



International Journal of Education Economics and Development

ISSN online: 1759-5681 - ISSN print: 1759-5673

<https://www.inderscience.com/ijeed>

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DOI: [10.1504/IJEED.2023.10048928](https://doi.org/10.1504/IJEED.2023.10048928)

Article History:

Received: 25 February 2022

Accepted: 06 June 2022

Published online: 22 January 2024

Culture and education as factors affecting entrepreneurship in Spain: an analysis of expert opinion

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Abstract: This article focuses on the Spanish context, which is characterised by high rates of unemployment and social exclusion, in which entrepreneurship can drive innovation and economic growth. The objective was to analyse culture and education as factors affecting entrepreneurship from expert opinion on the subject. The study used the most recent data on Spain in the global entrepreneurship monitor (GEM) database. Following a descriptive analysis, quantitative analyses were performed using non-parametric tests. The results indicated that the experts were not optimistic that culture or education were factors that would encourage entrepreneurship. Our findings support the view that the evaluation of entrepreneurship is affected by variables such as gender, the type of degree obtained, and professional area. The findings of the study indicate the need to reinforce entrepreneurship education and training (EET) in order to compensate for social inequalities that affect the decision to start a business venture.

Keywords: entrepreneurship; entrepreneurship education and training; EET; culture; education and training systems; gender; degree type; professional area; global entrepreneurship monitor; GEM; national expert survey; Spain.

Reference to this paper should be made as follows: García-Álvarez, J., Vázquez-Rodríguez, A. and Sáez-Gambín, D. (2024) 'Culture and education as factors affecting entrepreneurship in Spain: an analysis of expert opinion', *Int. J. Education Economics and Development*, Vol. 15, Nos. 1/2, pp.98–118.

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1 Introduction

Spain faces some of the most severe problems of unemployment and social exclusion in Europe. According to the 2020 data from Eurostat (2021), 15.5% of the Spanish workforce were unemployed, which is amongst the highest rates in Europe, and far higher than the European average (7.9%). In the same period, 26.4% of the Spanish population were at risk of poverty and social exclusion, which is an increase on previous years and has clear consequences for people's wellbeing (European Anti-Poverty Network, 2021). The working situation in Spain must be understood within the framework of two situations. The first is the continuing impact of the 'great recession' and the very slow recovery, and the proliferation of temporary contracts. The second is the more pronounced impact of COVID-19 on employment and job security (Aceytuno et al., 2020; Malo, 2021).

In this context, starting a business venture is held to be a plausible option for entering the world of work, as well as something which strengthens economic growth, employment, development, and innovation (González et al., 2019; Liñán et al., 2013; Neira et al., 2013). This is especially so because socio-economic changes have meant there is a need to create businesses and social enterprises, which in the Spanish context are a mechanism for job creation and the promotion of a more competitive, innovative, inclusive economy, in line with European Union priorities (González et al., 2019; Lanero et al., 2011).

Because of this, entrepreneurship has been touted by politicians and in the cultural context as a key mechanism for increasing competitiveness and economic growth. One clear example of that is the approval of a national strategy for active support for employment (Ministerio Español de Trabajo y Economía Social, 2021) which gave 'star' status to measures aimed at entrepreneurship such as training and advice for entrepreneurs and promotion of policies for starting businesses from opportunities in the digital and social economy. This political discourse is accompanied by an emphasis on education programs for entrepreneurs as the way to develop entrepreneurial spirit, improving employability and resilience in an uncertain job market (Guerrero et al., 2011). This supports the idea that cultural values and education may be factors that promote entrepreneurship, although social and political discourse are a long way from the current reality of employment in Spain.

According to the most recent data, being an entrepreneur in Spain is not an attractive proposition. This is supported by the fact that total entrepreneurial activity (TEA), which measures entrepreneurial activity as the percentage of the active population (aged 25–64) who have their own business, is well below the European average. There is also a large proportion of people for whom fear of failure is an obstacle to starting their own business (64% in Spain compared to 47% on average) (Observatorio del Emprendimiento de España, 2021). In addition, if one looks at education and training systems as mechanisms for promoting entrepreneurship through the development of skills and abilities (human

capital) and social networks (social capital) (González et al., 2019; Loi, 2018; Neira et al., 2013), Spanish educational institutions and training providers offer fewer initiatives, networks, and teacher training aimed at promoting entrepreneurship in students (González et al., 2019; Sánchez, 2013).

Based on the above, this study aims to analyse education and culture as factors affecting entrepreneurship. The scientific literature has already shown that, in combination, they encourage people to view entrepreneurship as an attractive career option (Fellnhöfer and Puumalainen, 2017; Muofhe and du Toit, 2011). These factors are even more important in countries like Spain, with little job creation and notable social inequality, where entrepreneurship mediated by those factors might improve the national situation (Aceytuno et al., 2020).

The objective of this study is to use the data from GEM to analyse culture and education as key factors of entrepreneurship from the point of view of experts in the Spanish context. We chose to include expert views in this study because of their broad knowledge of this area which would give us the best overall view of the situation of entrepreneurship in Spain.

Ultimately, our purpose is to determine whether experts view entrepreneurship as an attractive option for the population, or rather as an individual responsibility within the framework of neoliberal discourse of economic growth and business innovation in the face of a scenario of high levels of unemployment and social inequality (Aceytuno et al., 2020; Oliva et al., 2021).

We should not forget that the decision to start a business depends on the social environment that is directly affected by human and social capital (resources, family support, education, social contacts, etc.), as well as by each person's personality traits (Aghion, 2017). The experts' views may shed light on whether entrepreneurship maintains social inequality, by producing a positive view of it in those who have started businesses and producing frustration in others from socioeconomic and cultural backgrounds which are less helpful in attempting this difficult task (Aceytuno et al., 2020; Oliva et al., 2021).

The paper is structured as follows: The next section examines and contextualises the importance of cultural and educational variables in entrepreneurship. Section 3 describes the research questions guiding the study. Section 4 describes the methodology used, with the results given in Section 5 in relation to the research questions. Section 6 is a discussion of the results, and a comparison with the most important findings in the literature, as well as a presentation of the main limitations of the study and the principal conclusions drawn from it.

2 Theoretical background: culture and education as factors affecting entrepreneurship

The modern challenges of globalisation have meant that economies have had to reorganise themselves, hence the need to have plans and approaches that can adapt to the demands of business and to current and future social changes. In this scenario, entrepreneurship should not be thought of as something that is only linked to the employment setting, but rather as something that has become more important in education and training, and is now an important resource and agent of social change in various cultures. From this perspective, analysis of entrepreneurial activity should be

considered in the framework of a given social context because of the interactions within it and with the singular norms and values of the culture (Granovetter, 1973). Culture, as ‘mental programming’, determines thought patterns, feelings, and potential actions that are learned throughout life, distinguishing members of one group from those belonging to other groups (Hofstede et al., 2010).

Culture may influence entrepreneurship by two main mechanisms:

- 1 a culture of support may drive social legitimisation of entrepreneurship, making it more highly valued as a career choice and more widely socially recognised
- 2 a shared culture of values and patterns of thinking may lead to people with psychological traits and attitudes associated with entrepreneurship (Krueger et al., 2013; Liñán et al., 2013).

Hence, culture as learned collective programming could support or hinder entrepreneurship through the discourse and cultural patterns that influence not only families and peers, but also the various actions of EET that the subjects are involved in, determining the path to follow for those who decide to start a business (Bygrave and Minniti, 2000; Fellnhofer and Puumalainen, 2017; Guerrero et al., 2011; Hofstede et al., 2010; Krueger et al., 2013). In this regard, it is worth remembering how important education is to a person’s employability (Santos Rego et al., 2018) and how it links to indicators of high quality employment (Crespo et al., 2017). EET in particular may increase students’ interest in being entrepreneurs as a career (Dyer, 1994).

Because of the importance of effective professional pathways, educational policies and programs have been designed which encourage entrepreneurial culture as a response to the new challenges of the current model of society. So much so that *recommendation 2006/962/CE of the European parliament and of the Council of 18 December 2006 on key competences for lifelong learning* has led Spain to incorporate entrepreneurial skills in its most recent education legislation: LOE, LOMCE, and LOMLOE (Jefatura del Estado Español, 2006, 2013, 2020). This demonstrates the growing concern of policymakers about this dimension of students’ basic education.

Naturally, this encouragement of entrepreneurship has materialised in educational institutions’ efforts—both formal and non-formal—in the design and delivery of education processes that encourage students to develop ‘entrepreneurial initiative’ (Hytti and O’Gorman, 2004; Nabi et al., 2017). The uncertainty of the global job market, together with high rates of unemployment, mark a clear challenge for public and private agents who must regenerate economic activity through new jobs and sources of wealth creation. It is a scenario in which entrepreneurship and learning to operate in the ‘new era’ have become essential components both in business and in education (Rae, 2010).

As noted previously, cultural values and norms affect the extent to which institutions (especially educational institutions) and the people in a given social context support entrepreneurship. One example would be reinforcing values such as risk-taking and innovation which are related to greater competitiveness and economic growth (Aghion, 2017; Guerrero et al., 2011; Liñán et al., 2013; Sánchez, 2013). In addition, the social legitimisation of entrepreneurship also leads to the institutional need to promote EET programs aimed at developing social and human capital that may, to some extent ‘neutralise’ the effects of social inequality (Aghion, 2017; Loi, 2018). That said, there is no doubt that the issue of entrepreneurship is still a challenge for schools and training

institutions all over the world, as is encouraging entrepreneurial skills in their students in order to ensure that they have options in the modern job market (Priegue et al., 2014).

At the international level, there are educational programs designed to stimulate ‘enterprising initiative’, with objectives such as developing a broad understanding of what entrepreneurship means, as well as the role of entrepreneurs in modern societies and economies provision of training for students with a focus on entrepreneurship based on the modern world of work and preparation for acting as entrepreneurs in which they have to manage a new public or private organisation (Hytti and O’Gorman, 2004). These kinds of missions can be summed up as educational approaches to ‘learning the meaning of entrepreneurship’, ‘learning to be entrepreneurial’, and learning to become an entrepreneur’ (Gibb, 1999; Hytti and O’Gorman, 2004).

However, incorporating this into the educational arena must be considered from an interdisciplinary perspective, and it should be a priority for current policies and strategies around development and innovation (European Commission, 2013; Fellnhofner and Kraus, 2015; Guerrero et al., 2011; Kozlinska, 2011). It means a new approach which attempts to bring enterprising culture and the world of businesses closer to educational institutions and practices, promoting general competencies from the perspective of human capital such as self-confidence, leadership, resistance to failure, creativity, innovation, optimism, initiative, and autonomy, among others (Bernal-Guerrero, 2021; Bernal-Guerrero et al., 2021). This is the origin of EET, which may be understood from a social-mobility perspective as ‘the process of providing individuals with the concepts and skills to recognise opportunities that others have overlooked and to have the insight, self-esteem and knowledge to act where others have hesitated’ [Jones and English, (2004), p.416].

Alongside this, people who have direct, positive experience of enterprising activity through their cultural context, family support, and educational environments have been shown to be more likely to start businesses (Fellnhofner and Kraus, 2015; Neira et al., 2013). This, in addition to economic and institutional incentives, may lead people to consider starting a business as either a viable option or a risky decision in a context of an uncertain job market (Bygrave and Minniti, 2000). One example of that is the importance of gender in entrepreneurial intention. Women have been found to demonstrate less self-confidence about taking on the risks of starting a business, with EET and family help being fundamental where there are no other support networks (Cardella et al., 2020; Fernández-Cornejo et al., 2018; Welsh et al., 2018).

It is important to remember that, when engaging in entrepreneurial activity, the skills and personality traits people have, together with their social backgrounds (resources, education, level of social interactions, cultural norms, and values) are key aspects in the directions they take in their professional careers. Although there have been notable efforts in education towards entrepreneurship, it is essential to consider the difficulties of integrating these components, especially in formal contexts. One example of that is the scant understanding of the influence of education-related variables on the development of entrepreneurial attitudes. Fayolle and Gailly (2008) indicated the need to advance the analysis of the possible nexus between developing entrepreneurial skills and variables such as past exposure to entrepreneurial activity, the content of completed educational activities, learning methods, the professional profiles of educators, and the resources available for education. In terms of the latter, some authors have also identified the importance of teacher training in promotion of EET, indicating that teachers need methodological skills that will allow them to design and apply practical, active,

experiential training that is close to experience, making them into ‘educational entrepreneurs’ (Bernal-Guerrero, 2021).

On the basis of the review above, it is clear that we should understand culture and education as elements that affect entrepreneurial activity. In that regard, according to the theory of planned behaviour (TPB) (Ajzen, 1991) as a conceptual framework for the study of human behaviour, we understand entrepreneurial intention as a person’s planned, intentional behaviour in the framework of a specific social context (Muofhe and du Toit, 2011).

According to TPB, entrepreneurship is a career decision that is affected by culture, education, family background, gender, friends, and prior personal and professional experiences (Ahmad and Kumar, 2020; Fellnhofner and Puumalainen, 2017). More specifically, this theory identifies enterprising intention with three attitudinal precursors to the intention (Ajzen, 1991; Liñán et al., 2013; Muofhe and du Toit, 2011): Attitude toward behaviour or personal attitude (PA), which refers to how much the subject has a positive or negative personal assessment of entrepreneurship Perceived social norms or subjective norm (SN), which addresses pressure or approval from peer groups or ‘significant people’ about becoming an entrepreneur and perceived behavioural control (PBC), which is defined, in line with the work from Bandura (1977), as the perceived ability to engage in certain behaviour (in terms of self-efficacy), in this case the perception of the ease or difficulty of becoming an entrepreneur.

Within this conceptual framework, it is important to bear in mind the large body of the literature which identifies role models as a key factor in promoting entrepreneurial activity (Fellnhofner and Puumalainen, 2017). It is here that formal, non-formal, and informal education is particularly significant (in the framework of formal and non-formal learning in education and training systems, but also in informal learning in the family, from peers, and through the media) because, through social interactions in various social contexts, individuals learn behaviours and skills from others who act as role models and see entrepreneurship as an attractive career option, thus affecting entrepreneurial activity (Bygrave and Minniti, 2000; Cardella et al., 2020). In this way, it is possible to establish a relationship between education and role models in making decisions about starting businesses (Fellnhofner and Puumalainen, 2017; Muofhe and du Toit, 2011), which shows that countries like Spain should work more on promoting educational programs to achieve greater entrepreneurial activity and reduce social inequality (Aceytuno et al., 2020).

3 Study research questions

Based on the literature review, the objective of this study was to analyse culture and education as factors affecting entrepreneurship from the perspective of expert opinion. The study used the data from the national expert survey (NES) from the GEM (2021). Expert views, from different professional areas and situations, may help provide a good overall understanding of the importance of cultural and education-related variables in the decision to start a business venture. The expert profiles for the study represented a range of those involved directly in the development of entrepreneurship in Spain, and were as follows:

- 1 entrepreneur
- 2 investor, financier or banker
- 3 policy-maker
- 4 business and support services provider
- 5 educator and researcher in entrepreneurship.

The intention was to evaluate, in the experts' opinion, how far the national reality makes it possible for there to be 'equity' of opportunity for people in Spain to become entrepreneurs, encouraging social mobility and breaking down social inequalities, or whether instead they consider it to be a society with cultural and institutional traits, discourse and policies aimed at 'talent' and excellence for those who, because of their socioeconomic backgrounds and individual characteristics, can become relatively successful entrepreneurs (Aceytuno et al., 2020; Aghion, 2017; Oliva et al., 2021).

Given that the experts' individual characteristics may have an impact on their evaluations, in addition to their professional areas, the analysis included gender and the type of degree they studied. Gender has been shown to notably influence entrepreneurial intention, which might alter the experts' opinions (Cardella et al., 2020). In addition, the degree a person studies brings with it the discourse and values represented by their 'role model' educators, and this, along with their experiences throughout education and working in a given area, may also affect the experts' assessments (Ahmad and Kumar, 2020; De Jorge-Moreno et al., 2012).

Overall, our aim was to continue the existing line of study about experts' attitudes towards entrepreneurship (Fellnhofer and Kraus, 2015; Herrington and Coduras, 2019). This study also allowed us to continue investigating education and culture as factors that might determine entrepreneurial intent in the Spanish setting, which is characterised by high rates of unemployment and employment uncertainty. The following research questions were proposed:

RQ1 How do culture and education affect decisions about entrepreneurship?

Determining whether culture and education/training systems affect entrepreneurial activity in Spain requires an approach from the perspectives of those directly involved, who have a good understanding of the situation. In this regard, research has highlighted cultural and educational factors as affecting decision-making about entrepreneurship (Ahmad and Kumar, 2020; Fellnhofer and Puumalainen, 2017; Krueger et al., 2013; Liñán et al., 2013; Muofhe and du Toit, 2011).

Differences have been found in intention and motivation about starting business ventures in different cultures (Krueger et al., 2013; Liñán et al., 2013). One of the most widely-studied cultural variables is the emphasis on more individualistic values, such as success, self-direction, and a stimulating life, which are related to greater entrepreneurial activity and intention at both personal and cultural levels (Liñán et al., 2016). Nonetheless, the role of culture is broader, as social norms and values are influenced by the different backgrounds and social or family contexts one has throughout life. This cultural context determines possibilities for innovation, accepting risks, significant social interaction, and in general, whether one is in a culture oriented towards entrepreneurial activity (Ahmad and Kumar, 2020; Cardella et al., 2020).

EET, in relation to TPB, has been shown to play an essential role in the development of human and social capital leading to greater entrepreneurial intention, thanks to the promotion of skills, behaviours, professional experience, and social interactions (González et al., 2019; Loi, 2018; Muofhe and du Toit, 2011; Sánchez, 2013). EET can help people to consider starting a business venture as an attractive career choice (Dyer, 1994; Muofhe and du Toit, 2011). In the analysis of expert views of education and culture, we expect to see how these factors are seen as determinants of entrepreneurship in the social context.

RQ2 Does the gender of the Spanish experts influence their assessments of how culture and education/training systems contribute to entrepreneurship?

Gender may be a key determinant in the experts' assessments of entrepreneurship. Firstly, because the cultural variable is directly linked to the learned norms and values which affect the decision to start a business venture. In this regard, the theory of social roles and the theory of gender roles have demonstrated that gender can affect the decision to start a business venture via stereotypes, cultural patterns, and the norms and discourse that encourage 'hegemonic masculinity' (Connell and Messerschmidt, 2005; Rubio-Bañón and Esteban-Lloret, 2016).

Cultural and social values can encourage male dominance in entrepreneurial activity and raise barriers to women starting ventures (Ahmad and Kumar, 2020; Cardella et al., 2020; Verheul et al., 2012). Similarly, for women, exposure to parental role models and programs aimed at entrepreneurship have a positive influence on their perceived entrepreneurial behaviour control (Cardella et al., 2020; Entrialgo and Iglesias, 2017). We expect, therefore, that in the analysis of culture and education as determining factors of entrepreneurship, there will be significant differences according to gender.

RQ3 Do the types of degrees the experts studied or their professional areas influence their assessment of the contribution of national culture and education/training systems to entrepreneurship?

The profiles and individual characteristics of the experts may also determine their evaluations of entrepreneurial activity. In fact, the literature supports this argument, suggesting that previous educational experience (type of degree) and professional experience (work-related variables) influence entrepreneurial intention (Ahmad and Kumar, 2020; De Jorge-Moreno et al., 2012; Feltnhofer and Puumalainen, 2017). At a broader level, the importance of what degree someone does has been demonstrated in issues such as civic and social competencies which, in terms of human capital, are linked to greater employability and community involvement (Santos Rego et al., 2020).

In this regard, we expect experts with training and experience in economics or business to have a more realistic view of the situation in Spain, which may be significantly different to the views of other professionals (De Jorge-Moreno et al., 2012). We expect to find, in line with Oliva et al. (2021), more negative views from working entrepreneurs. Given this reference, and considering the diverse profiles of experts, from entrepreneur to educator, this is a good opportunity for the study to look at the differences in views based on their professional areas and degree types.

4 Methodology

The empirical analysis in the study focused on the GEM database survey of experts NES using the most recent available data, from 2017. GEM provides information about the attitudes, activities, and characteristics of people who involved in entrepreneurial activity in various parts of the world (GEM, 2021).

To address the research questions, the database of Spanish experts with higher education qualifications was chosen, in order to study the influence of degree type on their perceptions. After applying the filters, the final sample comprised 709 subjects (33.29% women, 66.71% men). Three quarters of the subjects (73.20%) studied the arts, humanities, or social and legal sciences (A-H-SLS), while a quarter (24.80%) studied science, health, engineering, or architecture (S-H-E-A). The professional profiles of the sample were as follows: 15.09% entrepreneur, 5.21% investor or financier 7.48% policy-maker 15.51% Business and support services provider, and 11.42% Educator or researcher. The remaining participants reported multiple professional areas.

The survey questions allow a detailed picture of culture and education as determinants of entrepreneurship. To that end, the study used the 6 items from scale D ($\alpha = 0.87$) and the 5 items from scale I ($\alpha = 0.91$). Both scales have statements with 9 Likert-type response options ranging from ‘completely false’ to ‘completely true’ with a mid-point of ‘neither true nor false’. The full list of items is given in Table 1.

Table 1 Items making up scale D and scale I

<i>SCALE D</i>	
D01	In my country, teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative
D02	In my country, teaching in primary and secondary education provides adequate instruction in market economic principles
D03	In my country, teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation
D04	In my country, Colleges and universities provide good and adequate preparation for starting up and growing new firms
D05	In my country, the level of business and management education provides good and adequate preparation for starting up and growing new firms
D06	In my country, the vocational, professional, and continuing education systems provide good and adequate preparation for starting up and growing new firms
<i>SCALE I</i>	
I01	In my country, the national culture is highly supportive of individual success achieved through one’s own efforts
I01	In my country, the national culture emphasises self-sufficiency, autonomy, and personal initiative
I02	In my country, the national culture encourages entrepreneurial risk-taking
I03	In my country, the national culture encourages creativity and innovativeness
I04	In my country, the national culture emphasises individual responsibility (rather than collective) for managing one’s own life
I05	In my country, teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative

In this quantitative study, the data from the GEM-NES database were analysed using the IBM-SPSS statistical package (version 25). We conducted descriptive comparative analysis using the Mann-Whitney U and Kruskal-Wallis tests to compare responses between independent samples (gender, degree type, and professional area). We performed pairwise comparisons of the Kruskal-Wallis test using the Dunn test with Bonferroni correction, reported in the main body of the article only when significant. The effect size was calculated for the Mann-Whitney U test ($r = Z/\sqrt{N}$) and the Kruskal-Wallis test [$ES = H * (N + 1)/(N^2 - 1)$] for all results (Tomczak and Tomczak, 2014). A significance level of $\alpha = 0.05$ was used.

5 Results

RQ1 Culture and education as determinants of entrepreneurialism. The expert view

We first performed a descriptive analysis (means and standard deviations) to assess the experts' assessments of each of the items in the scales related to culture and education as determinants of entrepreneurialism in Spain. This analysis was complemented by examining the differences between scores based on the experts' gender, degree type, and professional area Table 2.

Overall, the experts indicated that Spanish education and training systems made little contribution to entrepreneurial activity. The lowest scores were in encouraging creativity, self-sufficiency, and personal initiative (D01) education in the market economy (D02): proper attention to entrepreneurship (D03) and entrepreneurial risk-taking (I03).

With regard to gender, women gave higher scores in all items in both scales. The higher scores given to the preparation provided by education and training systems in starting and growing new businesses (D05) stood out, as did the scores for the support from the national culture for individual success (I01).

In terms of degree types, those whose degrees were in A-H-SLS scored all of the items higher than those whose degrees were in S-H-E-A. This was most clearly evident in the items related to training by colleges and universities (D04) and the systems of vocational, professional, and continued training (D06) for creating and growing new businesses. The differences were also notable in the culture dimension, particularly in encouraging individual success (I01) and entrepreneurial risk-taking (I03).

With regard to professional area, the analysis indicated two divergent views. Entrepreneurs gave the lowest scores to all of the items in the scales. In contrast, policy-makers, and educators and researchers, gave the highest scores. It was not unexpected for the entrepreneurs, who know the difficulties and possibilities in state education and training systems, to demonstrate a more pessimistic view of how those systems contribute to entrepreneurship, even more so if one considers the unstable situation of the current job market. It is also reasonable that both policy-makers—responsible for designing employment policy—and educators and researchers—responsible for improving training processes—to have more positive assessments.

Table 2 Means and standard deviations for scales D (Education) and I (Culture)

	n	Mean [Std]										
		D01	D02	D03	D04	D05	D06	I01	I02	I03	I04	I05
<i>General</i>												
	709	3.26 [1.934]	3.06 [1.823]	2.79 [1.679]	4.03 [2.120]	5.06 [2.078]	4.75 [1.950]	4.83 [2.275]	4.46 [2.127]	3.45 [1.949]	4.00 [2.062]	4.55 [2.268]
<i>Gender</i>												
Women	236	3.50 [2.161]	3.22 [2.037]	2.95 [1.867]	4.14 [2.249]	5.37 [2.143]	4.91 [2.091]	5.37 [2.305]	4.86 [2.174]	3.62 [1.987]	4.22 [2.043]	4.88 [2.192]
Men	473	3.14 [1.802]	2.98 [1.705]	2.71 [1.576]	3.98 [2.052]	4.92 [2.031]	4.67 [1.876]	4.56 [2.212]	4.26 [2.077]	3.37 [1.926]	3.89 [2.065]	4.38 [2.289]
<i>Degree type</i>												
A-H-SLS	519	3.30 [1.945]	3.17 [1.854]	2.84 [1.686]	4.20 [2.145]	5.16 [2.116]	4.87 [1.921]	4.95 [2.270]	4.59 [2.134]	3.59 [1.965]	4.12 [2.069]	4.62 [2.244]
S-H-E-A	176	3.18 [1.929]	2.73 [1.716]	2.64 [1.670]	3.60 [1.995]	4.76 [1.919]	4.36 [2.011]	4.41 [2.221]	4.10 [2.095]	3.09 [1.852]	3.66 [2.011]	4.36 [2.324]
<i>Professional area</i>												
Entrepreneur	107	2.57 [1.853]	2.49 [1.589]	2.28 [1.497]	3.50 [1.91]	4.82 [1.908]	4.33 [1.860]	4.15 [2.318]	3.77 [2.063]	2.96 [1.769]	3.60 [2.027]	4.14 [2.467]
Investor or financier	37	3.09 [1.721]	3.03 [1.485]	2.74 [1.314]	4.38 [2.032]	5.00 [1.986]	5.00 [1.953]	5.81 [1.543]	5.19 [1.697]	4.43 [1.772]	4.89 [1.868]	5.19 [1.561]
Policy maker	53	4.06 [2.024]	3.82 [2.047]	3.47 [1.848]	4.83 [1.949]	5.41 [1.734]	5.02 [1.774]	5.35 [2.239]	5.15 [2.155]	3.92 [1.937]	4.67 [1.937]	5.23 [2.202]
Business and support services provider	110	3.42 [2.010]	3.33 [1.875]	3.00 [1.715]	3.78 [2.094]	4.87 [2.053]	4.52 [1.803]	5.27 [2.292]	4.89 [2.200]	3.67 [2.005]	3.95 [2.149]	4.67 [2.271]
Educator or researcher	81	3.63 [1.981]	3.69 [2.232]	3.26 [1.886]	4.98 [2.295]	6.12 [2.091]	5.51 [2.056]	5.26 [2.143]	4.75 [2.077]	4.12 [2.076]	4.47 [2.080]	4.90 [2.041]

Notes: The initials "A-H-SLS" refer to degrees in the arts, humanities, or social and legal sciences. "S-H-E-A" refers to degrees in science, health, engineering, or architecture.

RQ2 The gender of the experts and the perception of entrepreneurship in culture and education variables

In order to identify the extent to which the variables of gender and degree type influenced the experts' views, comparative analyses were performed using Mann-Whitney *U* tests. Table 3 shows that women gave significantly higher scores in certain items (D05, I01, I02, I04, and I05).

Table 3 Results from Mann-Whitney *U* test comparing gender and scale item scores

<i>ITEM</i>	<i>Mann-Whitney U</i>	<i>Z</i>	<i>Asymp. Sig. (2-tailed)</i>	<i>n</i>	<i>r</i>
D01	48,243	-1.556	0.120	686	0.059
D02	48,764	-0.883	0.377	679	0.034
D03	49,124	-0.967	0.334	683	0.04
D04	53,202	-0.619	0.536	701	0.023
D05	43,614.500	-2.564	0.010	672	0.099
D06	42,747	-1.240	0.215	644	0.049
I01	44,326	-4.468	<0.001	708	0.168
I02	46,868	-3.431	0.001	707	0.129
I03	51,409	-1.651	0.099	707	0.062
I04	50,481	-2.097	0.036	709	0.079
I05	47,623	-2.838	0.005	702	0.107

More specifically, women gave higher scores to items related to personal effort (I01), self-sufficiency and autonomy (I02), creativity and innovation (I04), individual responsibility for managing one's life (I05), and proper preparation for creating new businesses (D05). It is notable that the differences were in items linked to a view of entrepreneurship as individual responsibility and competence. This is supported by the finding that in the culture scale (Scale I), the only item without significant differences was about entrepreneurial risk-taking (I03), which is mediated by contextual variables and hence lacks the individual-oriented responsibility of the other items. In addition, it was not unexpected that most of the differences were in this scale, given that it shows the role of cultural and social values in the distribution of gender roles in Spanish society, which have traditionally promoted entrepreneurial activity aimed at 'masculine hegemony'.

RQ3 The experts' degree types and professional areas and the perception of entrepreneurship in the variables of culture and education

There were notable significant differences in the experts' views according to the type of degree they had studied Table 4.

Table 4 Results from the Mann-Whitney *U* test comparing degree types and scale item scores

<i>ITEM</i>	<i>Mann-Whitney U</i>	<i>Z</i>	<i>Asymp. sig. (2-tailed)</i>	<i>n</i>	<i>r</i>
D01	41,418	-0.733	0.463	674	0.028
D02	36,096	-2.890	0.004	667	0.112
D03	39,087	-1.566	0.117	671	0.060
D04	37,886.5	-3.182	0.001	688	0.121
D05	35,157.5	-2.329	0.020	660	0.091
D06	30,942.5	-2.888	0.004	633	0.115
I01	39,282	-2.695	0.007	694	0.102
I02	39,367.5	-2.625	0.009	693	0.102
I03	38,462.5	-3.039	0.002	693	0.115
I04	39,767.5	-2.592	0.010	695	0.098
I05	41,757	-1.317	0.188	688	0.050

Experts whose degrees were in A-H-SLS areas gave significantly higher scores than experts whose degrees were in S-H-E-A area in most of the items. One possible explanation for this is in the makeup of the social sciences, which covers undergraduate degrees in business administration and management, economics, labour relations, law, etc., which include education, skills, and methodologies that are directly related to entrepreneurship.

Finally, Table 5 shows a comparative analysis between the experts' professional areas, in order to determine the influence that may have on their perceptions of culture and education/training systems as determinants of entrepreneurship.

Once again, the analysis indicated notable differences. These differences were apparent in all items, mostly in the views of the entrepreneurs compared to the other professional profiles. This agrees with our initial descriptive approach, in which we supposed that entrepreneurs would have more pessimistic views. That may be due to their real experiences, as their professional situations would make them aware of the significant limitations posed by institutional factors such as taxes for the self-employed and SMEs, which are the main drivers of job creation and economic competitiveness in Spain (González et al., 2019; Lanero et al., 2011). It was also no surprise that these experts' opinions would differ considerably from those of educators and researchers, which may indicate a discrepancy between the discourse in training and policy and professional reality.

Similarly, there were also notable differences between educators and researchers and the profile of business and support service providers in terms of the contribution to starting new businesses of university and college education (D04), entrepreneurial education and management (D05), and vocational, professional, and continuing education (D06). The results indicate that educators and researchers had more optimistic views of how these education and training systems were preparing Spaniards to face the risky task of starting a new business, again highlighting the mismatch between the academic and the professional viewpoints.

Table 5 Results from Kruskal-Wallis test comparing professional areas and the scale item scores

<i>Item</i>	<i>Chi-square</i>	<i>df.</i>	<i>Asymp. sig. (2-tailed)</i>	<i>n</i>	<i>ES</i>	<i>Pairwise comparison (Sig.)</i>
D01	29.375	4	< 0.000	375	0.08	1 < 4 (0.005) 1 < 5 (0.001) 1 < 3 (< 0.001)
D02	24.962	4	< 0.000	369	0.07	1 < 4 (0.005) 1 < 5 (0.001) 1 < 3 (< 0.001)
D03	25.486	4	< 0.000	369	0.07	1 < 4 (0.009) 1 < 5 (0.001) 1 < 3 (< 0.001)
D04	29.794	4	< 0.000	381	0.08	1 < 3 (0.002) 1 < 5 (< 0.001) 4 < 3 (0.021) 4 < 5 (0.002)
D05	23.917	4	< 0.000	367	.07	1 < 5 (<.001) 4 < 5 (<.001)
D06	19.764	4	0.001	346	0.06	1 < 5 (0.001) 4 < 5 (0.006)
I01	23.945	4	< 0.000	386	0.06	1 < 5 (0.010) 1 < 4 (0.003) 1 < 3 (0.012) 1 < 2 (0.001)
I0	25.007	4	< 0.000	386	.06	1 < 5 (0.010) 1 < 4 (0.003) 1 < 3 (0.012) 1 < 2 (0.001)
I03	25.832	4	<.000	386	.07	1 < 3 (0.020) 1 < 5 (0.001) 1 < 2 (< 0.001)
I04	19.516	4	.001	386	.05	1 < 3 (0.046) 1 < 5 (0.016) 1 < 2 (< 0.009)
I05	11.536	4	.021	383	.03	1 < 3 (0.047)

Notes: The professional profiles are: (1) entrepreneur, (2) investor or financier, (3) policy-maker, (4) business and support services provider, and (5) educator or researcher.

6 Discussion and conclusions

The aim of this article was to analyse culture and education as determinants of entrepreneurship from the perspective of various experts in the Spanish context. Entrepreneurship continues to be a broad, complex subject in the literature, and there are many still-open questions, particularly linked to the role of educational and cultural variables in promoting and reinforcing it (Bernal-Guerrero, 2021; Bernal-Guerrero, et al., 2021; Fayolle and Gailly, 2008; Fellnhöfer and Kraus, 2015). These are interrelated variables, as a person's self-perception about starting a new business venture as an attractive career choice is not only affected by their skills and attitudes, but also by their social interactions, socioeconomic background, education and training, and prior personal and professional experience, as well as by their role models (Ahmad and Kumar, 2020; Ajzen, 1991; Bygrave and Minniti, 2000; Cardella et al., 2020; Dyer, 1994; Fellnhöfer and Puumalainen, 2017; Muofhe and du Toit, 2011; Toledano and Urbano, 2008). This means that cultural and educational variables are inseparable, as they address the importance of learning throughout life (Coombs, 1973) in the formal, non-formal, and informal settings that make up the 'learned mental programming' of cultural and social values in a given social context (Hofstede et al., 2010).

In this regard, this study has allowed us to follow on from other research, showing the importance of culture and education as interrelated factors in considering entrepreneurship as a potential 'way out' of unemployment and social exclusion such as the situation in Spain. This study has confirmed that education and culture offer a limited contribution to promoting creativity, self-sufficiency, personal initiative, market economic education, entrepreneurship, and risk-taking. This may be explained in two main ways.

The first is related to the cultural variables that have a dual effect. On the one hand, at the level of socioeconomic background, social interactions, and personal and professional experiences, and on the other, in the contrast between the institutional and structural factors that affect the Spanish labour market and the political and social discourse with a 'rose tinted' view of entrepreneurship (Aceytuno et al., 2020; Ahmad and Kumar, 2020; Aghion, 2017; Oliva et al., 2021).

The second is related to current education and training systems which are poorly oriented towards the labour market, social and community needs, and the creation of new business ventures (Santos Rego et al., 2018, 2020; Toledano and Urbano, 2008). It is clear that Spanish education is not contributing to the development of programs, initiatives, or methodologies that encourage the development of human and social capital as key elements in promoting entrepreneurial competitiveness (Fernández-Salineró and García-Álvarez, 2020; Neira et al., 2013; Vázquez-Rodríguez et al., 2021). In this regard, Spanish education and training systems should open the door wider to the reality of the world of work and promote study plans with non-formal learning and training experiences which encourage social skills and networks that promote entrepreneurship—mobility, volunteering, and social entrepreneurship (Brinia et al., 2020; Santos Rego et al., 2018; Vázquez-Rodríguez et al., 2021)—as well as other practices that connect educational spaces with the business community (Toledano and Urbano, 2008). In addition, in formal learning, teacher training needs to be reinforced with active methodologies that lead to greater entrepreneurial intention in students (Nabi et al., 2017). One example is SL, which has been shown to promote skills linked to

entrepreneurship such as creativity, the ability to identify opportunities, initiative, and motivation for success (Santos Rego et al., 2020, 2021; Lorenzo et al., 2021).

Furthermore, and despite the public policy efforts in Spain to promote a situation that encourages entrepreneurship (Ministerio Español de Trabajo y Economía Social, 2021), our study indicates that the measures taken so far have been very limited (Aceytuno et al., 2020; Oliva et al., 2021). Considering the findings of our study in terms of the multiple factors that influence entrepreneurship, there are a number of policy actions that should be assessed. In educational policy, there need to be EET programs aimed at entrepreneurial skills in the formal education system (human capital), as well as the establishment of networks of contacts via connecting the education system with agents in the surroundings (social capital) (González et al., 2019; Loi, 2018; Neira et al., 2013). At the social policy level, there should be support for training initiatives aimed particularly at vulnerable groups with a clear gender focus, which must be accompanied by resources for initiatives in social and community entrepreneurship (Brinia et al., 2020; Santos Rego et al., 2018). Finally, in employment policy, direct action is needed aimed at business creation, promoting institutions in the social economy, and generating business projects that address the new challenges of a more sustainable job market (De Jorge-Moreno et al., 2012; Liñán et al., 2016). To summarise, the Spanish context needs strong political engagement with entrepreneurship, not only through funding and legislation, but also through strengthening EET programs that seek to improve entrepreneurial initiative through innovative training.

One of the interesting contributions of this study is the analysis of gender, degree type, and professional area as variables that modulate expert opinion. We found significant differences between the two genders in their evaluations of entrepreneurship. Regarding the key aspects for entrepreneurial activity, women gave higher scores to items related to effort and individual responsibility. This may indicate the influence of gender roles in their assessments, as research has shown that women have less support from role models when starting ventures (Cardella et al., 2020; Fellnhöfer and Puumalainen, 2017; Fernández-Cornejo et al., 2018; Welsh et al., 2018), with the role of the family and peers via informal learning being key elements in their consideration of entrepreneurship as an attractive career choice. Nonetheless, and despite the fact that it is clear that cultural values continue to reproduce a ‘masculine hegemony’ in the world of work (Connell and Messerschmidt, 2005; Rubio-Bañón and Esteban-Lloret, 2016), EET programs have again been shown to offer possibilities for women to develop the skills and attitudes which would allow them to contemplate starting a business as a professional career choice (Bygrave and Minniti, 2000; Krueger et al., 2013).

When it comes to the effect of the type of degree the experts studied, those with degrees linked to A-H-SLA had more positive assessments of the contribution of culture and education in promoting entrepreneurship. It was also shown that the experts in these areas focused on individual responsibility and risk-taking in their views on entrepreneurship. When looking at this finding, one must consider the fact that a large part of the sample in this group studied economics or business administration, which include curricula aimed at business creation and management and therefore provide preparation oriented towards taking on risks at the personal and professional level (Hytti and O’Gorman, 2004; Stephens, 2020). The importance of EET programs was again clear for providing future professionals with the skills they need, especially in areas where there were more pessimistic assessments of the possibilities of entrepreneurship.

That said, the high representation from A-H-SLS areas in the sample may be considered one of the limitations of the study. Future research should look more deeply into the influence of specialised education and training in entrepreneurship. One possible way to overcome this limitation may be to include more experts from S-H-E-A areas in the sample, which would correspond to their presence in the Spanish labour market.

Another of the notable results of the study was the importance of the experts' professional area in their evaluation of culture and education as determinants of entrepreneurship. More specifically, we found that educators and researchers had more positive assessments than entrepreneurs and business and support service providers. On similar lines to what we have already noted, people in these professions linked to the reality of the labour market have better knowledge of employment and tax rules and so it is not surprising to find a difference between these profiles and those related to education and research. There were two contrasting views, consistent with the arguments from Oliva et al. (2021), those who support the neoliberal arguments in which entrepreneurship is the 'way out' of problems of unemployment and social exclusion, and those who have more moderate views of the importance of education and cultural variables through having to deal with the serious difficulties of starting a business. This finding also backs up previous studies which looked at the views of Spanish university students and reported that in degrees linked to entrepreneurialism (such as business studies), students have less intention to start businesses the further they advance in their education and the closer they get to the reality of employment (De Jorge-Moreno et al., 2012). In this regard, one can see the important mission of educational institutions, through incorporating educational programs, role models, and formal and informal mechanisms which stimulate entrepreneurial intention. Our study confirms that these influence the views of experts from the professions linked to research and education (Fellnhöfer and Puumalainen, 2017; Guerrero et al., 2011).

In addition to the contributions of this study, it is important to note limitations that might affect the results. Firstly, as mentioned, the sample of experts from different knowledge areas needs to be enlarged, which would contribute to better representation of the professional reality of entrepreneurship in Spain. Secondly, it is important to have a longitudinal picture of the data, addressing the time periods related to the two economic crises that have affected the Spanish job market the 'Great Recession' and the COVID-19 pandemic. Lastly, we believe that although the GEM database provides important information, it limits the analysis to a more economic than social and educational perspective. It would be interesting to include other specific variables in the experts' perceptions such as the importance of family background, prior personal and professional experience, the use of networks of contacts, development of general skills, and the application of innovative methodologies by educators, among others.

In closing, we believe it is important to highlight the importance, on the basis of the evidence in this study, that culture and education have shown in driving entrepreneurial activity. However, we cannot ignore the influence of structural and institutional factors in the continuation of social inequalities that encourage entrepreneurialism in those who, because of their backgrounds, socio-cultural conditions, and education, already have the best tools with which to face this task (Aghion, 2017). Our results show the important work education must undertake for the future, as it might compensate for social inequalities with the application of programs, strategies, and methodologies focused on developing human capital (skills and abilities) and social capital (networks of contacts and information about the possibilities of starting a business). EET will be a key

mechanism for giving people role models who will serve as examples and support in the difficult task of starting a business, as well as giving people skills and support networks which will allow them to face the current uncertainty that characterises employment in Spain.

Acknowledgements

This research was funded by the Spanish Ministry of Science, Innovation and Universities, grant number EDU2017-82629-R.

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