A study of entrepreneurship in Spain through a cluster analysis

M. Ángeles López Cabarcos
Professor of the Department of Business and Commercial Studies

Paula Vázquez Rodríguez
Professor of the Department of Business and Commercial Studies

Nieves Muñoz Ferreiro
Professor of the Department of Statistical and Operative Research

University of Santiago de Compostela

Abstract
It is generally agreed among today’s researchers that it is no longer possible to conceive of an advanced society that does not encompass a continually growing business sector. The creation of enterprises determines the different rates of growth that can be seen within countries during certain periods.

In this article a detailed study will be made of enterprise in Spain, through a description of the movement towards the formation and dissolution of individual firms and corporations. At the same time a detailed study will be made of the Autonomous Regions through an analysis of conglomerates which, aside from facilitating comparisons, leaves room for practical decisions to be made.

Keywords: Entrepreneurship, enterprise, creation of businesses, cluster analysis, analysis of conglomerates, enterprise vocation.

Codes JEL: M13
1. Introduction
A large number of researchers agree that today it is impossible to conceive of an advanced society that does not have an emerging business sector in continual growth (Ayerbe, 1994; Shane, 1996; Cuervo, 1997; García y Marco, 1999, 2002; among others). Thus business becomes the principal generative factor in terms of the progress and socio-economic development of a country, (Schumpeter, 1912; Orr, 1974; Deutsch, 1975; Hause y Du Rietz, 1984; Birley, 1986, 1987; Cooper, Willard y Woo, 1986; Lafuente, 1986; Lafuente y Lecha, 1988; Acs y Audretsch, 1989; Audretsch y Acs, 1994; Carter, Stearns, Reynolds y Miller, 1994; Audresch, 1995; García y Marco, 2002, among others), in the flagship of the market economies (Genescá y Veciana, 1984). In the words of Cuervo (1997), “these days business capacity and quality determine the rate of a country’s development. Different rates of increase between countries or during particular time frames within a country are determined by the offer and quality of business potential”.

This article brings together an analysis of enterprise in Spain during the period 1999-2002 in the different Autonomous Regions (AARR). The article has been structured in two parts. The first part includes a theoretic approximation of the concept of enterprise and an analysis of the most recent empirical studies in the field through a study of the literature provided by the scientific region over the years; and the second part includes a cluster analysis relative to the state of the creation of companies in Spain during the period of study.

2. Entrepreneurship
2.1. Concept
The term entrepreneurship was coined in the United States\(^1\) to describe a cultural and methodological discipline whose objective is to inspire enterprise and the creation of companies. Spain, like other European countries, is trying to join the entrepreneurship revolution, even adopting the very same Saxon word and attempting to dispel principal fears, worries and

\(^1\) It has become the most rapidly changing discipline in recent years in Schools of Business and Engineering in the United States, being present in more than 1,100 universities and institutes, 200 profesorships and 50 centres specialising in entrepreneurship.
half-truths that can jeopardize the creation of new businesses. There has been an attempt to find a Spanish word that might synthesise this Anglo-Saxon term. Veciana (1999: 14-15) claims that the term entrepreneurship embraces three concepts – businessman, business function and the creation of businesses – and is thus difficult to translate into Spanish. He affirms that the most literal Spanish term would be “empresarialidad” (business, a general term) but this is not a term that is in frequent use and therefore ought to be ruled out. Other authors opt for words like “emprendedori- mo” (business, a general term again) (Orti, 2003; Da Costa, 2002) or for the descriptive “creación de empresas” (creation of companies) (Cuervo, 1997; De Andrés, De la Fuente y García, 1998; García y Marco, 1999, 2002; Llopis, Sabater, Tarí y Úbeda, 1999; Muñoz, 1999; Rubio, Cordón y Agote, 1999; Veciana, 1999; Barba, 2002; González, 2002; among others). We endorse this second employment of the term which in this work will be referred to as “emprendimiento” (business enterprise).

The meaning of the word is of course equally important. Veciana (1999: 15) is again decisive upon the point. According to this author, it is not important to seek a literal translation in Spanish for entrepreneurship given that “in the academic sphere there is no shared criteria about its definition, meaning and sphere of usage”.

This idea is supported by Stewart (1991) and by Bygrave and Hofer (1991), all of whom affirm that there is no universal definition of entrepreneurship and one should not even exist in the first place. They believe that it ought to be the researcher, within the realm of their investigations, who decides and explains clearly exactly what is understood by entrepreneurship and by entrepreneur. However, authors such as Gartner (1985) or Vesper (1983) show that this inability to reach an agreement regarding a common definition has halted the investigative process in the area. On the other hand, Low y McMillan (1988) defend the idea of a universal term and try to include the varied proposals of researchers within the term entrepreneurship and their investigations try to explain and facilitate the role of new companies in the fomentation of economic development.
The lack of a clear and concrete, common definition of entrepreneurship has led us to consider, in the first instance, those definitions which have been upheld by different authors over the years. Knight (1921) and Schumpeter (1934) write of future, successful combinations. Danhoff (1949) defines the nature of the activity or function and not the individual characteristics. The focus upon profit is the key emphasis made by Cole (1968), while Kirzner (1973) writes of the ability to anticipate the imperfections and imbalances of the market. The achievement of competitive advantages and optimum financial results forms a significant part of the definitions given by Leibenstein (1978), Schollhammer (1982) and Carland, Hoy, Boulton and Carland (1984). It is in 1985 that we begin to speak of new possibilities in terms of business and the creation of companies (Gartner, 1985; Stevenson, Roberts and Grousbeck, 1985; Low and McMillan, 1988; Bygrave, 1989; Gartner, 1989; Veciana, 1999). Davidson (1991) considers entrepreneurship to be a gradual process that includes the instigation of the enterprise as well as its growth and innovation. Similarly, Stewart (1991) and later Henderson (2002), will always include the concept of innovation. Krueger y Brazeal (1994) discuss the search for opportunity independent of available resources. Finally, Orti (2003) widens the concept by considering the body of knowledge whose aim is to foment the enterprising spirit. As already mentioned, within this wide array of definitions, we have chosen those of Gartner (1985, 1989), Carland, Hoy, Boulton and Carland (1984), Low and McMillan (1988), Bygrave (1989) and Veciana (1999), where entrepreneurship is defined as the creation of new companies.

Veciana (1999: 16-31) presents the phenomenon of the creation of companies as a programme of independent scientific investigation, explaining its origin from four distinct theoretic viewpoints: economic, psychological, socio-cultural and managerial (table 1).
The economic viewpoint is based upon economic viability and the aversion to risk, showing that anyone can have the attributes necessary to move from being a worker for another firm to carrying out business tasks and vice-versa. The psychological viewpoint involves the determination of those traits that distinguish entrepreneurs from non-entrepreneurs and successful businesses from unsuccessful ones. The socio-cultural viewpoint holds that the decision to create a company and become an entrepreneur is influenced by external, surrounding factors. Hagen (1960) or Greenfield and Strickon (1981) believe that the underprivileged collectives are those that would develop particular attitudes towards the creation of companies and the assumption of risks. Other authors, for example Shapero y Sokol

<table>
<thead>
<tr>
<th>ANALYSIS LEVEL</th>
<th>VIEWPOINT</th>
<th>ECONOMIC</th>
<th>PSYCHOLOGICAL</th>
<th>SOCIO-CULTURAL</th>
<th>MANAGERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MICRO (individual level)</td>
<td>The enterprise function like the fourth production factor</td>
<td>Theory of the Personality Characteristics</td>
<td>Margination Theory</td>
<td>Theory of X-efficiency of Leibenstein</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Theory of Firm Formation</td>
<td>Psychodynamic theory about management Personality</td>
<td>Parental Role Models</td>
<td>Managerial Behaviour Theory</td>
<td></td>
</tr>
<tr>
<td>Meso (level of the company)</td>
<td>Transaction Cost Theory</td>
<td>Network Theory</td>
<td>New Enterprises Success Models</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incubator Theory</td>
<td>I+D New Projects Models (“Corporate Entrepreneurship”)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Social Schange Theory</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The Population Ecology Perspective</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Institutional Theory</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1982) or Veciana (1999), without denying this affirmation, state that it is emerging new entrepreneur collectives (for example, Silicon Valley and Rute 128). The managerial viewpoint maintains that the creation of companies is the result of a rational decision process whose objective is to create. This viewpoint does not attempt to explain the causes of the creation of new companies but rather to generate knowledge and detail practical models.

2.2. Recent studies
The study that has been carried out in this work is in response to the need to understand in some depth the enterprising situation within Spain, so that the conclusions arrived at might help to make advanced decisions regarding the observed processes and finally reinforce the enterprising activity of our country. In order to achieve this we have taken as a point of departure figures from the Autonomous Regions (henceforth abbreviated to AARR) of the Economic Activity Tax (henceforth abbreviated to EAT) referring to the formation and dissolution of companies, both corporations and individual firms, in the period 1999-2003 – these figures have been provided by the Spanish Agency of Administrative Taxation (SATS). Our two objectives have been the following: (1) To carry out a small study of entrepreneurship in Spain by investigating the propensity towards the enterprise birth and death created by only one person –sole proprietors– or created under other juridical forms; and (2) to analyse the state of entrepreneurship of the distinct Spanish Autonomous Regions in relation to the Spanish mean, through an analysis of conglomerates.

The extent of the observations and facts considered makes the present study a completely novel initiative in Spanish territory, even though in other geographic spheres and for other motives some extremely interesting studies regarding enterprise have been carried out. Taking into account the geographical variables, the study carried out by Mitchell (2003) is interesting in relation to the reasons and motivations that can ignite enterprising activity in Africa; Uhlaner’s (2003) study about enterprising activity in Italy, including references to other European countries; the studies of Kell-
man, Roxo and Shachmurove (2003) that make a detailed analysis of the causes of the failure of enterprising activity in Sub-Saharan Africa; Harada’s (2003) study that includes the key issues – size of company as well as the sex and age of the entrepreneur – in order to become a successful entrepreneur in Japan; Hiskey’s (2003) study about the politics that is needed to initiate the restructuring of business through enterprise in Puerto de Vera Cruz in Mexico; the study of Friar and Meyer (2003) that includes the variable dimension in order to investigate where enterprising activity ought to develop in Boston; the study of Noronha et al (2003) which makes a complete study of enterprise taking into consideration those regions of southern Europe; the study of Morales and Pena (2003) in which they explain the factors which create the prolific creation of companies in the Basque country’ or the study of Todtling and Wanzenböck (2003) which analyses the regional differences that affect the process of beginning new businesses or business activities in Austria.

The last study cited above is interesting because it has much in common with the aims of our current investigation. These aims involve using Spain as a territorial base and the autonomous region as a point of comparison. Together this creates differences that are large enough to enable comparative and specific analyses of the enterprising activity being carried out in each case, as well as allowing us to predict trends and make decisions regarding the consideration of other macroeconomic variables. In Todtling and Wanzenböck, Austria is used as a territorial base and as a point of comparison seven areas are used which, due to their structure, allow conclusions to be drawn about the country’s enterprising initiatives. The seven areas are: Vienna, provinces and cities of medium size, purely industrial areas; old industrial areas; rural industrial areas; tourist areas and purely rural areas. With regard to these seven areas, the evolution of variables related to enterprise is studied. Such variables are: the activity sector, the number of entrepreneurs, the manner in which the activity was initiated, the distribution of capital, cooperative base, the qualification of the members, the managerial experience and the possibility of survival.
There are other studies regarding enterprise that take into consideration the activity sector in which the companies operate. A large number of them are applicable to the advanced technology sector, like that of Zhang (2003) and Silicon Valley; or that of Elfring and Hulsink (2003) carried out with regards to the most important technological companies in Norway. In view of the most important repercussions that these studies may have for the future it is necessary to mention those studies whose object it is to motivate or animate young people in the initiation of new business activities (Meager, Bates, Cowling, 2003). Also worth a special mention are the enterprising initiatives which are based in universities, where, from our point of view, the enterprising ambition of students should gain most vigour (Pirnay, Surlemont, Nlemvo, 2003). Thus it is extremely interesting to analyse the enterprising activity of the University of Santiago de Compostela, which has become in a short space of time a fine example of university entrepreneurship throughout the world.

Two important factors are altering the enterprising sphere on all levels: the concern for sustainable development and the management of diversity. Naturally, enterprising activity is increasingly conditioned by these two aspects which ought to be considered with regards to any current decisions and more importantly in any future decisions. Some studies have already done this. The studies of Seidl et al (2003), Musyck (2003) and List et al (2003) consider environmental variables to be crucial when creating businesses in the Swiss market, the region of Freiberg (Germany) and New York. On the other hand, the studies of Kloosterman (2003), Collins (2003), and Mitchell (2003) believe that ethnic and cultural variables are more significant in the Norwegian market, in Australia and South Africa.

3. Study of entrepreneurship in Spain

3.1. Analysis of situation

Following on from this we will describe the evolution of entrepreneurship in Spain from 1998-2003. The total number of companies formed during the period studied has not undergone great changes (Graph 1). However,
it can be seen that in only two of the five years that have taken into consideration (1999 and 2002) has the number of companies formed increased with regards to the year 1998: by 3.44% and 3.47% respectively.

Graph 1. Total number of enterprise birth and death per year

The year 2003 does not appear to have been very active either in terms of entrepreneurship in Spain. We can see that the number of companies formed up to the 15th of December is considerably inferior to that of 2002 and approximately 8% less than in 1998. It can be observed that in 2000 and 2001 a smaller number of companies are formed. This could be partly due to the economic crisis that Europe has suffered since 1999 and which has been exacerbated by the events of September the 11th together with the crisis of companies denominated “.com”. Taking into account the company dissolutions that have been suffered in the same period we can see that they follow an upward trend. This supports the theory of an economic crisis during the analysed period. The most worrying figure is recorded in 2001 when the net increase (total enterprise births minus total enterprise deaths) hardly comes close to the 200,000 licenses.

As can be seen in Graph 1, 2002 was a year in which a greater number of companies were dissolved according to the IAE register, more than double that of 1998. If we compare the enterprise birth created by only...
one person –sole proprietors– and enterprise birth created under other juridical form, the firsts present a higher percentage that oscillates between 60% and 65% of the total amount of companies formed (graph 2).

Graph 2. Percentage of enterprise birth (sole proprietor and other juridical forms) according to the annual total of companies birth

This seems logical given that the business structure is formed largely by small and medium companies, for individual and professional societies.

The situation is identical when it comes to companies that have been dissolved. We can see that the number of enterprise death (sole proprietor) is almost triple the number of enterprise death (other juridical forms) (graph 3).
In this case and in relation to the total number of companies deaths, the percentage of those enterprise death (sole proprietor) reaches values of between 70% and 78%. Thus there are a greater number of dissolutions in individual, autonomous or professional companies than in companies of one or two associates. This distributive trend, like that observed in the enterprise birth, remains constant throughout the period under observation.

3.2. Cluster Analysis

3.2.1. Description of Method

The following part of the study focuses on an analysis of the different AARR in relation to the Spanish mean by closely examining conglomerates. This is also known as a cluster analysis which is facilitated by the use of the statistical program SPSS 12.0.

The data refers to all the Spanish AARR’s except the Basque country and Navarre: (AN) Andalucia, (AR) Aragon, (AS) Asturias, (BL) Balea-
A study of entrepreneurship in Spain through a cluster analysis

The cluster analysis is a technique which aims to group together objects based on a multivariate profile. The required prerequisite is for the conglomerates or groups formed to be as homogenous as possible in themselves (with regards to a previously determined selective criteria) and as heterogeneous as possible between one another (Hair et al., 1999: 492; Cea, 2002: 227). By using a cluster analysis in this case we hope to discover which regions behave similarly in relation to the enterprise birth and death created by only one person –sole proprietors– or created under other juridical form in the period ranging from 1999 to 2002. We thus seek to limit the information in relation to this period so that we can observe how the enterprising activity has been affected. The following classifications have been used: enterprise birth – sole proprietor (AF); enterprise birth – other juridical forms (AJ); enterprise death – sole proprietor (BF) and enterprise death – other juridical forms (BJ). All are represented according to the number of companies formed and dissolved for every 1,000 inhabitants.

We will carry out an analysis of each year by observing how the regions group themselves together and evolve in the period under consideration. In order to carry this out, each year a combination of hierarchical and non-hierarchical processes has been used (Hair, 1999; Luque, 2000: 167; Cea, 2002: 247; Levy & Varela, 2003: 435): (1) A hierarchical method (Ward method) is applied with the aim of finding out the number of conglomerates that can be formed in the matrix of data to locate a initial centroid. (2) The outcome of the hierarchical method is taken as a initial centroid for the non-hierarchical method. The latter helps to adjust or to a
greater extent determine the constitution of the conglomerates that have been obtained through the employment of the hierarchical method. In this case is applied the K-means method.

Thus, as a first step to examination of the cluster of regions, a factorial analysis has been applied in which, together with the annual data, two factors are calculated which are then employed in the analysis of conglomerates.

3.2.2. Analysis of the results
Table 2 summarises the two factors calculated each year with the data regarding the enterprise birth and death created by only one person –sole proprietor– or created under other juridical form for every 1,000 inhabitants. Included are the correlation coefficients between the variables and the factor. Highlighted in black are the coefficients that reflect the association between variables and the factor that represents them. Added to this is the percentage of total variance which is explained by the factors that have been extracted each year.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACTOR</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>AF</td>
<td>0.261</td>
<td>0.952</td>
<td>0.861</td>
<td>0.431</td>
</tr>
<tr>
<td>AJ</td>
<td>0.907</td>
<td>0.139</td>
<td>0.987</td>
<td>0.040</td>
</tr>
<tr>
<td>BF</td>
<td>0.797</td>
<td>0.442</td>
<td>0.199</td>
<td>0.976</td>
</tr>
<tr>
<td>BJ</td>
<td>0.922</td>
<td>0.355</td>
<td>0.843</td>
<td>0.502</td>
</tr>
<tr>
<td>% OF VARIANCE</td>
<td>90.5%</td>
<td>96.5%</td>
<td>95%</td>
<td>91.8%</td>
</tr>
</tbody>
</table>

Instead of providing a dendrogram for all the periods considered, we have only included one for the final period, the year 2002, comparing it with the results obtained in the previous years. In this particular year the
most relevant variables in the first factor are those related to the birth of a particular enterprising activity, created by only one person –sole proprietor– (AF) or created under other juridical form (AJ). This factor is labelled the CREATION OF COMPANIES. The most relevant variables of the second factor are those relating to the death of business activities in relation to enterprises that were created by only one person –sole proprietor– (BF) or created under other juridical form (BJ). This factor is labelled DISSOLUTION OF COMPANIES. The regions’ factorial figures are the starting point in the analysis of hierarchical conglomerates with which the following dendrogram has been obtained for the year 2002 (figure 1).

Figure 1. Dendogram (Hierarchical Analysis, Ward’s method)
The preferred solution is formed by three conglomerates. The final composition of the groups has been effected by the non-hierarchical procedure of K-averages. This does not alter the initial formation of the groups except in the case of 1999, when Catalonia changes its conglomerate in relation to the formation of groups in the hierarchic process.

The three resulting conglomerates from 2002 are the following:

**CONGLOMERATE 1.** The first conglomerate is formed by the AARR of Castile of the Mancha and Madrid. This conglomerate has a greater average score in relation to the first factor (1.7). We ought to remember that the most relevant variables in the first factor are those relating to the birth of business activities (the creation of companies), created by only one person –sole proprietor– (AF) or under other juridical forms (AJ). The variable in relation to the AJ (0.933) carries more significance within the factor than the AF variable (0.881). Therefore those AARR that constitute conglomerate 1 stand out as being *highly developed enterprising regions* especially with regards to the creation of enterprises under other juridical forms (graph 4).

**CONGLOMERATE 2.** The second conglomerate is formed by the AARR of the Balearic Islands and Catalonia. This conglomerate has a greater average score in the second factor (1.68). The most relevant variables in the second factor are those relating to the enterprise death whether enterprise that were created by a only one person (BF) or enterprise that were created under other juridical form (BJ). The variable in relation to BF (0.958) carries more significance within the factor than the BJ (0.745). Therefore those AARR that constitute conglomerate 2 stand out as regions which, although they have a high propensity to create companies, display a *high level of enterprise death*, especially in relation to individual or autonomous firms. This means that the net balance (total enterprise births minus total enterprise deaths) is reduced (graph 4).

**CONGLOMERATE 3.** The third conglomerate is formed by the rest of the AARR: Cantabria, Galicia, Castile and Leon, the Canary Island, the
Region of Valencia, Andalucia, Rioja, Aragon, Asturias and Extremadura. This conglomerate is characterised as a group that is less active when it comes to creating enterprises and the effect of enterprise death is minimal (graph 4).

Graph 4. Analysis of the conglomerates

The composition of the regions’ groups in the previous years reveals divergences from the year 2002. The situation of the AARR of Madrid, the Balearic Islands and Catalonia changes to a certain extent in 2002, for
up to this year they appear together in conglomerate 1. Factor 1 reaches an outstanding level in this conglomerate throughout the period and, as can be seen in table 2, both the variables in relation to the AJ and BJ remain quite well represented by this factor from 1999 to 2001. We could therefore conclude that the four years analysed are characterised in these regions by the continual births and deaths of enterprises. Apart from the year 2000, the creation of enterprises by only one person does not particularly stand out whereas their death most certainly does. Finally, in 2002, there is a tendency in the region of Madrid to create enterprises while in Catalonia and the Balearic Islands there is a tendency to dissolve enterprises that were created by only one person –sole proprietor–. With regards to conglomerate 3, the majority of the regions in the group remain in the same conglomerate throughout the entire period studied. It is characterised throughout the period by minimal changes whether in the creation or dissolution of enterprises. However there are three significant changes in 2002:

1. The absence of the region of Castile which goes on to form part of conglomerate 1 with Madrid.
2. The presence of the region of Extremadura which in the previous years formed conglomerate 2 by itself, except in 1999 when it was joined by Asturias. This conglomerate is characterised by an alternation in the birth and death of enterprises created by only one person –sole proprietors–.
3. In 2000 and 2001, the region of Valencia and the Canary Islands form part of conglomerate 1 together with Madrid, Catalonia and the Balearic Islands. This conglomerate is characterised by variations in the birth and death of enterprises created under other juridical form.

In 2002 Galicia –our region–, as part of conglomerate 3, has the lowest record of enterprises formed. It is below the conglomerate mean both of AF and AJ. With regards to the AF, Galicia is only ahead of Aragon, Cas-
tile and Leon. The situation varies slightly with regards to the AJ as Galicia improves its position in the conglomerate ahead of Asturias, Cantabria, Castile and Leon and Extremadura (graph 5). In previous years the situation is similar although from 2001 onwards one can see a slight recovery in the birth of enterprises under other juridical form.

4. Conclusions
The enterprising incentive is defined when a business activity is initiated, when a company is created, by only one person or under other juridical forms.

In Spain, unfortunately, the ideal trend – that is, for the number of companies formed to increase while the number of companies dissolved decreases – is not sustained throughout the period that has been studied.

The companies created suffer small ups and downs throughout the period from 1998 to 2003. The number of companies created increases
only in two periods – 1999 and 2002. The number of companies dissolved rises throughout the period studied meaning that the net increase has decreased as the years have gone by.

Through the analysis of conglomerates or clusters, a classification of the AARR has been carried out from a starting point of four variables, two related to the creation of new companies (AF and AJ) and two related to the dissolution of companies (BF and BJ). An attempt has been made to make the groups as homogenous as possible individually and as heterogeneous as possible in relation to each other.

The first conglomerate involving Castile of the Mancha and Madrid and is highly involved in enterprise. The second conglomerate involving the Balearic Islands and Catalonia has the highest levels of company death and the third conglomerate is made up of the rest of the AARR. This latter conglomerate is formed by AARR that are inactive in terms of enterprise birth. Galicia is situated in the third conglomerate as a community that is below average in the creation of enterprises.

The application of this type of multivariate analysis has facilitated a rapid and simple classification of the Spanish AARR. The next step is to try to increase the number of AARR that display a strong and sustainable enterprising spirit and to reduce those that fall into the opposite category by changing the original enterprising ideal that evolved in their day.

**Bibliography**


BARBA, V. (September, 2002). La decisión de crear una empresa: una aplicación de la teoría de las expectativas. Presented to the XII Congreso Nacional de ACEDE, Zaragoza, Spain.


