Education, Innovation, Stage of Activity and the Recent Economic Crisis as Key Factors of Internationalization: An Empirical Analysis of the Spanish Entrepreneurs Using the GEM Database

Carmen Lafuente[1], Ignacio López[2] , Carlos Poza[3]

ABSTRACT

The aim of this article is to analyze the impact of employees' level of education, productive innovation, stage of activity and the current economic downturn on the degree of internationalization of Spanish firms, taking into consideration some variables such as company size or sector. This analysis is carried out by means of the Spanish Global Entrepreneurship Monitor (GEM) database for 2006 (pre-crisis), 2010 and 2011 (crisis). The results show that the firms with higher education employees, the organizations that innovate in their production process and the early stage companies present a higher likelihood of exporting than the rest of the firms. Furthermore, it is empirically analyzed that the recent recession is having a negative influence on export activity of firms.

1.0   INTRODUCTION

This research analyzes some of the factors that improve the internationalization of companies. Specifically, this article emphasizes the strengths that companies present and help to increase their international presence. The scope of this work is focused on the Spanish entrepreneurs.

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[1]E-mail: clafuent@nebrija.es Nebrija University, Madrid, Spain
[2]E-mail: ilopezd@nebrija.esNebrija University, Madrid, Spain
[3]E-mail: cpoza@nebrija.esNebrija University, Madrid, Spain

The overall aim of this study is to identify if the education, the innovation, the stage of activity of the company and the economic cycle are determining factors in the internationalization of Spanish companies, in terms of exports.

The determining factors to be contrasted are related to individual company strengths, and not so much to business opportunities that occur in its international activity (Puljev aand Widén, 2007). From this point of view, the aim is not to analyze the external factors that encourage companies to internationalize (size of markets, potential economic growth, search for economies of scale, risk diversification and so on), but to identify the internal determining factors that boost and facilitate exports (size of the company, activity sector, innovation degree, education of employees or stage of the company). Nevertheless, because of the influence that external factors exert on the internationalization of any company, it is necessary to include a variable in the analysis that represents the overall economic outlook. In this way, the exporting activity is looked at in two different scenarios: pre-crisis and crisis.

In order to meet the proposed objectives, the Spain *Global Entrepreneurship Monitor* database for years 2006, 2010 and 2011 will be used. The selection of the years is justified by the need for selecting a period before the crisis and another one during the crisis. In this sense, we could begin to understand what has happened to the internationalization of firms when going into recession.

Using this database, a descriptive analysis is carried out so as to identify the variables behavior related to the exporting activity that would justify the subsequent dependence analysis. Ultimately, a binary logistic regression is applied in order to assess if the selected variables explain in a significant way the internationalization of the Spanish firms. This technique is used because it is the most suitable to explain the behavior of an endogenous dichotomous variable.

The article contains the following parts: Introduction, a review of the empirical literature concerning internal factors of firms that encourage its internationalization, methodology of research, results and conclusions and limitations of the research.

2.0   A REVIEW OF THE EMPIRICAL LITERATURE CONCERNING INTERNAL FACTORS OF FIRMS THAT ENCOURAGE INTERNATIONALIZATION

An increasing ease to get into global markets has provided more opportunities for many companies to expand activity rapidly, to increase revenues and improve growth (Keupp and Gassmann, 2009; Westhead, Wright and Ucbasaran, 2001). In this new global context, each firm's strategies are multiplied and the international company management facilitates behaviors and actions that, virtually, define each organization. Thus, making characterization more complex, giving rise to an extremely high degree of heterogeneity among international companies (Villarreal, 2005).

This is why the internationalization process has been widely studied from an academic point of view: from the reasons that lead to the internationalization of a firm (Bilkey, 1978; Buckley y Brooke, 1992; Casson, 1992; Cavusgil, 1980, Claver, Querand Molina, 2001; Durán, 1994; among others), to the financial profits that it provides[4](Daniels and Bracker, 1989; Edmunds and Khoury, 1986; Zahra et al, 1997; Oviatt and McDougall, 1997); or the rise of non-financial benefits[5]. Researchers have also analyzed the internationalization process of very specific sectors and types of company (Wang, 2010, to mention just one reference). In spite of the existing differences in resources and capabilities, some companies have been able to take advantage of those growing opportunities that international expansion offered (Cumming et al, 2009; Soriano and Dobon, 2009).

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[4] In terms of sales growth, size growth or profitability increase.

[5] The internationalization may be seen, too, as a process of learning and accumulation of knowledge and technology (Blalock and Gertler, 2004; Yeoh, 2004) and ultimately, it is suggested that internationalization is a source of competitive advantages for the companies (Autio, 2005; Kuemmerle, 1999, 2002; Oviatt and McDougall, 1994).

This research provides thought-provoking conclusions concerning the internal aspects of companies that foster internationalization, if these internationalizations measured by means of the exporting propensity.

The use of the variable "export" as an indicator of the internationalization degree of a company is widely used in the specialized literature (Hessels and Van Stel, 2011; Terjessen and Hessels, 2009; De Clercq et al, 2008andFernández and Nieto, 2005). For their part, the executives and/or general managers, particularly in small and medium companies, take decisions on every aspect of the organization. In this regard, it seems clear that the characteristics or attributes of the executives conditions the company strategies. A widely studied characteristic is the education, or moreover the higher education of the executive and its influence on some company variables, in particular concerning the decision to internationalize.

It seems logical that a higher education level would have a positive impact on the decision to export. Alonso and Donoso (1994), in a study carried out about a sample of Spanish exporting companies, observed a noticeable relationship between the propensity to export and the education level of the executives. According to this study, in general, the executives with exporting propensity had University degrees. However, Del Río and Varela (2006), in a similar study took a sample of 64 firms from Galicia in the food products sector but found that the education level does not affect the companies' attitude to internationalization. Nevertheless, it could be argued that the size of the sample and the sector type may have conditioned the cause-effect relationship.

Other studies carried out in different countries and activity sectors, for example Atabay (2008) in the Turkish olive oil sector, show with a 1% significance that the education levelis the attribute, out of all the attributes looked at in the study, with the highest impact on the exporting performance. Also, the work of Federico et al (2011) draws up the same hypothesis: if companies whose main founding member has University or Bachelor degree they have a higher probability of internationalization in early stages. This hypothesis is drawn up from Álvarez and Busenitz (2001) who state that there is a positive correlation between the education level of entrepreneurs and the exporting activity of companies. The final results point out that the hypothesis is accepted for the Latin American and Asian countries analyzed, but not for Spain.

> H1: The University education of employees or entrepreneurs positively influences the companies' internationalization.

The innovation factor and its effect on the exporting propensity of a company have been another element specially analyzed by many studies regarding internationalization. The majority of authors agrees and identifies the positive and significant relationship between both variables.

For example, Cassiman, Golovkoand Martinez-Ros (2010) found evidence of a connection between product innovation and productivity in a sample of Spanish firms in the manufacturing sector, leading to the non-exporting small size companies to export.

In addition, Milesi and Agio (2008) studied the relationship between innovation and exporting success. Innovation was measured through the generation and adaptation of technologies, and the exporting success by means of the exporting continuity, the exporting dynamism, the markets diversification and the conditions of accessing the markets, of a sample of Latin American companies. The result is positive and significant.

Pla-Barber and Alegre (2007) found a positive and significant relationship between innovation and exporting intensity based on a sample of French IT companies. In a similar study, Álvarez (2007) analyzed key factors of exports and their success from a sample of manufacturing Chilean companies. He argues that the labor competences (already aforementioned in the paragraphs above) and the technological innovation are positively related to export, in the same way that the previous exporting experience favors the success or sustainability of exports.

Rodríguez and Rodríguez (2005) examined the influence of the technological capacity of Spanish manufacturing companies on their decision to export and their exporting intensity. The results show that both the process innovations and the product innovations have a positive and significant connection to the exporting propensity. This is consistent with the work of Rodríguez (1999), where the link with the technological activity of the Spanish manufacturing firms, estimated through different variables of the innovation process, and their relative presence in the outer markets are compared. Positive association can be studied between both strategies. Nevertheless, this connection is only present from innovation to export, but not the contrary.

Also Lefebvre, Lefebvre and Bourgault (1998) found that the research and development activities had a positive effect on the export results of a sample of Canadian companies. The R&D activities were measured from a series of variables such as the basic research, applied research, product development and process development, while the export variable was measured by the export level to total sales ratio.

> H2: Companies that use new procedures or technologies in their production process show a higher probability of exporting than those that do not use them.

As far as stage of activity is concerned, Carr (2010)reaches the conclusion that the companies face a dilemma to undertake internationalization: they may internationalize in the short-term, like a *Gazelle or Born Global Company*, but a mistake may carry the premature extinction of the company, or they might internationalize in the long-term to increase the know-how to open new markets.

Sapienza et al (2005) come to different conclusions, as they state that an early internationalization, understood as the one developed in the first life stage of a company, is associated to a quicker development in the international scale, that is, when it is combined with a great deal of knowledge. At last, this early internationalization promotes a greater entrepreneurship spirit and gives a greater growth advantage.

The traditional focus on internationalization of nascent companies[6] is different; as it modifies the way they establish, continue and consolidate their external presence. These differences in terms of age and the rate of internationalization emphasize new ways to fix and sustain a competitive advantage in the international scene. At least that is what Cellard (2009) found in a model he developed that suggests a negative relationship between the age of internationalization and the international growth potential.

Lehrer (2009) tried to explain why some companies decide to internationalize almost from the beginning (nascent companies, from 0 to 3 months). He states that it may be justified by an innovative culture, by a capacity to detect opportunities that other companies do not have, or by the existence of competitive advantages on the side on internationalized companies that do not aim only at the local market. Nevertheless, in his study he concludes that the early internationalization process is, finally, a process induced by the context of the country where the company is set up, and its business environment.

Oystein (2002) reached a similar conclusion to the one pointed out before by affirming that the decision to aim at global markets depends a great deal on the global orientation of the person who makes the decision, the entrepreneur, as much as on the situation of the local market, its context and the access to external markets.

> H3: Nascent (from 0 to 3 months) or baby (from 3 to 42 months) companies, as for the GEM definition, have the propensity to export in proportion to their total sales more than the established companies(more than 42 months of activity).

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[6]See page 9 for the definition.

The available literature about business organization has widely shown that the external environment of companies may affect sales figures (Keats and Hitt, 1988; Naman and Slevin, 1993, Yasai-Ardekani, 1989). Moreover, many studies suggest that the organizations reflect the environment in which they develop their activity (Meyer and Rowan, 1991; Whitley, 1999) and the early entrepreneurs, such as those that aim to external markets in the first stages of the company´s life are under the influence of that environment (Autio and Acs, 2010; Edelmen and Yli-Renko, 2010; McDougall et al, 1994; Woolley and Rottner, 2008). For this kind of nascent companies, the impact of the environment is specifically more important in this young period. As a consequence, they have less control on those external conditions (Pfeffer y Salancik, 2003), and that makes them more dependent on those factors than the established or already consolidated companies (Gnyawali y Fogel, 1994).

Perníaand & Legazkue (2007), for example, studied the effect that foreign direct investment (FDI inflows) has on the propensity of early entrepreneurs to join foreign markets. Their conclusions are that FDI inflows increase the likelihood of joining external markets for that early entrepreneur, while FDI outflow has no impact. Their results show, too, that the export behavior of the early entrepreneurs is based on the personality of the entrepreneur and organizational factors.

Finally, it should be noted in the *World Economic Outlook Reports (2010 and 2011)*, drawn up by the IMF, how the current economic crisis had notably shrunk the international trade in 2010.

> *H4: The current worldwide economic crisis negatively affects the Spanish firm's exports.*

3.0   METHODOLOGY OF RESEARCH

3.01   Data

This paper used the database of the *Global Entrepreneurship Monitor* (GEM), which is an annual assessment of entrepreneurship activity in more than 90 countries (GEM Spain, 2011).

GEM was created in 1999 and Spain collaborated a year later. The methodology is the same for each one of the participant countries and territories. As per GEM Spain (2010): "the key point of this methodology is the homogeneity of the tools used to collect the information". This allows not only carrying out reliable comparisons among countries and regions, but also for the same country in different years.

Additionally, this database shows very varied information, referring to entrepreneurship, intra-entrepreneurship, baby companies, established firms and the self-employed, among other aspects. But in-depth information may also be extracted about a series of social-demographic and economic variables that allows an extension of the analysis beyond the entrepreneurship, such as internationalization. Some examples may be seen in Nissan, Carrasco and Castaño (2012) where the relationship between entrepreneurship, gender, innovation and internationalization is analyzed through the GEM database, or in Hessels and Van Stel (2008) where the exporting propensity of entrepreneurs is also analyzed using the GEM data source.

3.02   Sample

A Spanish GEM sample of the years 2006, 2010 and 2011 is used in this paper. These three years are used to increase the sample size in order to obtain more robust results, and also to have the option to analyze the impact of the economic crisis on internationalization, via Spanish firm's exports. The year 2006 is the year before the beginning of the economic crisis in Spain and 2010-2011 are years with data available in GEM that collect information about the effects of the Spanish economic recession. The years 2010 and 2011 have been put together in order to balance the sample before and after the crisis (the 2006 sample was noticeably greater than the 2011 sample, so that we opted for merging it with the 2010 sample). An example of this kind of merge can be found in Acs, Desai and Klapper (2008).

Before the econometric analysis, the three years have been integrated into the same database in order to widen the sample and make pre-crisis/crisis comparisons. The whole sample comes to 72,194 case studies, from which, after carrying out the proper statistical analysis, there are 4,757 valid cases left, from which 2.105 are for 2006, 1,536 for 2010 and 1,116 for 2011.

3.03   Variables

Dependent Variable
EXPORTS: this variable has value 0 when the company does not export and 1 when the company does export, with independence of the level of its exports.

The GEM database offers information regarding the ratio of foreign customers of the firm (represented by an entrepreneur) to the total customers. From that item the variable EXPORTS are formed. This kind of variable has already been used by other authors to represent the internationalization of companies. Fernández and Nieto (2005) use it for Spain working with the "Encuestasobre Estrategias Empresariales" (ESEE, or Survey on Business Strategies), Wang (2010) for United Kingdom and Ireland through the FAME database and Alon and Lerner (2008) apply it to China using the GEM database.

Independent Variables
The independent variables used are: explanatory and control.

The following are included in *explanatory variables*:
HIGHER EDUCATION: this variable takes value 0 if the surveyed entrepreneur that represents a firm has not a university degree and 1 if he has a university degree.
INNOVATION: this variable takes value 0 when the firm uses technologies or processes 5 years or older in its production process, therefore in GEM terminology: it does not use new technologies, and has the value 1 when the company uses technologies or processes that are 5 years or less old, so in this case, the firm uses new technologies. This variable works as a proxy for business innovation.
STAGE: this variable takes value 1 when the company is in the market between 0 and 3 months: nascent company (in terms of the GEM questionnaire: Has the new business paid any salaries, wages, or payments in kind, including your own, for less than three months?), it takes value 2 when the company is between 3 and 42 months old: baby company and value 3 when the age of the company is over 42 months of activity: established company.
CRISIS: this is a time variable that takes value 0 when considering year 2006 and value 1 when considering years 2010 and 2011. In the first case, the period is assumed as an expansive phase of the cycle for the Spanish economy (no crisis) and in the second, the period represents a recessive phase (crisis).

The following are included concerning *control variables*:
SERVICES: this variable takes value 0 when the company does not belong to the services sector, this is, it is part as for the GEM terminology, of the extractive and industrial sector (primary sector), and takes value 1 if the company belongs to the service sector, being its customer a company or a final consumer.
NUMBER OF EMPLOYEES: this variable takes value 0 if the company has between 1 and 49 employees, defining the company as a micro or small company, and the value 1 when the company has more than 50 employees, in which case the size would be medium or large.

3.04   Techniques

From one viewpoint, the descriptive analysis has been utilized to show in a general way how the variables behave, independent and dependent. Basically, the frequencies have been calculated of the independent variables as a function of the endogenous variable so as to detect significant differences. Finally, the Chi-square independence test was used to contrast if there is dependence or not between the internationalization and the rest of the explanatory variables used in the analysis.

From another viewpoint, a binary logistic regression has been applied to test the hypothesis outlined at the beginning of this work. The selection of this technique is mainly based in that the dependent variable used is dichotomous (0/1), however it allows to identify which one of the explanatory variables exerts a stronger influence on the explained variable.

In fact, this technique is widely used in the field of internationalization. Some examples may be found in Fernández and Nieto (2005)where a Probit model worked out which dependent variable, namely "exporting activity", is binary. According to these authors:

> "The binary election models are analysis that could assimilate to the regression methods in which, because the nature of data, a special treatment of them is needed. [...] The coefficients of the independent variables show that the impact of changes in the variables on the occurrence probability of the dependent variable" (Fernández and Nieto, 2005: 118).

Furthermore, the use of this technique may be seen in Wang (2010)where by means of a logistic regression model the effect of a series of explicative and control variables on the dependent variable "exporting propensity" is contrasted.

4.0   RESULTS

4.01   DESCRIPTIVE ANALYSIS

Once the GEM data has been prepared and transformed to the aims of this research, a sample of 4,757 Spanish firms was obtained, which main characteristics are (see table 1):
- The majority of surveyed Spanish firms do not export.
- The majority of Spanish firms belong to the services sector.
- In general, it can be stated that the size of Spanish firms is small. Only 1.5% of the sample is a medium and large company.
- Around the 60% of the sample is made up of established companies, that is, those that have been active for more than 3 and half years. The rest of the companies distribute almost equally among nascent (from 0 to 3 months) and baby (from 3 to 42 months).
- On their part, only 14.4% of the entrepreneurs have a higher education level, understood as a completed University degree.
- In the same way, only 21% of the Spanish firms use technologies 5 years old or less in their production process.
- Finally, 44.3% of the sample is from 2006 and 55.7% from 2010/2011.

Table 01: Frequencies, distribution of the sample (percentage)

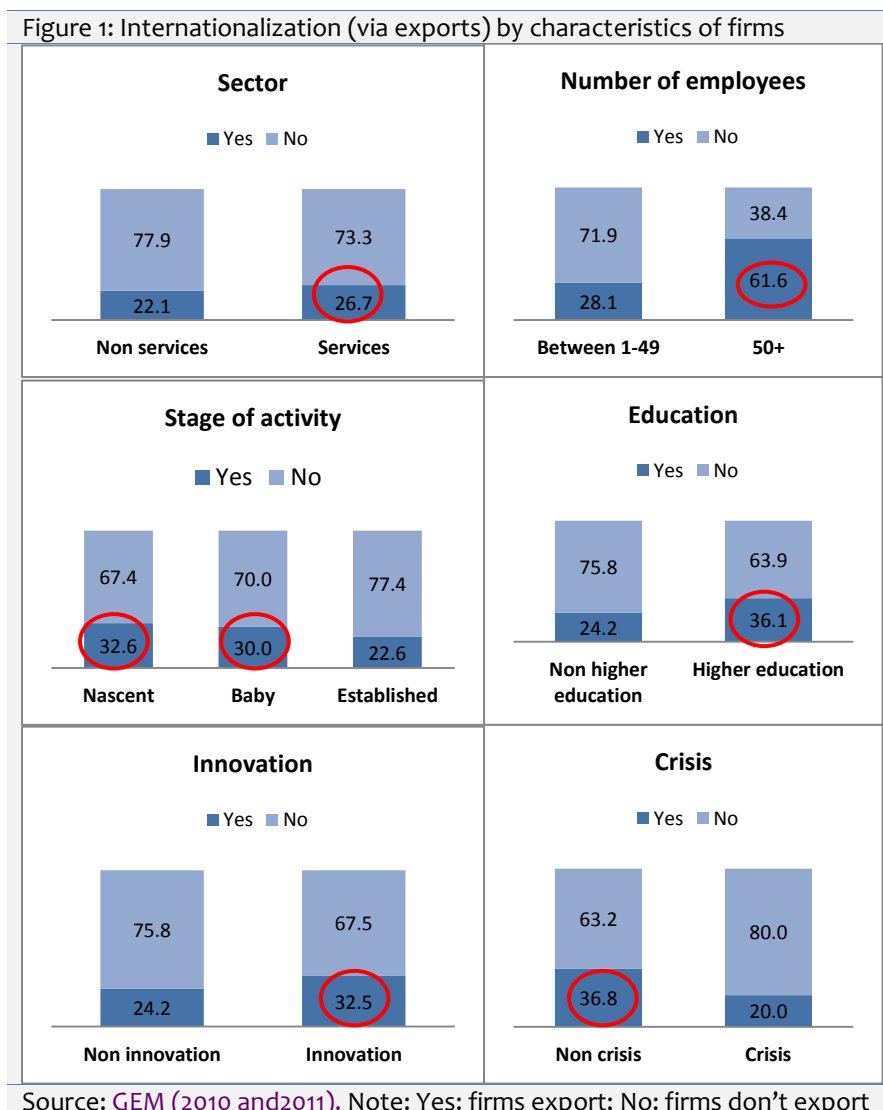| Variables	No		Yes
Export (dependent)	74.0		26.0
Services	38.2		61.8
Number of employees	Between 1-49		50+
	98.5		1.5
	Nascent	Baby	Established
Stage			
	18.6	21.7	59.8
Higher education	85.6		14.4
Innovation	79.0		21.0
Crisis	44.3		55.7

Source: GEM (2010 and 2011)

In a first descriptive analysis of the characteristics of the Spanish exporting firms it can be ascertained, on average, that the firms with more exporting propensity mainly exert their activity in the services sector, have a large or medium size, are in the first stages of their activity, the employees have finished University degrees and have bigger innovative capacity.

In a more detailed view, in figure 1, we can detect that 26.7% of firms in the services sector export, while the export percentage is only 22.1% for the rest of sectors. If we compare the exporting companies by size, in terms of number of employees, more than half the firms with 50 or more employees (61.6%) have sales abroad. The exporting companies with less than 49 employees only reach 28.1%. As far as stage of activity is concerned, the firms in their first stages of development export around 30%, approximately 8 basis points above the established firms.

The employees University degree also seems to be a determining factor in the exporting propensity, because the 36.1% of the firms with high education employees export, in contrast to the 24.2% of exporting companies from the group of firms with employees with lesser education qualifications. Also, the firms with innovative capacity export 32.5% more than the exporting firms from the group with low innovative capacity.

Finally, the percentage of exporting firms is bigger before the crisis that during the crisis (36.8% against 20%, respectively), due to a plummet in international trade in 2010 (IMF WEO, 2010).

Figure 1: Internationalization (via exports) by characteristics of firms

Source: GEM (2010 and2011). Note: Yes: firms export; No: firms don't export

In order to show whether there is a dependency between the internationalization and the exogenous variables used in the analysis, the Chi-square independence test was applied. In all cases, with a significance level of 1%, the null hypothesis is rejected. This means that the internationalization depends statistically and individually upon the variables: service sector, size, stage of activity, education level, innovative capacity and economic crisis.

Table 2: Independent test between the variable internationalization and the rest of variables

Variable	Chi-square	P-value
Services	21.686	0.000 (*)
Number of employees	39.623	0.000 (*)
Stage of activity	84.320	0.000 (*)
Higher education	87.086	0.000 (*)
Innovation	52.536	0.000 (*)
Crisis	298.062	0.000 (*)

Source: GEM (2010and 2011). Note: P-value< 0.01. In all cases, the expected frequency is higher than 5

4.02   BINARY LOGISTIC REGRESSION

To jointly contrast that the aforementioned characteristics have an effect on the variable export, a binary logistic regression is carried out, in which the dependent variable is EXPORT (0=No; 1=Yes), the independent variables are the stage of activity of the firm (1=Nascent; 2=Baby; 3=Established), the education level reached by the individual (0=No University degree; 1=University degree) and innovation (0=It uses technologies more than 5 years old; 1=It uses technologies 5 years old or less) and the control variables are the sector to which the entrepreneur aims the activity of the firm (0=No services; 1=Services) and the number of employees (0=Between 1-49; 1=50+).

In addition to these variables a time component to the analysis has also been incorporated. This aims to compare the situation before the economic crisis and during the crisis. The variable called "crisis" has been generated, that takes value 0 when the year 2006 is considered (pre-crisis) and value 1 when the years 2010 and 2011 are considered (crisis). Note that there are two crisis years to balance the sample size with that of 2006.

Considering the objective of this research is to define the influence of certain internal factors: innovation, stage and education level along with the economic crisis (economic outlook) on the exporting propensity. In this regard, the logistic regression model proposed does not have a predictive intention; it aims to verify the sense and intensity of the relationship between each one of the independent variables and the exporting probability (dependent variable) for Spanish firms.

Additionally, for the definition of the regression model, the "backward procedure" has been used, meaning, the starting point is the maximum model, the one that includes all the explicative variables (namely the independent ones and the control ones).

The results of the regression show that the global adjustment of the model is satisfactory as per the Hosmer and Lemeshow test (the null hypothesis that the predicted data matrix is similar to the observed data). Moreover the main point for our research is that all the parameters are significant to the 1% (the p-value of the variable Stage coefficient meets the 1%) following the Wald test, therefore, all the variables are individually explicative, including the control ones, and show relation to some extent with the variable EXPORT.

In the model it could ascertain that the variable University degree is positively related to the exporting probability, that is, an employee education level fosters the exporting propensity of Spanish firms. The empiric study from Alonso and Donoso (1994) quoted by Del Río and Varela (2006), confirm that there is a positive relationship between the executives education and the exporting propensity of companies. This fact validates the first research hypothesis.

The coefficient of the innovation variable also presents a highly significant and positive sign. Following this result, we accept the hypothesis of a positive influence of the innovative capacity on the exporting propensity (second research hypothesis).
The third research hypothesis is also valid for the sample used. The negative and significant sign of the coefficient for the variable Stage informs the inverse relationship between the company stage and its

exporting propensity. That is, the probability of exporting is higher when the companies are in their first's months of activity (0-42 months). They are probably started up as exporting companies.

The economic crisis variable, included in the model to define how the economic outlook affects the exporting propensity, is also considered a significant variable with a negative influence on the exporting proclivity of Spanish businessmen. From this result we can deduct that a situation of global economic crisis reduces the likelihood of foreign sales for Spanish firms.

Finally, the two control variables used in the model, company size and sector, also have an individual and positive influence on the exporting propensity of Spanish firms. Following Fernandez and Nieto (2005)"most of the studies carried out confirm this fact".

Table 3: Results of the binary logistic regression

Independent variables	Coefficient	P-value
Higher education	0.256	0.003 (*)
Innovation	0.308	0.000 (*)
Stage	-0.156	0.010 (*)
Crisis	-0.680	0.000 (*)
Services	0.180	0.009 (*)
Number of employees	1.539	0.000 (*)
Constant	-0.463	0.007 (*)

Source: GEM 2006, 2010 and 2011

Note 1: (*) P-value ≤ 0.01. Note 2: There is no problem of multicollinarity because the Condition Numbers are lower than 30 (the highest value is 14.154)

5.0   CONCLUSIONS AND LIMITATIONS OF THE RESEARCH

The theoretical and empirical literature has explained the internationalization via exports from multiple points of view, although as per Puljeva and Widén (2007) the causes may be divided into internal factors and external factors. This study has used the own company strengths criteria bearing in mind two scenarios for the economic outlook: one of growth and another of crisis.

Among the internal determinant factors, this research has selected those that exert –following the empiric literature–a greater effect on the internationalization of companies, but that are somehow measured in the GEM database. Thus it is likely that in this analysis not all the intrinsic causes that explain the international presence of Spanish firms are considered, but we can state that a substantial part of the internal factors that favor the exports have been considered.

These explaining factors are basically: the employee's education in general, particularly the executives' education (Atabay, 2008); the innovation processes that the company implements (Milesi y Agio, 2008) and the life stage of the company (Iyer, 2010). Also we have included in the analysis as control variables the company's size and the sector. Finally, the time variable has been incorporated in the analysis that represents the two scenarios of the economic outlook mentioned above: growth/recession (Whitley, 1999).

Using the Spain GEM database for the years 2006 (growth or not crisis) and 2010/2011 (crisis), it has been empirically shown that the firms with a higher education level (university), that incorporate new procedures or technologies in their production process and that are in an early stage of activity present a higher exporting probability than the others companies studied. Furthermore, the firm has more than 50 employees and focuses its activity on the service sector. On its part, the economic growth scenario encourages exports while the recession discourages them probably, as a consequence of the economic situation of the Spanish international partners.

In the end, authors as Autio and Acs (2010), Edelmen and Yli-Renko (2010), McDougall et al (1994), and Woolley and Rottner (2008) point out that the early entrepreneurs, understood as those that aim at foreign markets in the first stages of the companies life, are influenced by that environment. In fact, they show that for these kinds of nascent companies, the environment impact is especially important. It is not unusual; therefore, that if there is a greater proportion of young companies that export compared to the established ones, in a recession period like the current one the exports volume would be notably affected.

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APPRENDIX

Hosmer andLemeshow Test

Step	Chi-square	df	Sig.
1	11,205	8	0,190