

**THE INFLUENCE OF TRAINING AND GENDER IN ENTREPRENEURSHIP
THROUGH BUSINESS INCUBATORS IN GALICIA (SPAIN)**

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ABSTRACT

The potential entrepreneur's training is one of the most important variables along with age and the experience previous to the startup of their enterprising initiative that affects the tendency of humans to entrepreneurship. This article discusses the importance of the variable of entrepreneurial training in a universe formed by Galician business incubators and the search of a common link between activities, types of business incubators and educational level. Furthermore, this is compared by gender due to the significant differences observed pointing out some of its causes.

Key Words: *Entrepreneur, company start up, training and entrepreneurship, entrepreneurial spirit, business incubators.*

Introduction

Many factors affect the creation of companies. Since the unemployment caused by the current crisis' situation to the socioeconomic factors and determinants typical of such a tumultuous age as the one we are living, among other factors as the preparation of businessmen or entrepreneurs, as their will to take risks and create a company.

Unemployment is one of the biggest problems that affect our society and has terrible consequences for itself. In the recent past it has been aggravated due to the economic crisis. A fact that guarantees the Audretsch and Thurik's (2000) argument is that the 60% of the applications filled in by entrepreneurs to be protected by the IGAPE (Galicia of institute economic promotion) were unemployed.

This crisis entails the close of innumerable companies and the dismissal of many workers. Unemployment, in opposition to what is supposed, affects in a positive way the creation of firms, as Audretsch and Thurik point out. It means a higher number of unemployed people

who, due to the lack of expectative in the labour market are forced to create new companies, they are named forced entrepreneurs. If they had stable jobs or the capacity to find one had not been decreased, they would not have decided to create a firm.

The economic environment influences on the startup of enterprising initiatives as this one is bound to the market, to the supplier, the human resources, the credits, being essential to analyze the socioeconomic situation in Galicia in order to know the condition in which the Regional Government of Galician is and be able to see how it affects the galician businessman. The economic situation is the base where the viability of the company must be supported and it is also what makes the functioning satisfactory for its creation and future maintenance.

Another factor that significantly affects the creation of companies is the education and previous experience of the entrepreneur, important variable and little analyzed at the moment. In that field, business incubators, universities and other training plans have an important role, as we will see.

Besides these factors there are others like the own interest to be entrepreneur and create a firm or the aversion to the risk.

In this article it will be analyzed the variable education and we will do a little tour through the differences of gender related to entrepreneurs' training and the tendency to entrepreneurship, having as reference the potential entrepreneurs in Galicia.

Galician in context

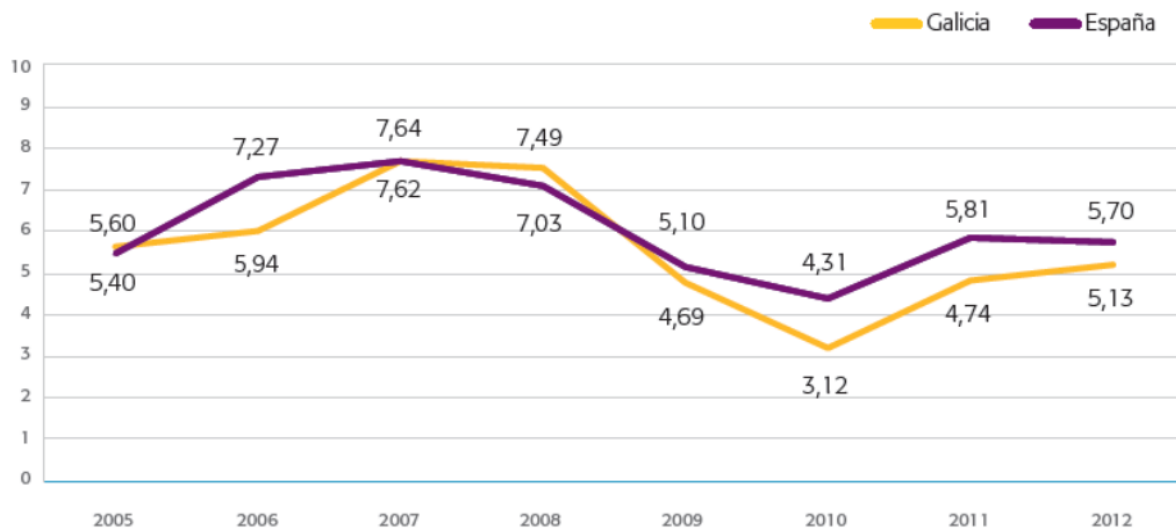
We cannot ignore the fact that in these moments of crisis there are more hindrances to entrepreneurship, business expectatives are slowing down, demand and investment are going down and it is difficult to access to credit, etc. besides the fact that competitiveness between new entrepreneurs is increasing as many unemployed people are forced to entrepreneurship due to the difficult labor market situation and the lack of job opportunities. There is also a big difference between both genders.

Currently, the profile of an average entrepreneur in Galicia consists in a forty-year-old spanish man, with higher studies who develops his initiative in an urban environment with a medium family of 4 members as maximum, an full-time employee and must have a specific education in entrepreneurship (vaquero and Ferreiro, 2010). In general, most entrepreneurs earn an annual rent lower than 30.000 euros. In addition, there are less informal investors than the rest of Spain.

The first years of this crisis took place an important decreasing in the enterprising activity in Galicia, measured by the TEA¹ index (*Total Entrepreneurial Activity*). This tendency also happens in a national level. (2008-2010).

we can say that the recuperation of enterprising activity continues in Galicia since 2010. This tendency means a TEA of 5,13 which corresponds with the percentage of adult population involved in enterprising activities of less than 42 months of activity.

Figure 1: Evolution of TEA in Galicia and Spain for the period 2005-2012



Source: GEM inform (2012)¹

In the first figure we analyse the evolution of the TEA and the information shows that this index had its worst result in 2010 and a little growth afterwards in the last years.

The TEA shows similar in Spain and Galicia in both value and punctual years but still exists another variable that is not, the continuous decreasing that galician population in regards to the average of Spain. It is an interesting variable which shows the existence of a direct relationship between population and the number of companies located in that place, such as Solw (1956), Dean et al. (1993), Reynolds (1994), Garofoli (1994), Belso (2004) or García et al., (2007) exposed.

The population dynamism by region or provinces does not seem to affect the existence of business incubators, which have created 3.300 jobs and 1.100 companies. One of the last incubators installed in Galicia was the CIE Seara-As Pontes in the region of Eume. Even in areas with decreasing of population like O Ribeiro one has been installed. In A Coruña an incubator was installed in 2010 sponsored by A Coruña’s Council and its population is rising a 9,8% the period 2000-2010.

In the last years, despite all, the global valuation of the enterprising environment in Galicia has improved and besides it exceeds the Spanish one. In this way, we must emphasize the availability of physical infrastructure, the attention to innovation and the support given to enterprising women. On the other side, they point out that the less favourable conditions for entrepreneurship are the enterprising education in primary and secondary education as the financial support and the existence of obstacles in the interior market, (Ferreiro and Vaquero, 2010).

However, more than the middle of experts consulted have identified an unsuitable financial support as the principal obstacle for the creation of new companies in Galicia and consider

¹ TEA index (Total Entrepreneurial Activity Index) represents the percentage of adult population (18-64 years) of a country, place or region that expounds to be involved in new enterprising initiatives.

that the economic climate also has a negative influence. And in third place, they mention as obstacle for entrepreneurship the education and formation as well as the governmental politics.

Therefore, to solve the current problems to entrepreneurship the State has several tools as using direct financing or counting on the business incubators one of the most important tools at the time of helping in the creation and consolidation of new companies as well as to foment the entrepreneurship. These are not simple cessions of space with prices lower than in the market but they must be an element of union between entrepreneurs and investors at the time of transferring information, new ideas and projects. Vaquero and Ferreiro (2010) add that business incubators can suppose a very interesting alternative as instrument to generate employment, in opposition to some of the traditional options of direct grants.

The medium cost of an incubator for every company created increased in 2009 to 11.497 euros, being 8.505 euros (the 74%) granted by the public government. If we assign the cost of the companies that abandoned to the ones which survived the public cost for every company would be 2.389 euros. Continuing with this simulation exercise if the entity lasts 10 years the cost would fall to 955,6 euros. These values (Vaquero and Ferreiro, 2012) are clearly recovered by the public government with taxes and Social Security fees.

The public cost for each job created is 2.626 euros. If we compare it with the grants given by the Office of Work and Welfare of the Galicia's Council to the new entrepreneurs the cost for each job created in an incubator is really lower.

The variable education in entrepreneurship

The education and experiences of the entrepreneur have a decisive role at the time of entrepreneurship. This is the posture defended by many authors as Shapero (1977) who explains that the entrepreneur's education is an important factor when it comes to start a business adventure. For their part, De la Vega et al. (2002) observed an increase in the number of students due to the evolution of the higher education in Spain in such a way that the Spanish society in general and the galician in particular is getting more and more educated.

In 2012 significative differences are identified between entrepreneurs with university studies and without them. University students are who expound a bigger enterprising intention and start up more initiatives, but most of businesses created in Galicia are made for services with a notable difference in the studies directed to companies where a 46,11% (20 points more than in 2011) has university studies, in opposition to the 7% who does not.

That implies an increase of the medium qualification comparing with the previous period what can be owed to lack of job opportunities in this sector of population.

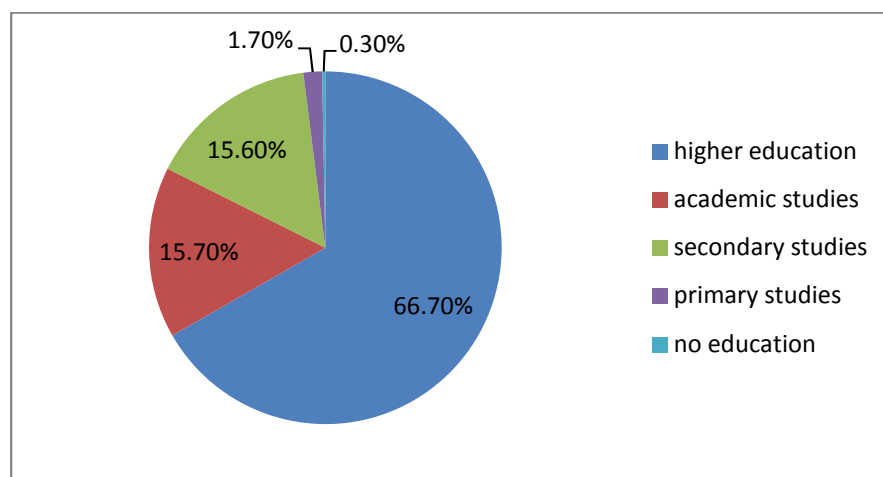
In the case of the new entrepreneurs, the percentage of Professional Education's graduates is over the university ones with a margin of 8,12 percentage points.

Nevertheless, most of consolidated entrepreneurs continue having the level of compulsory studies (47,85%) and the percentage of entrepreneurs with a Professional Training has increased 11,35 points in comparison with the previous year.

As regard the business abandonment entrepreneurs with compulsory studies continue being who have more abandons registered, although in less quantity than the previous year. It has still increased the percentage of abandon from entrepreneurs with a higher qualification in Professional Education (27, 91%) as well as university studies (21, 73%). But we can see a relation between higher studies and lower abandon rates.

According to the information showed in Vaquero and Ferreiro’s work (2010) about the educational level of entrepreneurs in Galician incubators for the year 2009 (Graphic 2), we can see that the percentage of entrepreneurs with higher university studies reach the 66,7% of the total whereas a 15,7% of them has medium university studies that, summing up, would be a 82,4% from the total of entrepreneurs establish in Galician incubators. It is reasonable being their previous education one of the most demanded requisites besides the condition that they must sign up as freelancer, that the project must be viable, innovative and social. In this way, to access to the incubators managed by Chamber of Commerce is needed to make a training course.

Figure 2: Level of studies of entrepreneurs in galician incubators (2009)



Source: Vaquero y Ferreiro (2010)

Comparing this with the GEM inform of Galicia and Spain in 2009². For the case of Galicia we can identify how the percentage of entrepreneurs with a university level reaches the 38,8% being less than the middle of entrepreneurs that operate in galician incubators.

In the case of Spain we see that the training levels are very similar as summing up in Galicia and Spain the higher and medium levels on one side and the university and Professional Training on other side it would be a 54,9% with medium and higher education in opposition

² In this case it is used the GEM inform (2009) instead of 2012 due to the fact that the information of the entrepreneurs in companies' incubators correspond to 2009 and in order to make the comparison homogeneous.

to the 53,6% in Galicia therefore these are details that can be consider homogeneous and with a very lower training comparing with the entrepreneurs that operate in Galicia’s incubators.

The elevated percentage of entrepreneurs with university training in galician incubators (82,4% in 2009) has its causes in several motives:

1. The simple configuration of incubators that entails as requirement prior to the admission a previous training.
2. Current galician incubators are oriented to the service sector which requires a good training
3. The existence of technological incubators³ (24% in 2009). The 84,6% of entrepreneurs who carry out their business initiatives in technological incubators have higher university qualification counting with presence of phd, master, etc. having in general a broad regulated training supported by a constant continuous one. In the case of general incubators higher university training decreases to the 50% what represents a 34,6% of difference regarding technological incubators. The 13,5% of entrepreneurs and professional of technological incubators have medium university studies which means the 98,1% of the total of them who have university qualification, all of that is owed to the fact that three of the four incubators in Galicia are oriented and related to the University.

Now we will analyse what percentage of university entrepreneurs that have technical or social careers are oriented to every sector so as to sift out which university specialties are the most demanded in the aforesaid incubators or are more directed to enterprise.

Table 1: Technical and social university studies by type of activity of the entrepreneurs of

	Technical higher education	Social higher education	Technical academic Studies	Social academic Studies	Total technical studies	Total Social studies
Primary	40%	0%	60%	0%	100%	0%
Manufacture	42.9%	21.4%	14.3%	21.4%	57.1%	42.9%
Sanitation	20%	30%	20%	30%	40%	60%
Commerce	20%	55%	0%	25%	20%	80%
Information	27.8%	36.1%	25.6%	10.5%	53.4%	46.6%
Professionals	44.7%	33.5%	12.6%	9.2%	57.3%	42.7%
y scientists						
Education	0%	75%	0%	25%	0%	100%
Entertainment	4.2%	83.3%	0	12.5%	4.2%	95.8%
TOTAL	34.5%	38.7%	14.8%	12%	49.3%	50.7%

Galician incubators (2009) *Source:* Own elaboration made up of surveys carried out to the entrepreneurs of galician incubators

³ Technological incubators are those which just advise or accept initiatives in their installations if they have a technological base or are clearly innovative.
General incubators have possibilities of services and industrial activity.

As we can see that there is equality between both types of degrees being incapable of discerning differences of enterprise between some and other university students.

We also see in higher education, there are more entrepreneurs in social science than techniques science, (38,7 % social and 34,5 % technical), but if we compare academic studies, it happens something different there are more entrepreneurs in techniques science than science social (14,8% technical and 38,7% social) This information is explained because we can perceive students of technical engineers or technicians that with a medium qualification already have enough knowledge to integrate in the labour market or become entrepreneur whereas who studies medium degrees of social speciality needs a degree to have possibilities to integrate in labour market.

Once seen the training level of new entrepreneurs, can we say that the University or having university studies foment entrepreneurship? It seems to be true that they are necessary and who has these studies, principal requirement in incubators, establish companies with more survival rates. But in the case of Spain the situation is alarming as due to cultural reasons the main objective of spanish university students is to work for the State. According to a study of the the Savings Bank Foundation (Fundación de Cajas de Ahorros –FUNCAS) the 47% of spanish want their children to be civil servant. According to Tortellá (1996) during the Franco's dictatorship the business initiative was not fomented being developed a paternalistic culture from de State. So it is not unusual for the society to perceive that the labour conditions offered by the Public Administration (safe work, workday with no break, more vacations, etc.) are superior to the conditions we can have in the private service or being entrepreneur what motivates the wish of being part of the public sector instead of the private.

Many universities have business incubators and all of them count on the OTRISs (Offices of Transfers of the Investigation's Results) with the objective of evaluate in the market the investigations that came up in the university world. One of the main ways the universities have to create value from the knowledge is the creation of companies being the OTRIs a good instrument as the business incubators that besides being a place to rent space for companies at a price lesser than the market it has knowledge and helps with the creation of new companies by the education and establishing some minimum requirements for the entry that are favourable to the following survival of the just created companies compared to the ones that are part of the incubators.

Emphasize that if we analyse the medium of entrepreneurs who operate in business incubators we have an average of 35, 3 years (Vaquero and Ferreiro, 2010) that if it is compared with the age someone must be to start working or develop a business activity (16 years) needs almost 20 years to make the decision of doing it. However, it would not be correct to compare it with the legal age to start working as the 66,7% of entrepreneurs of business incubators have university training even in some case with Masters and Doctorates. Therefore we must analyse the time that goes by since studies end until they start. Considering that degrees in 2009 took mainly 5 years with some year that could be repeated, a person finish a qualification with 24 or 25 years in such a way that ten years are needed since they finish the studies until they make the decision of being entrepreneur.

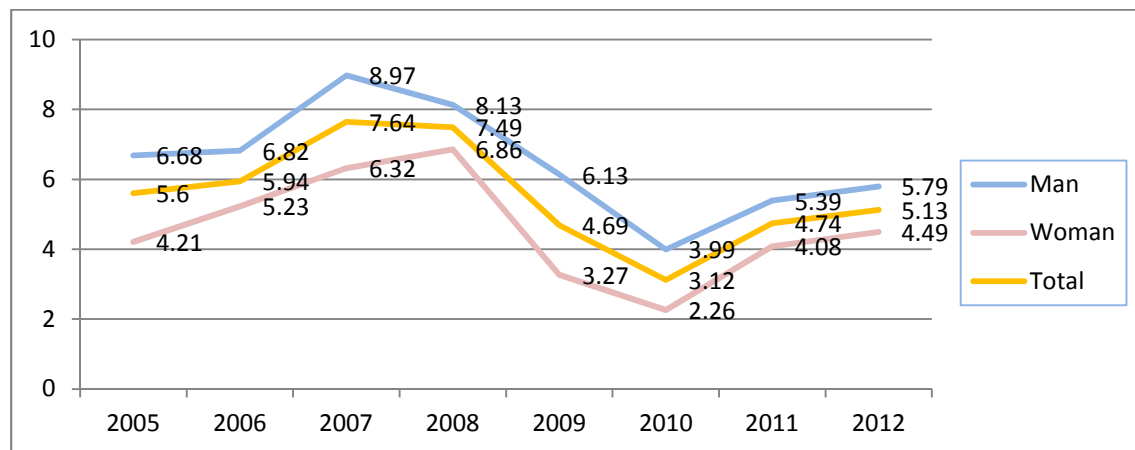
García et al. (2009) analysing a sample of 468 galician entrepreneurs coming to a very similar conclusion: they must be an age united to a minimum experience to undertake but add that since certain age the probability of creating a company is reduced progressively. Sternberg (2005) affirmed that the age was an important factor for the decision of creating a company.

The variable gender in entrepreneurship

Following, we insert a new variable: the gender of entrepreneurs as there are significative differences. The female’s TEA (4, 49) is under the male’s (5,79) although it cuts positions being the fewer difference since 2008.

In 2012 continues the recuperation of the TEA started in 2011 that contracts with the drop happened in the 2007-2010 period. This way, the index of female’s entrepreneurship increases in 0,41 points related to 2011 (from 4,08 to 4,49) the same increase produced in the male’s TEA (from 5,39 to 5,79).

Figure 3: Evolution of the TEA by gender



Source: GEM inform (2012)

In the whole period of study and in all the periods of the enterprising process there are indicators for women fewer than for men but the differences can be reduced since 2010.

Besides, these distances are inferior to the ones in Spain. What can explain that difference? Education?

1. This way, if we analyse the level of studies of entrepreneurs by gender it is showed how training is much bigger for women than for men. Whereas a 64,3% of males have a higher university qualification in the case of women they reach a 73,8%.
2. If besides we establish a division between technological and general incubators we see that the 93% of enterprising women who work in technological incubators have an higher university training in opposition to the 80% of males, whereas in the case of general incubators the university training for women is clearly superior with a 56,8% to the 47,1% of men. Therefore, with this information it is not erroneus to affirm that women who

Then, in spite of the fact that their training has a higher medium, there are less female entrepreneurs than males in the enterprise world. Therefore, training is not the cause.

Some studies have tried to find out why that happens. Langowitz and Minniti (2007) made an investigation in 17 countries to try to define what variables influence on the enterprising tendency and if they have any significative correlation with the differences of gender. Among the possible ones the following were found:

Labour conciliation: In this line and according to a survey made to 5 thousand interviewed published by PwC PricewaterhouseCoopers (2008) just the 40% of women have the ambition to assume the risks needed to create their own personal project establishing as main cause the labour flexibility whereas men assume the role of working harder to obtain better labour conditions. That is the reason why the familiar conciliation is one of the less important motives.

Some authors and people of knowledge think that the superior training is the cause of the less interest in being entrepreneurs. Ortiz et al. (2008) in their study affirm that sociodemographic variables do not explain by themselves the difference in the creation of companies between men and women and this one does not either.

Aversion to risk: The labour security is a very valued aspect in opposition to new challenges of personal projects as women prefer a post in big companies with possibility of promotion.

There are authors who see this aversion to the risk as the real motive of the lack of entrepreneurship in women. Ploeger, the president of the Chamber of Commerce of Manhattan (2011) affirms that women have more aversion to risk but the ones who do it are very constants and have a bigger percentage of success. But it is not the only one as there are other authors who assume that this aversion is the explanation for the less enterprise and the wish of creating a company. Díaz et al. (2008), analysing the situation of enterprising women in Extremadura, they reached the conclusion that the perception of good opportunities and the fear to fail depend on the gender. Arenius and Minniti (2005) conclude in their investigation that factors as the confidence in the own abilities and capability, the aversion to risk, the probability of failing, the knowledge of other businessmen explain the enterprising tendency. The bigger aversion to the risk from the women appears also in the study of Koellinger et al. (2008) according to which women have a fewer preference to self-employment than men as women perceive less utilities in their own business in part owed to a bigger aversion to risk. For Justo (2007) the fear to failing influence negatively in women at the time of business, meaning nothing to men.

Lack of motivation: Aspects as aversion to risk or the probability of failing are causes that explain the less tendency of women to business, besides their own abilities are not the ones which determine the decision but the fact that motivation for women is lower.⁴

⁴ This fixes perfectly with the information obtained from entrepreneurs of galician business incubators where women, having more training than men, have less enterprise.

Cause that Cromie shares. In 1987 studied why women are less enterprising emphasizing among several reasons that they are less interested in making money and in occasions they choose to have their own company because of the dissatisfaction of their career. Kourilsky and Walstad (1998) made a study about the women's enterprising tendency existing many similarities between men and women in relation to their knowledge but shows important differences in other fields with a less enterprising tendency of women.

Another remarkable aspect is that it is true that women who create a firm are less but they do it before. Excepting the incubators of the Chambers of Commerce of Ferrol and A Coruña, the medium age of enterprising men is higher than women's. Whereas the male medium is about 35 years women are 33. Therefore it does seem to confirm that women invest less but before.

The results show that the subjective variables of perception have a decisive influence on the women's enterprising tendency. Hence this low tendency caused that different institutions are fomenting the enterprising activity of women with specific programs as the University of Santiago does with Woman Emprende which is trying to foment entrepreneurship in the female population and help to consolidate their business projects.

Conclusions and Recommendations

As we can see along this article employment and the difficulties to find a job in periods of crisis create more entrepreneurs some of them are volunteers and others are forced to that. Therefore does exist a positive relationship between unemployment, entrepreneurship and companies' creation above all between the last two aspects as Audretsch and Thurik emphasize (2000).

Audretsch (2002) points that if you want to increase the offer of entrepreneurs it will be necessary to strengthen the individual capacities and qualifications, to improve education and training, make the access to resources easier, to favour the immigration and the inclusion of minorities, extend the offer of financing and microcredits, develop politics to foment the enterprising activity and the entrepreneurship to destroy cultural hindrances and change the current structure of risks and rewards by a reform of the fiscal system and the labour legislation.

In this article the analysis is focused on the role of training and besides It is also included the perspective of gender because of the significative differences observed in the training levels of men and women. The average educational level has increased in Spain. Some authors as Del Prado (2008) point out that the level of the entrepreneur's training influences on their capability of leadership. Vaquero and Ferreiro (2010) show in their study the different levels of training for the entrepreneurs of business incubators highlighting the importance of university training. They also analyse the causes of this situation that involves since the own incubators' design through the existence of technologic incubators until the type of activities in galician incubators. Emphasize that women have better training in average but they have less enterprise. According to the studies mentioned, the causes are the aversion to risk, the desire of a stable job and in big organizations with possibilities of promotion (that is why

they have more presence in public posts in Galicia), or their motivation to have a labour and familiar conciliation.

We also must emphasize the important role that incubators have on the training and preparation of new entrepreneurs and point out the Spanish society's ambition, even university students to get a job as civil servant instead of being entrepreneur. Something inculcated in our culture.

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