

Scarcity of Women Entrepreneurs: Some Spanish Perceptions

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Abstract: This study analyses female entrepreneurs' perceptions as to why male entrepreneurs outnumber them as business owners. The researchers apply the Principal Components Analysis (PCA) technique to a large database constructed from a questionnaire sent to a sample of female entrepreneurs of the region of Aragon in Spain. The results suggest that two groups of reasons explain why men outnumber women in business: variables related to family responsibilities and variables related to the decision to start a new enterprise (women's greater aversion to taking risks, different motivations, lack of experience and lack of legitimacy as leaders). While family responsibilities are correlated with no other variable, the variables related to starting a new business are largely interconnected.

Key words: Women entrepreneurs, family balance, flexibility, women business, owners

INTRODUCTION

Female entrepreneurship has become a key area of interest around the world that is increasingly recognized internationally as critical to the economic development agenda and as an area of growing interest in women's studies (Langowitz and Minniti, 2007). For some researchers, the increase in the number of entrepreneurial initiatives among women is a reaction against persistent discrimination in the labor market (Weiler and Bernasek 2001). Others found evidence that women use entrepreneurship as a career choice that offers them the flexibility to manage family obligations (DeMartino *et al.*, 2006). Weiler and Bernasek (2001) further suggest that self-employed women may suffer less discrimination than women employees although research examining these aspects and the relevant data are scant. At the same time, family responsibilities could discourage women from creating a business if they find that contract employment offers greater social protection than self-employment. Clark Muntean and Ozkazanc-Pan suggest that "Government policies should directly address the inequities in equity finance, its pipeline and networks and open up these resources for women" (2015).

Despite recent advances, the Global Entrepreneurship Monitor Women's Report shows that in

most countries men outnumber women entrepreneurs, as "there are far fewer women engaging in entrepreneurial activity and starting and running businesses is a predominantly male occupation". In Spain, there are fewer female than male entrepreneurs. Table 1 which reports the evolution of Total Entrepreneurial Activity (TEA) rate determined as the percentage of the population of 18-64 year olds who are either nascent entrepreneurs or owner-managers of a new business, suggests that men's entrepreneurial activity rate has always been higher than that of women. Furthermore, the data published by the Spanish Association of Businesswomen and the National Statistics Institute (NSI) show that women's impact on the Spanish business field is still minuscule as the majority of entrepreneurs is still represented by men (67 %). This paper studies the reasons for the low percentage of female entrepreneurs in Spain.

Table 1: Evolution of female and male entrepreneurial activity rates in Spain

Year	Male rate (%)	Female rate (%)
2006	8.83	5.70
2007	9.75	5.48
2008	8.08	5.97
2009	6.29	3.33
2010	5.40	3.18
2011	7.05	4.54

Several researchers explain why male entrepreneurs outnumber female entrepreneurs by pointing to women's problems of balancing working and family lives, differences in the attitudes of men and women towards risk-taking or the difficulties women face in a world traditionally dominated by men. The institutional barriers that contribute to this situation relate to gender differences in education, work experiences, networks and access to capital (Greer and Greene, 2003; Loscocco *et al.*, 2009).

Inevitably, the stereotype that associates women with family responsibilities has also placed a role (Achtenhagen and Welter, 2003; Bird and Brush, 2002; Welter *et al.*, 2003).

This study seeks to analyse female entrepreneurs' perceptions of why there are fewer women entrepreneurs in Spain with the help of a survey of 373 female entrepreneurs in the Aragón region. The participants have either started their own enterprise or are self-employed. The questionnaire administered to respondents measured six variables that could potentially explain the difference in the number of male and female entrepreneurs and asked respondents to assess the importance of several possible obstacles that women face when wishing to become entrepreneurs. The study uses Principal Components Analysis (PCA) with Varimax rotation to analyse the data.

This study contributes to the research literature in the field on gender studies in three ways. First, we analyze the perception of women entrepreneurs about structural and cultural reasons (family responsibilities) and perceptual variables about the decision to start a new business as factors that can explain differences in entrepreneurial activities between men and women in a region of Spain. Second, we relate family responsibilities with the social protection offered by labor legislation. Unlike previous studies which found that women start their own business in search of greater flexibility, this research argues that self-employment can, under certain circumstances, be relatively unattractive for women with family responsibilities. The reason lies in the high social protection offered by the Spanish labor legislation. When women employees experience weak labor rights, self-employment acts as an incentive but when such women have greater assistance with childbirth, childcare or care for other dependent persons, self-employment is preferred to a lesser degree. In Spain, the labor legislation allows women employees to leave the labor market temporarily. Self-employed women, in contrast, find it much harder to leave as their absence could have negative consequences, possibly even endangering the future viability of their company. This reference to labor law is one of the main contributions of this research which distinguishes it from earlier studies that ignore the effect of labor legislation. Third, this research is one of the first

studies of female entrepreneurship in Spain. As such, this research can conceivably provide a reference for future work.

The study is structured as follows. The next section reviews the previous research on female entrepreneurs in Spain and other countries by paying particular attention to the explanatory frameworks proposed by other researchers discussing the involvement of women and men in entrepreneurship. Then, the study describes the methodology, the survey and the sources of information used to carry out this study. The final sections present the results of the study and the main conclusions and implications for future research on female entrepreneurs.

“Women entrepreneurship the state of the art”? To date, several studies have tried to analyse gender differences between men and women when they decide to set up a business and why women are less interested than men in becoming entrepreneurs (Ahl, 2006). Ahl (2006) concluded that there is a digression on the scale to measure how “entrepreneurial” an entrepreneur is, such that the words that have male connotations are linked to entrepreneurial success while the words with female connotations are related to weakness. Ogbor (2000) maintains that the concept of entrepreneurship is not only discriminatory and gender-biased but also ethnocentrically determined and ideologically controlled. This researcher also points out that “Female participation in entrepreneurship is reasoned to be the antithesis of entrepreneurial norms as a result of gender qualities: male achievement versus female subjugation; male dominance versus female submissiveness; male control versus female appreciation; male autonomy versus female support; male aggression versus female co-operation; male independence versus female dependence; male idiosyncrasy versus female conformity” (Ogbor, 2000). Ortiz *et al.* (2012) state that recognizing the differences between men and women could perpetuate the low status of women in society, but that ignoring them means that no actions can be taken to ensure the progress of women.

For nearly two decades, not much progress has been made since Rosa *et al.* (1994) pointed out that “in spite of growing research into women in business, the question of how far gender difference exists in small business ownership and management has not been rigorously addressed, mainly because most studies have been exploratory and insufficiently sophisticated in terms of methodology”.

Some researchers explain that the lower participation of women in entrepreneurship is due to their limited possibilities of financing (Alsos *et al.*, 2006; Rosti and Chelli, 2005). Others suggest that the reason may be the different value systems of men and women (Malaya, 2013). For example, for women, personal satisfaction and

other non-financial goals may be as important as the financial success (McClelland *et al.*, 2005). In contrast to men, increased profits and business expansion are not the most important factors determining success for women. Women value more a suitable microclimate of enterprise and employee satisfaction, self-fulfillment, professional performance and development, recognition and improvement of skills, balancing work and family responsibility and social contribution.

From a different point of view, some researchers observe that in spite of the growing number of female entrepreneurs, the businesses owned by women are less successful than those held by men (Loscocco *et al.*, 1991; Welter *et al.*, 2003). However, the limited empirical evidence suggests that businesswomen are not less satisfied than their male counterparts (Cooper and Artz, 1995; Parasuraman *et al.*, 1996). Powell and Eddleston (2008) conclude that businesswomen have a greater freedom to create work environments that are consistent with their values and objectives as well as better opportunities to obtain financial independence, autonomy, flexibility and achievements (Bird and Brush, 2002; Buttner and Moore, 1997; Mattis, 2005). In some countries, the attitudes of lenders and the experiences of businesswomen with finances have a particular importance (Bruin and Hartle, 2007).

It is important to examine the previous studies analysing the potential reasons why male entrepreneurs outnumber female entrepreneurs. Arenius and Minniti (2005), consider that in the entrepreneurial behaviour, in addition to economic and demographic factors, other factors exist that have been established in the psychology and sociology literature. For the researchers entrepreneurship is about people, thus they "add a set of variables describing personal perceptions and judgements about the environment that, although often biased are nevertheless highly correlated with an individual's decision to start a new business". They call these factors perceptual variables. Langowitz and Minniti (2007) stated that perceptual variables influence women's propensity toward entrepreneurship. Following Arenius and Minniti (2005), we grouped the set of variables that are related to the decision to start a new business into 5 perceptual variables. In our study, these variables include: greater aversion to taking risks among women, different motivations from men's, lack of experience and self-confidence and lack of legitimacy as leaders. As structural and cultural variables, we have considered family responsibilities, the traditional culture and the social structure.

Greater aversion to taking risks among women. Buttner and Rosen (1988) confirm the hypothesis that women are seen by less entrepreneurial than men, particularly in the aspects of leadership, autonomy,

risk-taking, willingness to change, endurance, lack of emotionalism and need for support. Sexton and Upton (1990) found that female entrepreneurs score lower in traits related to energy level and risk-taking, but higher in traits related to autonomy and change. Cliff (1998) found evidence that female entrepreneurs prefer a managed approach to business growth rather than taking risks in growth strategies. Verheul and Thurik (2001) suggest that women entrepreneurs from the Netherlands are more likely to work part-time, work in the services sector, be more risk averse, have less experience in financial management and spend less time networking than their male counterparts. Masters and Meier (1988) found a lower propensity for risk in businesswomen than in businessmen which resulted in more moderate interest in creating businesses of large size and fast growth (which would involve greater risk and dedication). One reason that could hinder women to take risks to start their own business is that their network of contacts in the enterprise world is scarce. Sharing informal networks could be an important factor at the time in becoming a female entrepreneur.

Langowitz *et al.* (2006) note that networks and role models are very active elements for women involved in the entrepreneurial process. Similarly, Langowitz and Minniti (2007) highlight the importance of social networks and business relationships for creating a business. Arenius and Minniti (2005) review the effect of demographic and economic characteristics on entrepreneurial motivation. Although women's participation rates in entrepreneurship are lower than those of men, these researchers observe that there are no gender differences in entrepreneurial behaviour (Brush, 1992). However, Langowitz and Minniti (2007) states that men are more tolerant to the risk of losses than women and, given that women are traditionally the caregivers of the family, the fact of putting the family's resources at risk also increases their perception of risk.

Different motivations from men's. Brandstatter (1997) compares male and female entrepreneurs who started their own business with others who inherited their business and found evidence that the former are more independent, more emotionally stable, more extroverts and more open to changes and new experiences. Some studies find differences in the motivations for starting a business between men and women (Buttner, 1993, DeMartino *et al.*, 2006; Parasuraman *et al.*, 1996). According to Scott (1986), the most important motivation for men is the desire to be one's own boss while the most important motivations for women are the personal challenge and satisfaction. These findings are contradicted by Gatewood *et al.* (1995), who found that one of the reasons why women take the initiative to start their businesses is that they want to be their own bosses. Buttner and Moore (1997) examined the reasons why 129 female executives and professionals left

their companies to become entrepreneurs. The primary motivations were a desire for change, self-determination and a balance between family life and work responsibilities. Masters and Meier (1988) indicate that, because of their different lifestyle, women prefer smaller businesses that allow them to reconcile their family and professional lives. A study carried out by Catalyst suggested that the main reasons for women leaving their company to start their own business are the need for greater flexibility, feeling unhappy with the working environment, experiencing a glass ceiling and feeling that nothing changes in their work. DeMartino did not find much difference between the importance of career/achievement and personal life orientations for both female entrepreneurs and female non-entrepreneurs. However, the study did find that male entrepreneurs possessed greater career/achievement orientations compared to male non-entrepreneurs. Previously, DeMartino stated that women are more motivated than men with the same qualifications to become entrepreneurs by family-related lifestyle reasons. These researchers observed that these differences between men and women grew when the entrepreneurs marry and have dependent children.

In the 1990s, many researchers still found that many women were unmotivated by their work and chose to start their own business to gain flexibility and be able to reconcile their professional and family life (Brush, 1992). Female entrepreneurs seem to experience greater conflict between work and family life than their male counterparts (Buttner, 1993). DeMartino found evidence that becoming an entrepreneur allowed women to combine their career with their family obligations. Nevertheless, the fact that women are motivated by frustration in their work (Kaplan, 1988) more than by the desire to become an entrepreneur (Goffee and Scase, 1983) could limit the success of their ventures. If the motivation for starting a business only comes from the desire for a more flexible timetable to be better able to manage their family and working lives, women might not dedicate enough time to their business. This desire for flexibility could be disastrous, particularly in the early stages, when a business demands, even more, commitment.

Motivation seems to depend on many other factors, such as the entrepreneur's age or whether the creation of the enterprise is a job transition or return to the labor market (Kaplan, 1988). Another motivation that could drive women to start their businesses is their difficulty in reaching the top positions in their companies. Some researchers found that women have more difficulty in getting promoted than men (Baxter and Wright, 2000; Elliott and Smith, 2004; Foschi, 2000). Cohoon show differences in motivations between men and women,

including that women were more likely to take the plunge and start their company if they were encouraged by a business partner.

Kelley compare women's motivations to start businesses in different countries with issues related to the need for subsistence and with business opportunities. Langowitz and Minniti (2007) label these reasons as a necessity versus an opportunity. Kelley observe that in less developed economies there is a greater likelihood that women are more motivated than men by necessity. In fact, the study GEM-Spain 2011 includes Nigeria, China and Chile among the countries with the highest percentage of female entrepreneurship, while Denmark, Slovenia and Pakistan stand out as being those who shed the lowest figures this sentence is confusing.

Lack of experience and self-confidence. Cohoon conclude that both men and women consider their prior work experience as a fundamental element to determine their success in establishing a new enterprise. In addition to experience, human capital in the form of a university education was rated, on average, important to very important. Many reserachers argue that female entrepreneurs are more experienced in education, sales, personal services and administration (Neider, 1986; Scott 1986) than in other areas. Watkins and Watkins suggest that the lack of working experience forced women to remain in traditionally female dominated sectors.

At the moment, the educational level does not justify gender differences in leadership or entrepreneurship. As Carter and Silva (2010) point out, with the same highly trained graduates in MBA programs one would expect that women and men are on equal footing in the pipeline and their career trajectories are gender-blind. However, their study shows that, even after taking years of experience, industry and global region women still were more likely than men to start in a first post-MBA job at a lower level.

Furthermore, certain studies consider that women tend to underestimate their skills or performance as compared with men (Wohlens and London, 1989; Lindeman *et al.*, 1995). In the opinion of Verheul *et al.* (2005), this underestimation may be explained by the fact that women often do not need success, or they are just more modest when describing their skills. Verheul *et al.* (2005) show the impact of gender on their own business image. According to these researchers, even when controlling for variables such as a broad range of achievements in business, age and education level, women have a lower probability than men to see themselves as entrepreneurs. In the end, gender stereotypes can reduce women's self-confidence, especially in male-dominated technical fields, where women believe that a track record is particularly valuable under these conditions because, it demonstrates their

competence. Similarly, Langowitz and Minniti (2007) show that women are likelier to create their businesses if they feel they have the skills and knowledge to be successful entrepreneurs.

Lack of legitimacy as leaders. Research on gender and leadership has focused on the small proportion of women in upper management and on possible indicators of this inequality (Haslam and Ryan, 2008). Haslam and Ryan discuss some possible explanations, including perceived incompatibilities between women's abilities and the demands of leadership (Arvey, 1979; Schein, 1973) and women's fear of success (Horner, 1972). Buttner and Rosen (1988) suggest that women are seen as less likely to possess the attributes needed to be successful entrepreneurs. But according to Ljunggren and Kolvereid (1996), Norwegian women claim to have greater entrepreneurial abilities than their male counterparts. Brush (1992) argues that male and female entrepreneurs differ in their educational and occupational backgrounds, motivations for business ownership, business objectives, business growth and approaches to business creation.

Some researchers find evidence that female entrepreneurs are less likely to see themselves as entrepreneurs than male entrepreneurs (Grilo and Irigoyen, 2006; Verheul *et al.*, 2005). Swimney *et al.* (2006) observed that companies created by men outperform those carried out by women.

Family responsibilities. The family is seen as the woman's responsibility and this perception can have both a positive and negative influence on female entrepreneurs (Ahl, 2006). Various researchers argue that women seek a balance between work and family life while men are more motivated by wealth creation and/or economic advancement (Brush, 1990; Goffee and Scase, 1983; Kaplan, 1988; Scott, 1986). In fact, for some women, personal success means achieving a balance between family and work (Li *et al.*, 2008; Neider, 1986; Schwartz, 1976). DeMartino *et al.* (2006) found that the flexibility of an entrepreneurial career is important to women who are single, but, even more, important to women when they marry and have children.

Furthermore, some researchers propose that women and men business owners adopt different strategies for managing the work-family interface, although empirical research is still limited (Jennings *et al.*, 2010). Women often work part-time or leave the labor market, even if only temporarily, to look after children (Ucbasaran *et al.*, 2009). Nevertheless, self-employment could be a source of considerable difficulties for women, particularly when they have family responsibilities. Therefore, women might think twice before choosing this option. Women who are employees could find it easier to leave the labor market

temporarily when the legislation supports maternity or parental leave since they can return to their jobs after that period. This return is much harder for self-employed women.

Limited opportunities in the labor market, discrimination and glass ceiling career problems can make the choice of self-employment more attractive because women perceive it as a survival strategy, or at least as a means of achieving flexibility in their work scheduling and reconciling multiple roles (Baughn *et al.*, 2006). Tsyganova and Shirokova (2010) found that the welfare state of a country can influence the number of women starting up a business.

As a consequence, an important factor that needs to be considered is the social protection available for women employees or self-employed women when they care for underage children or dependent relatives. For women employees each European member state establishes the leave for childbirth in the case of illness according to the Council Directive 2010/18/EU but regulations vary from country to country. Women enjoy a minimum of 14 weeks total maternity leave before and after childbirth in all member states. Women receive between 80 and 100% of their salary, depending on the length of their leave.

Heymann and Earle (2010) analysed 173 countries and found that 168 of them guarantee payment during maternity leave and 98 countries do so for at least 14 weeks. Countries that do not guarantee paid maternity leave include the United States, Lesotho, Liberia, Swaziland and Papua New Guinea. Heyman and Earle (2010) believe that women will be less inclined to opt for contract employment in countries like the US, where only 30% of workers receive paid leave to care for children, than in countries with stronger social protection programs, such as in the north of Europe

Union. In countries with less social protection for employees, women will conceivably opt more for self-employment which offers them more flexibility to care for children and dependent relatives, than contract employment, which provides limited leave and economic assistance for their family responsibility.

Traditional culture and social structure. Some researchers have found that culture and other variables like technology, the level of economic development and institutions influence demand for entrepreneurship. The cultural and social context, such as defining women through roles associated with family responsibilities (Bird and Brush, 2002; Welter *et al.*, 2003) or the social acceptability of female entrepreneurs (Baugh *et al.*, 2006) has also an important influence on gender differences in the level of entrepreneurship.

In the 1970s, women mainly cared for the family and consequently suffered from a lack of work experience, a

lower educational level and less entrepreneurial initiative (Schwartz, 1976). These realities seem to have hindered women’s progress in organizations (Buttner and Rosen, 1988).

In addition, certain cultural and social factors play a significant role in maintaining women’s negative self-image such as their subordinate role to men (Hofstede, 1991). In the 1970s, Schwartz (1976) found few differences between male and female entrepreneurs in their personal attributes but also that female entrepreneurs suffered from credit discrimination; in 1975, the Equal Credit Act put an end to this situation. With all this changes, despite the masculine nature of popular images and early research on the subject entrepreneurship is often seen as offering empowerment to women (Gill and Ganesh, 2007). Yueh (2009) observes that women, older workers, more educated people and members of the ruling party are less likely to become entrepreneurs in China but people whose mother is or was in a skilled profession and who have a larger social network are more likely to become entrepreneurs. In the case of Lebanese female entrepreneurs, Jamali (2009) notes that “Other normative constraints encountered included the permeation of entrepreneurship with traditional male stereotypes and societal attitudes not supportive of the work of women in general”. The evidence that women seek more security and a work/family life balance in traditional industrial sectors suggests that despite these women’s wish to start a business, a high need for security may stop them from venturing into less familiar industries (Anna *et al.*, 2000).

MATERIALS AND METHODS

Scope of study and data collection procedure: In this analysis, we investigate female entrepreneurs’ opinions as to why male entrepreneurs outnumber female

entrepreneurs in the Spanish region of Aragón. This region is one of the 17 territorial entities that have legislative autonomy and executive powers within the Spanish legal system. It comprises three provinces: Huesca, Teruel and Zaragoza.

The researchers used an original questionnaire to determine the opinions of a sample of the female entrepreneurs living and working in this region (see appendix). As Ogbor (2000) states, “The problematic nature of the concept of entrepreneurship is reflected in a history of efforts by entrepreneurial researchers to explain ‘who’ is an entrepreneur and ‘what’ constitutes entrepreneurship”.

For this study, we interviewed women entrepreneurs at the moment of the survey, no matter when the business was created. The questionnaire was sent to all the female entrepreneurs in Aragón identified previously from firms in the Iberian Balance Sheet Analysis System (SABI) database in which the CEO spell out is female and also a shareholder, so only one questionnaire per firm. The questionnaire was sent via the Instituto Aragonés de la Mujer (IAM), a regional government body promoting gender equality in Aragón, to emphasize the institutional nature of the work. This organization sent a total of 713 questionnaires. In parallel, the questionnaire was also transmitted by post to all the female entrepreneurs contained in the database of women entrepreneurs at the chambers of commerce in Aragón of the three analyzed provinces. Additionally, the researchers also contacted all the associations of female entrepreneurs in Aragón to request that they send questionnaires to their members by email. Figure 1 summarizes the process of administration followed to implement the questionnaire among the businesswomen.

The total number of surveys completed was 373, including both women who had started a legally constituted company and women in self-employment. The researchers do not know the total population of female

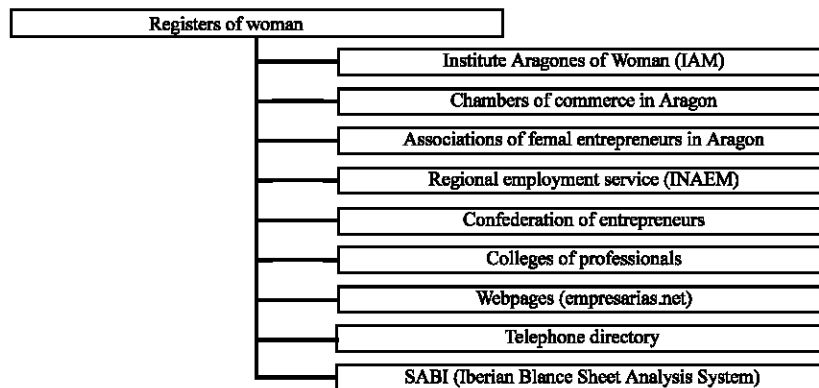


Fig. 1: Questionnaire administration diagram

entrepreneurs in the region of Aragón because neither the SABI nor the IAM know, so they cannot calculate what proportion of the total their sample represents. Some of the questionnaires were sent electronically by other institutions and the data protection legislation currently in force in Spain prevents them from accessing these organizations' databases. However, we estimate that the 373 questionnaires analysed represent the population of female entrepreneurs in Aragón assuming a maximum margin of sampling error of 5.07% at a confidence level of 95%. To calculate the sampling error the use of simple random sampling is presupposed. On the other hand, the researchers used the following formula of simple random sampling for infinite populations, because the population, although unknown can be considered infinite:

$$n = z^2 \times P \times Q / E^2$$

Where:

n = The sample size

Z² = The theoretical value that represents the confidence level

P and Q = Tbehavior of the event being measured, indicating the proportion of responses of one or other alternative lacking previous information they are both assumed to equal 50% (P = Q = 50%) and is the sampling error

Regarding the characteristics of the entrepreneurs or of the businesses where they are working, 5% of the businesses were created before the 1980s, 53.1% before 2000 and around 18% have set up a company during the last 42 months. As for the size of the companies, all of them are small and medium enterprises with fewer than 60 workers. In 30% of the cases, the companies have one employee and that is the female entrepreneur herself.

The age of Aragón business women participating in this survey ranges between 25 and 54. Almost 70% of respondents are under 44. Some 56.4% of the women surveyed have children, 26.2% do not and 17.4% did not answer this question. The percentage of women that have children under 16 years of age is 42.26%.

As for education, we found 43.9% of business women have university degrees (of whom 11% have a master's degree). Only 18.5% left school at the minimum age (16) and have not attended higher educational institutions. This figures allows us to affirm that the educational level of our business women can be considered medium-high in almost 80% of cases, even though some studies argue that the educational level of female entrepreneurs is lower than that of men (Li *et al.*, 2008). Comparing educational level with age of business women, we found as expected, a significant decrease of educational level with age, meaning that younger entrepreneurs tend to be more educated the older ones.

Data analysis: The researchers used Principal Components Analysis (PCA) to examine the reasons why, according to female entrepreneurs, male entrepreneurs outnumber women entrepreneurs. PCA is a statistical technique used to reduce the size of a data set and identify the reasons for their variability to simplify the problem under study. The researcher starts from a set of variables and the aim is to identify a smaller set of variables that accounts for the same variation. The variables are identified in diminishing order of importance.

We used PCA to extract the factors since the initial commonalities are equal to 1. This technique aims to reduce the size of the data and discover relations between the original variables that help them to be described and interpreted. The principal components are linear combinations of the original variables and the first variables are expected to explain most of the variability in the data. The first principal component is the most important, since it explains the highest proportion of the variance and corresponds to the perceptual variables meaning that the following components explain less.

The respondents were asked to assess a series of reasons as to why in their opinion, the number of female entrepreneurs was less than the number of male entrepreneurs. They responded on a scale of 1-7, with 1 being very low or strongly disagree and 7 very high or strongly agree (midpoint, 4). The researchers used the statistical package SPSS Version 15.0 to analyze the data obtained from the questionnaire. The variables considered were family responsibilities and traditional culture as structural variables and greater aversion to taking risks among women, different motivations, lack of experience and lack of legitimacy as leaders as perceptual variables.

RESULTS

As Table 2 shows, the variable with the highest mean of all the six variables is family responsibilities, at 6.37. This variable also has the smallest standard deviation (1.27). The variable measuring women's greater aversion to taking risks also exceeds the average of these means. The other variables score below average.

Table 3 shows the correlation matrix. Its determinant is 0.24 which indicates a high degree of intercorrelation between variables. Also, the p-values show high

Table 2: Reasons why male entrepreneurs outnumber female entrepreneurs

Variables	Mean	SD
Family responsibilities	6.37	1.27
Greater aversion to taking risks among women	4.22	2.16
Traditional culture and social structure	3.38	2.26
Different motivations	3.30	2.25
Lack of experience and lack of self confidence	3.22	2.09
Lack of legitimacy as leaders	3.11	2.12

N = 339

Table 3: Correlation matrix (a)

Parameters	Family responsibilities	Greater aversion to taking risks among women	Traditional culture and social structure	Different motivations	Lack of experience and lack of self confidence	Lack of legitimacy as leaders
Family responsibilities	1	-0.01	0.10*	0.00	0.02	-0.03
Greater aversion to taking risks	-0.01	1	0.39**	0.44**	0.31**	0.54**
Traditional culture and social structure	0.10*	0.39**	1	0.37**	0.32**	0.34**
Different motivations	0.00	0.44**	0.37**	1	0.55**	0.54**
Lack of experience and lack of self confidence	0.02	0.31**	0.32**	0.55**	1	0.49**
Lack of legitimacy as leaders	-0.03	0.54**	0.34**	0.54**	0.49**	1

a Determinant = 0.24; *p<0.05; **p<0.001

Table 4: Kaiser-Meyer-Olkin (KMO) and Bartlett's Test

Variables	Values
Kaiser-Meyer-Olkin measure of sampling adequacy	0.78
Bartlett's test of Sphericity	
Approx. Chi-Square	478.76
Df.	15
Sig.	0.000

correlations between most variables, enabling the use of PCA. The correlation matrix clearly shows a significant positive association between the variables measuring the reasons why male entrepreneurs outnumber female entrepreneurs. Some significant positive associations exist, in particular between different motivations and lack of experience (0.55); different motivations and lack of legitimacy as leaders (0.54); lack of legitimacy as leaders and greater aversion to taking risks (0.54) and lack of legitimacy as leaders and lack of experience (0.49).

Table 4 shows that the Kaiser Meyer Olkin test statistic equals 0.78, closer 1 than 0, which means that the data closely matches a PCA model. The p-value of the Bartlett test indicates that the null hypothesis of uncorrelated initial variables is not significant and therefore, it is logical to apply PCA.

The results of PCA show that family responsibilities and different motivations and lack of legitimacy as leaders are the main variables explaining why male entrepreneurs outnumber female entrepreneurs. Table 5 displays the results of the PCA. The total variability of the data can be calculated as the sum of the variances of each variable. As can be seen, the first two components explain 62.68% of the total variance. Figure 2 also shows that the only eigenvalues >1 are those of the first two variables, so these two variables summarize the rest the other variables, representing them coherently (Fig. 3).

Table 6 shows the components matrix, which is the factorial matrix that reports the weight of each element in each of the variables. The first component which alone explains 45.44% of the variance (Table 5) has a high positive correlation with the variables lack of legitimacy as leaders, different motivations, greater aversion to taking risks, lack of experience and lack of self confidence and

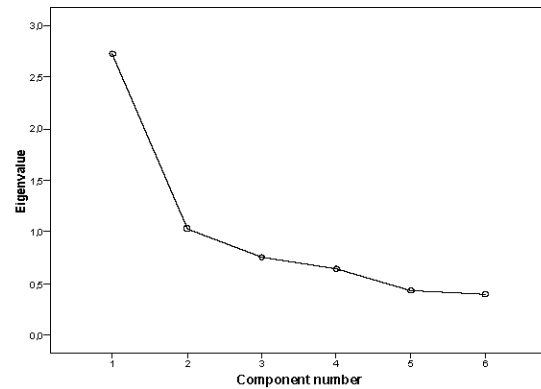


Fig. 2: Scree plot

traditional culture and social structure. This result means that the model discriminates very well the reasons why male entrepreneurs outnumber female entrepreneurs, according to the latter. None of the components correlate negatively.

The second component which alone explains 17.23% of the variance has a strong positive correlation with the variable representing family responsibilities because the dependence of children and other dependents on women leads the latter to spend a large amount of time caring for their family which frequently prevents them from taking the step to create their own business because they feel they are not going to have enough time to run the business properly.

After obtaining the number of components, these need to be interpreted, so the researchers then applied rotations. By rotating the components, a variable gets a high score in a single factor and low scores in all the others and that variables' scores are either all positive or all negative. The researchers used the Varimax rotation method (Table 7).

Thus, two groups of reasons exist, family responsibilities and perceptual variables. Family responsibilities are not associated with any of the other variables whereas the perceptual variables are correlated among themselves, although the correlation is higher in

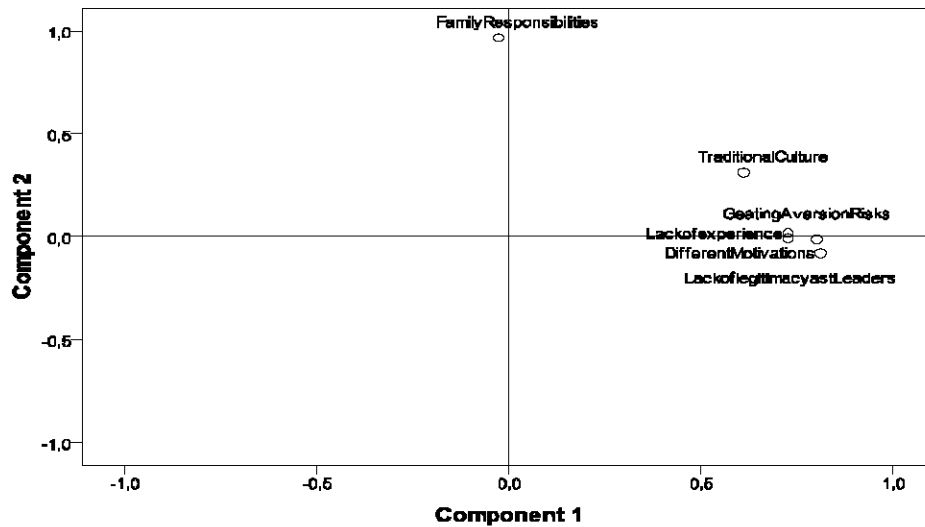


Fig. 3: Component plot in rotated space

Table 5: Total variance explained by the Extraction method: principal components analysis

Component	Initial eigenvalues			Extraction sums of squared loadings		
	Total	Variance (%)	Cumulative (%)	Total	Variance (%)	Cumulative (%)
1	2.73	45.44	45.44	2.73	45.44	45.44
2	1.03	17.23	62.68	1.03	17.23	62.68
3	0.76	12.62	75.30			
4	0.65	10.84	86.13			
5	0.44	7.26	93.39			
6	0.40	6.61	100.00			

Table 6: Component matrix

	Component	
	1	2
Family responsibilities	0.03	0.97
Greater aversion to taking risks among women	0.72	-0.05
Traditional culture and social structure	0.63	0.28
Different motivations	0.80	-0.06
Lack of experience and lack of self confidence	0.73	-0.02
Lack of legitimacy as leaders	0.81	-0.12

(a) Extraction method: principal components analysis; a 2 components extracted

Table 7: Rotated component matrix (a)

	Component	
	1	2
Family responsibilities	-0.03	0.97
Greater aversion to taking risks among women	0.73	-0.01
Traditional culture and social structure	0.61	0.31
Different motivations	0.80	-0.01
Lack of experience and lack of self confidence	0.73	0.02
Lack of legitimacy as leaders	0.81	-0.08

some pairs which define specific concepts. Concerning the first component (Table 5) which accounts for 45.44%

of the total variance, two variables must be reported: different motivations and lack of legitimacy as leaders. These variables have the greatest weight and are correlated to 0.54 and with high significance ($p < 0.0001$). These results could be related to the perception of these women about entrepreneurship. This first component could be an effect of gender stereotypes.

As indicated by Eddleston and Powell (2008), “The male stereotype is characterized by high amounts of “masculine” traits that are task-oriented (e.g., dominance, autonomy and achievement) whereas the female stereotype is characterized by high amounts of “feminine” traits that are interpersonally-oriented or communal (e.g., deference, nurturance and affiliation)”. Therefore, these results echo those of Bird and Brush (2002) who believe that the social representation of entrepreneurship is a male practice and women entrepreneurs are more concerned with pursuing social objectives. Unlike male entrepreneurs, the women believed that there would be a lower interest in status-based career satisfiers derived from its business success among female entrepreneurs (Cliff, 1998; DeMartino *et al.*, 2008).

DISCUSSION

The number of women entrepreneurs has increased in recent years, but the total of male entrepreneurs is still greater. This situation is particularly the case in the region under study here (Aragón, Spain) where women create only 34% of the firms. This study aims at providing evidence about the reasons for this discrepancy from the perspective of the female entrepreneurs themselves.

The questionnaire shows that the female respondents think that the explanation lies in family responsibilities. This result is in line with Li *et al.* (2008), according to which the women entrepreneurs' main obstacle to starting a business is a conflict between work and family life. Balancing family and work can be difficult for both men and women, but more so for women. Many women, therefore, prefer to assume no responsibilities in business that would call for considerable time, time that they would otherwise spend with their families.

This study contradicts earlier analyses that found starting a business can be seen as a means of gaining labor flexibility and thus reconciling family and work life (Brush, 1992; DeMartino *et al.* 2006). This is the situation in the US, for example, where women opt for self-employment to find work-family balance (Mattis, 2004; Roggenkamp and White, 1998). Thus, the environment is another important factor behind women's decisions to become entrepreneurs or not. Specifically, we argue that the success of initiatives to encourage self-employment could depend in part on the system of social protection and the employment policies in the labor market in each particular country. Another factor that could support business creation by women is social and tax policies concerning the level of social security connected to entrepreneurship (Welter *et al.*, 2003). In developing countries where unemployment protection is non-existent or minuscule, individuals may be forced to create their own businesses due to the weak structure of the labor market. This situation is highlighted in the case of women with low income and low education levels. These women often have reduced access to employment channels due to cultural reasons.

We believe Spanish women prefer the security of contract employment because the social security system in Spain guarantees that they can return to their jobs after maternity leave or caring for children or dependent relatives as well as a minimum of 16 weeks leave at 100% of their salary in the case of childbirth. Moreover, the measures aimed at reconciling work and family life introduced in 2007 by the Social Democratic government could further accentuate the differences between self-employed women and women employees. This allows

us to explain that entrepreneurship among men and women shows high differences in some countries with higher social protection to women for maternity, such as Norway (up to 46 week with full pay which can be extended to 56 with 80% of covered earnings) Spilling for example, shows that the percentage of corresponding women was only 20.9% whereas a higher 79.1% were corresponding out of the total number of firms registered during the 1990s. In the same direction, the GEM Report for Norway shows that the female TEA entrepreneurial activity rate was only 3.8% in 2010 while the male rate was up to 11.5%.

Unlike the US which has fewer measures to reconcile work and family life in the legislation for employees, in Spain, maternity leave of 16 weeks at 100% of salary could provide a disincentive for women to start their businesses. Moreover, the legislation in Spain allows couples to share part of this time between the mother and father (but with a minimum 6 weeks being reserved for the mother) and this new factor could be pushing the balance in favour of contract employment over self-employment still further.

Another significant contribution to the research is the weight of different motivations and the lack of legitimacy of women as leaders which are linked to the perception that these women have of entrepreneurship as a result of gender stereotypes.

It would be interesting to analyze in future work if the social representation of entrepreneurship is understood as a male practice and if women entrepreneurs are more concerned to pursue social objectives than economic results.

In this study, the researchers have analysed female entrepreneurs' opinions, so future work could research what male entrepreneurs think about why male entrepreneurs outnumber women entrepreneurs. It would be interesting to see if family responsibilities also prevent men from starting businesses as they do women. In Europe, although measures to reconcile the personal, family and working life have traditionally focused on women, a debate is in progress about who should be taking on the various responsibilities in the family. In some countries, like Denmark, Norway and Sweden, women's participation in the labor market as employees is the highest in the world strong social protection for childcare is in place and the legislation is the most generous in terms of paternity leave. It would be interesting to compare the characteristics of female entrepreneurs in such countries with those of their counterparts in countries where support for childbirth is practically nonexistent.

CONCLUSION

Finally, the rate of women's entrepreneurship in Spain decreased from 5.97% in 2008 to 3.33% in 2009 and 3.18% in 2010 but in 2011 it increased, reaching 4.54%. (Table 1). One could argue that the economic crisis and the cut in public offices could have convinced more Spanish women (and men) to engage in private entrepreneurship. We can see that the proportion of female entrepreneurs has decreased since the economy went into recession in 2009. Table 1 shows a reduction for two years, but then a significant increase in 2011. We all know that it took some time for the global financial crisis to produce effects in a particular country and those effects have lingered over time. The GEM 2010 Report argues that the effects on Spain of the global financial crisis are increasing gender differences in business activities which is evidence of different behaviours in men and women when facing unfavourable economic perspectives. Future research could investigate how the economic crisis has affected female entrepreneurs. Another aspect of future studies, highlighted in the GEM 2012 Report, is the need to increase the empowerment of women to encourage the creation of new companies.

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