aware of gender discrimination issues. Some of them may seek entrepreneurship based on independence and autonomy motives, as a possibility to develop a professional career avoiding direct glass-ceiling barriers (Ezzedeen and Zikic, 2012).

Thirdly, the results also show that the relation between EIs and personal value is not linear, at least for women's conservation and self-transcendence values. As we move from low- to average- and to high-intention women, the changes in personal values differ. The openness to change and self-enhancement values grow in quite a linear trend. Most of these values contribute to higher EIs. In contrast, the change from low- to average-intention is connected with a larger decrease in conservation values. In the change from average- to high-intention, in turn, it is the decrease in self-transcendence values that is more relevant. The differences are not substantial but, taken with caution, could be indicating that a relative emphasis on conservation is the strongest deterrent of women entrepreneurship, leading to low EIs. In contrast, for these women to exhibit high intentions, they need a lower emphasis on self-enhancement. As a consequence, to the extent that gender stereotypes differ, women may form EIs from accentuating different values (Dinc and Hadzic, 2018). These value differences are probably relevant in determining the kind of ventures women and men will start (Sakari Soininen et al., 2013; Rosa and Sylla, 2018).

### *5.1 Implications*

Important implications may be derived from these results. In the first place, the association of entrepreneurship with a male stereotype (Gupta et al., 2008, 2009) is probably a strong deterrent of EIs among women (and also among men without a male GRO). Thus, an effective means of promoting female entrepreneurship may be fostering the adoption of an alternative view of the entrepreneur, underlining the specific values more strongly prioritised by women. Entrepreneurship can be presented as a possibility to develop a 'path of your own' and 'living your own experiences' (openness to change values). At the same time, the entrepreneurial career can also be presented as an opportunity to 'care about others' and 'provide opportunities for others' (self-transcendence values). So, by associating entrepreneurship with these specific values, women exhibiting any GRO can feel entrepreneurship is 'suitable for them' (Hirschi and Fischer, 2013). There is a clear opportunity here to act in entrepreneurship

education (Tolentino et al., 2014). The inspiring effect that role models may have on students' entrepreneurial interest (Nabi et al., 2017, 2018) calls for inviting more entrepreneurs with differing value profiles. In more general policy action, enhancing the social image of entrepreneurs as people who 'live their lives' while 'helping others' will contribute to generating a more feminine entrepreneurial stereotype (Hancock et al., 2014), which can be very useful in promoting female entrepreneurship.

Additionally, important avenues for further research are opened by these results. The direct influence of values on EIs, over and above that of motivational antecedents, needs further investigation. The self-enhancement/self-transcendence axis seems to contribute more to explaining intention, but gender differences are relevant here. Similarly, the necessity/opportunity motive to start a venture deserves attention (Daulerio, 2018). Some authors claim that women start ventures out of necessity more than men do (Allen et al., 2007). This may be a consequence of their different value priorities. The relationship between taking advantage of an opportunity and personal values is thus an interesting area of further research (Gupta et al., 2013).

## *5.2 Limitations*

This study is not without limitations. Firstly, the sample corresponds to highly-educated adults in Spain. Although this educational category presents higher entrepreneurship rates (Kelley et al., 2012), a considerable number of ventures are created by less educated individuals. The extent to which these results hold for other population groups with lower education levels remains to be seen (Jiménez et al., 2015). Secondly, value priorities in Spain are in line with those of the great majority of the European Union (Schwartz and Ros, 1995) but are not exactly the same. Similarly, the extent to which entrepreneurship is associated with masculine characteristics may also differ by country (Mueller and Dato-on, 2013). Further studies are necessary to confirm the generalisability of these results to other developed countries. In this sense, Yang et al.'s (2015) results are slightly different for Taiwan (a country culturally very distant from Spain). The applicability of these results to less developed countries should, in turn, be evaluated with extreme caution.

## **6 Conclusions**

This paper has contributed to a deeper understanding of the role of values in the EI formation process from a gendered perspective. This is probably the first such study strictly following the TPB and Schwartz's values theory. The results have shown that personal values play a very relevant role in the formation of women's EIs. As expected, individualistic values are positively linked with entrepreneurship, while collectivistic values are negatively so. However, the relative importance of each value-dimension seems to be different for different groups of women, such as the low- vs average- vs high-intention groups. We have also found significant differences between the value priorities of women and men.

These results fit with a view of women entrepreneurship as affected by cultural norms, gender stereotypes and personal GRO. The present situation in this population suggests that high-intention women tend to stress openness to change more than men do, while they are more collectivistic along the alternative axis (accentuating self-transcendence more). But these differences may soften or even disappear with the development of a more gender-neutral entrepreneurship stereotype. Overall, therefore, more research is needed to fully understand the mental processes leading women (and men) to entrepreneurship. We hence call for additional research that may confirm or refute these findings.

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