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**MBA STUDENTS AND THEIR MOTIVATION TO STAR-UP THEIR OWN
ENTERPRISES. AN INTERNATIONAL EXPERIENCE¹***

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Abstract

The postgraduate studies give the opportunities to the graduates to develop skills and abilities to discover new business opportunities and to star-up their own business. In this paper we analyse the impact of postgraduate studies on the entrepreneurial activity developed by MBA graduates. We find empirical support for the relevant role played by the fact of belonging to a entrepreneurial culture family, individual personality characteristics (non-risk averse, creativity, taking initiative, teamwork skills). The paper also analyse the marginal gender effects that moderate the entrepreneurial activity intention. For this research

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a survey has been built ad hoc for MBA international students of three Public Spanish Universities' Master on-line on Business Administration programme

Key words: Entrepreneurship, MBA Students, Education, Gender

1. INTRODUCTION

According to the *Global Entrepreneurship Monitor, Special Report* (2009) Entrepreneurship education can be defined, in broad terms, as the build of knowledge and skills "about" of "for the purpose" of entrepreneurs generally, as part of recognized education programs at primary, secondary or tertiary level education (under graduate and postgraduate levels). So, the purpose of entrepreneurship training is very specific, while the purpose of entrepreneurship education can be much broader⁴.

In relation to education on entrepreneurial initiatives, saying that concern both at schools and at universities, is increasing. U.S. is the country that takes the initiative in entrepreneurship education (Katz, 2003), however United Kingdom includes development programs on entrepreneurship as one of the four strategic objectives of their universities. It is remarkable the progress in this regard in other countries of Europe, rest of America, Asia and Africa (Gürol Ansal, 2006).

The academic research is not *alien* to various aspects such as i) *what does work better training approach or educational approach?*⁵; ii) *what to teach?*⁶; iii) *where to teach?*⁷, and iv) *what is*

⁴.- "Global Entrepreneurship Monitor (GEM) model suggests that the effect of enterprise training on allocation of effort into entrepreneurial activity (as opposed to other economic activity, such as being an employee) will be fully mediated by its influence on opportunity perception, on the one hand, and entrepreneurial skills perception, on the other. This justifies a study of the effect of enterprise training on opportunity and skills perception".

⁵.- "Learning by doing" is more effective for developing entrepreneurial skills and attitudes than traditional methods like lectures (*European Commission Report*, 2008; Walter and Dohse, 2009); "Learning by learning" that is that experimental; learning approach works better (Rasmussen and Sorhein, 2005; Raffo *et al.*, 2002). Masters' students apply/receive both methods.

⁶.- There are ten desired topics for achieving a managing fast growth: business concerns such as selling, financing growth, managing cash flow and hiring and training employees. These ten topics help people to recognize opportunities and think creatively and enable them to build leadership skills and confidence, and to promote innovation and self-employment (Sexton, 1997 and the *European Commission Report*, 2008). A general MBA programme includes these different knowledge areas.

the impact of education on the professional activities of former students (Mwasalwiba, 2010 among others).

Focusing on university education, particularly in postgraduate programme, it is seen the greater the presence of programs that train students to carry out their own business. It is demonstrated that universities graduates have taken entrepreneurship courses are more likely to select careers in entrepreneurship, work in small business and develop patented inventions or innovative processes, services or products (Honig (2004), Matlay (2008), *Small Business Administrations Office of Advocacy, 2009* and Levi, Hart and Anyadike-Danes (2009), among others).

Along with this assertion, it is interesting to contrast if in this level of education, to assess its impact on the attitude and intention in the alumni to start up their own enterprise (Peterman and Kennedy, 2003 and Souitaris *et al.*, 2007).

In this paper we assess the impact of postgraduate education in the entrepreneurial initiatives in the origin's countries of the graduates of a Master *on-line* Business Administration Programme launched by three Spanish Public Universities. The paper also analyses: i) the impact not only on the attitude and intention to develop the entrepreneurial activity by those graduates, but also actually carry it out, and simultaneously ii) the study analyses gender issues.

The paper is structured as follows. In section 2 we present previous research and the hypotheses postulated object of our study. Section 3 presents the study design and methods. Section 4 presents the main results. And, finally, in section 5 we discuss the main conclusions and we present the academic and economic implications of the study.

⁷.- Entrepreneurship is multidisciplinary, so the training and education requires the knowledge of business skills. According to the *European Commission Report* (2008) the appropriate place to learn these skills comes from technical and creative disciplines.

2. PREVIOUS RESEARCH AND HYPOTHESIS

According to Levie *et al.*, (2009) “individuals may receive education and training at several points in their lives, such as at school, university, or after formal education, and it may take the form of traditional learning or experiential immersion in the phenomenon, through a placement, for example”.

According to the academic level where the courses were received, we can classify previous literature in the following three groups:

i) *High school studies:* Wilson, Kickul, and Marlino (2007) intent to reach to knowledge of the interactions of gender with entrepreneurial self-efficacy and entrepreneurial career intentions. Athayde (2009) measures the impact of entrepreneurship programs among young people.

ii) *Undergraduate Studies:* About courses, Vesper and Gartner (1997) analyze ranked university entrepreneurship programs. They explored how universities determined what courses constituted a program in entrepreneurship and how they determined the criteria that impact an entrepreneurship program's quality. Peterman and Kennedy (2003) and Souitaris, Zerbinati and Al-Laham (2007) test the effect of entrepreneurship programmes on the entrepreneurial attitude and intentions of the students. Gürol and Atsan (2006) explore the entrepreneurship profile of students and make an evaluation of their entrepreneurship orientation by comparing them with non-entrepreneurially inclined students. Levie, Hart, and Anyadike-Danes (2009) analyze the effect of enterprise training on opportunity perception and entrepreneurial skills perception of trainees.

iii) *Masters Postgraduates Studies:*

It is shown that graduates of business schools benefited from entrepreneurship courses have a higher propensity to become entrepreneurs (Vesper and Gartner, 1996).

Wright, Piva, Mosey and Lockett (2009) examine the current role of business schools in academic entrepreneurship, specially the contribution of business schools to the transfers of knowledge to enable academic entrepreneurship⁸. Being able to participate in a successful entrepreneurship increases the demand for quality of MBA programmes (Callan and Warshaw, 1995). However when analysing the impact of the success programs (failure) on corporate incentive after the completion of an MBA, should be taken into consideration prior business experience demonstrated by the student. So success could be explained, at least in part, by the knowledge gained by past experience (Krueger and Brazeal, 1994, Matlay, 2008).

2.1. Gender differences⁹:

One of the most complete studies is the work published by Louw, van Eeden, Bosh and Venter (2003). Among the main objectives proposed by the authors is pr studying the traits of students establish whether these traits are interrelated, and to determine the extent of the impact that demographic variables have on these entrepreneurial traits. The more developed entrepreneurial traits observed included: "Competing against self-imposed standards", "Self-confidence" and "Management of failure." Relationships between significative from the statistical point of view, besides the entrepreneurial traits of students and higher education institution attended, is gender, race and age of the students.

Motivational differences between female and male with MBA's studies (who are similar in terms of business education) has been studies by DeMartino and Barbato (2003).

⁸ .- "Five cases out of eight suggested that MBA students may provide effective alternatives to the involvement of academic faculty. ..The product of MBA programs could also be used directly in academic entrepreneurship. For instance, one university reported that the MBA student database has been used to identify interim managers for two spin-out companies."

⁹ .- "The top 10 MBA programmes in this year's Financial Times global MBA rankings have an average female enrolment of 34 per cent. This is a striking anomaly: most law and medical schools and undergraduate business programmes enrol men and women in about equal numbers" (Elizabeth Kenal). <http://discussions.ft.com/bused/forums/soapboxforum/gender-issues-should-be-integral-to-mba-courses>

Even among women who have chosen a management career path and are actively pursuing their MBA degrees, these differences in entrepreneurial self-efficacy persist. And yet, they see that entrepreneurship education may reduce these gender differences for those women with entrepreneurial aspirations. For the authors, entrepreneurship education can be positioned as an equalizer, possibly reducing the limiting effects of low self-efficacy need ultimately increasing the chances for successful venture creation by women (Pittaway, *et al.*, 2007).

In Spain there are not many studies that analyse the impact of postgraduate's education programmes and even less gender studies. However, it is worth mentioning the work of Veciana, Aponte and Urbano (2005) who presented an empirical study aimed at assessing and comparing the attitudes of university students towards entrepreneurship and enterprise formation. They almost analyze gender intentions to create a new firm. Coduras *et al.*, (2008) examines the relationship between support university entrepreneurship and the level of entrepreneurship activity.

For all these reasons, the purpose of this research is to give some information about:

- a) How an international MBA's programme give the opportunities to the graduates to develop skills and abilities' to discover new business opportunities and to start-up their own business in their origin countries, in most cases were located outside Europe.
- b) On the other hand, the authors also want to analyse some gender consequences.

2.2 Hypotheses

Based on the literature describe in the previous part and on all those research works summarized in Table 1 (Appendix 1), we hypothesize the following four assessments.

H1: Individuals are more likely to recognize their entrepreneurial intention if they have undertaken entrepreneur training or education at any level of education.

H1a: This likelihood will be affected by gender.

H2: Individuals are more likely to recognize their entrepreneurial intention if they belong to an entrepreneur family.

H2a: This likelihood will be affected by gender

H3: Individuals are more likely to recognize their entrepreneurial intention if they believe they have the entrepreneurial skills (non-risk averse, creativity, leadership, take initiatives, team works skills) to do it.

H3a: This likelihood will be affected by gender

H4: Individuals are more likely to recognize their entrepreneurial intention if they are involved in a dependency context (they have children).

I

H4a: This likelihood will be affected by gender

3. STUDY DESIGN AND METHODS

3.1 Sample Description

In May of 2010 a questionnaire was sent to the alumni of an *MBA and Master in Financial analysis on-line* from a well-known three Spanish Public Universities¹⁰. The programme focuses on traditional part-time MBA. The questionnaire included 44 questions that requested information related to personal profile (age, gender, origin's country, marriage and dependent status), current employment (sector and position of the firm), previous studies) and their own perception with respect to his/her *risk aversion, creativity, leadership skills, carry out initiatives and teamwork skills*.

The entrepreneurship profile were indentified in the following ways (DeMartino & Barbato, 2003): i) the intention of setting up his/her own business once finished the MBA programme: ii) if the answer was YES, if he/her finally set up his/her own business: iii) if hi/her is self-employed or employed currently; iv) His/her own perception with respect to: *risk aversion, creativity, leadership skills, carry out initiatives and teamwork skills*.

The survey was administrated to:the alumni population of 930 and there were received, until September, 30th, 2010, 213 answers, which represents a 23% response rate. This program began in October 2002. Since it is an on-line programme, it was followed by students from 30 different countries. The study was focused from the first edition (October 2002) until the last finished one (March 2008).

The final sample is composed of 213 students, 75% belonging to the MBA programme and 25% to Master in Financial Analysis. The rest of the characteristics in the sample are briefly described:

- The origin country where the final 213 students come from is spread as follows: 70.89% are coming from Southmerica, 24.41% are European students, being 19.72% spaniards; 4.69% of students come from Africa, and the rest China.
- By gender, we find 23.70% of femail and 76.30% of male
- The average age is 39 years old (median 38 years old), being the youngest student 24 and the oldest student 63 years old.

¹⁰.- With the support or a private partnership, a well-known Spanish Editorial with an important presence in Latin America.

- 64.32% of the students have children, so they have a dependency activity to add to their lives. The average number of children among them is 1.8 (median 2 children), being 6 children the highest.
- 72.25% of postgraduates programmes are married, 24.88 are single, and the rest of them in different situations.
- 19.25% if currently studying.
- The average number of years since the completion of their undergraduate degree (B.A./B. Sc.) is 16.78 years.
- The average number of years passed between their undergraduate degree (B.A./B.Sc.) and the beginning on-line MBA programme is 17 years.
- 47.89% of the students have received specific entrepreneurship training along their lives, and 24.41% of this group have received it at university, postgraduate programme or in their professional career.
- 58.45% of the students have a family member who can be entrepreneur, but only 30.54% students considers they come from an entrepreneurial family.
- The background studies of the MBA students is described as follows: 32.39% are graduated on technical studies or Engineering; 51.64% are graduated at Business Administration, Economics, Accounting or Marketing degrees; The rest of student have degrees on Law, Science, Humanities or Communication.
- The 33.80% of the MBA students in the sample had the intention to set up their own business when they finished the MBA programme (72 students). Finally, 46.75% of them set up their own business.

3.2. Variable Description

As stated above the variables used in this article come from the original data obtained from the survey made *ad hoc* for this research. According to the purpose of this study and the hypotheses we want to test, we defined different type of variables reported in Table 2.

Table 2: Variable definition

DEPENDENT VARIABLES:

Variable	Definition
ENT_ACT	Entrepreneurs Activity: Dummy variable that takes value 1 if the graduate is currently developing (or developed after finishing the programme) an Entrepreneurial activity. It takes the value 0 if since the end of the MBA has worked or works for someone else.
ENT_ACT_INTEN	Entrepreneurs Activity Intention: Dummy variable that takes the value 1 if the graduate had the intention to develop an entrepreneurial activity, self-employed persons, after finishing the master, whether he did or not later, and 0, in the other cases.
EXPLANATORY VARIABLES:	
TRAINING	Training/education: Dummy variable that take the value of 1 if the MBA student has received any specific training/education on entrepreneurship in his/her lifetime, and 0 otherwise.
LEVEL_EDUC	Level of entrepreneurial education. Dummy variable that take the value of 1 if the training/education on entrepreneurship has been received at university or later, and 0 otherwise.
FAM_ENT	Family Entrepreneur: Dummy that takes the value 1 when the former student comes from an entrepreneurial family, and 0 otherwise
RISK_TYPE	Personal risk averse: Linkert scale from 1 (risk averse) to 5 non-risk averse
CREATIVITY	Personal creativity. Linkert scale from not creative (1) to very creative (5).
LEADER	Leadership skills. Linkert scale from no skills (1) to many skills (5).
INITIATIVE	Carry out initiatives. Linkert scale variable from 1 (not entrepreneurial) to very entrepreneurial (5).
TEAMWORK	Teamwork skills. Linkert scale variable from 1 (no skills) to many skills

	(5).
GENDER	Gender. Dummy variable that takes number 1 when the student is a female and takes the value 0 when he is a male.
DEPENDENCY	Dependency: Dummy variable that takes value 1 if individual has dependent children, 0 otherwise.
YEARS_DEGMBA	Number of years since the graduate started the MBA programme and finished the undergraduate studies.
ENG_STUD	Previous Education Engineering. Dummy variable that takes the value 1 if the previous studies are technical studies or engineering, and 0 otherwise.
BUS_STUD	Previous Education Business Administration. Dummy variable that takes the value 1 if the previous studies are business administration, economics, accounting or marketing, and 0 otherwise.
AM_NAT	American Nationality: Dummy variable. It takes number 1 if the graduate came from USA and Latin America, and 0 otherwise
AFR_NAT	African nationality. Dummy variable. It takes number 1 if the graduate came from Africa, and 0 otherwise
EUR_NAT	European Nationality: Dummy variable. It takes number 1 if the graduate came from Europe, and 0 otherwise
AGE	Age

The statistical description of most of these variables can be found in Sample Description (3.1)

3.3. METHODOLOGY

The model designed to test all the hypothesis of the study is analyzed following the maximum likelihood estimation, probit models. This is the most appropriate given that the variables we want to explain are dicotomic variables. We distinguish two models: one for entrepreneurial activity intention and the second one for real entrepreneurial activity.

The first one is more important for this article goal, so this will be the one we develop with more detail. The second one, will be consider in the results part.

So, we want to study which is the final impact of training/educación, personal characteristics, entrepreneurial family and dependency context in the way in which individuals perceived their intention to start up their own company. But, as we have postulated in the hypotheses, we also consider that the gender will have a moderator impact of this explanatory variables on the entrepreneurial intention. So, the model is described in the following way.

(1)

$$ENT_ACT_INT_{in} = \alpha_0 + \sum_{j=1}^J \beta_j EV_{ij} + \sum_{m=1}^M \lambda_m CV_{im} + \varepsilon_i$$

Where,

ENT_ ACT_ INTENT_n is the dependent variable to explain that captures the entrepreneurial activity intention.

EV_{ij}: Explanatory variables captures all those variables that under our hypotheses will explain the entrepreneurial activity intention as specific training/education on entrepreneurship; personal characteristics associated to entrepreneurs as risk aversion,

creativity, be initiative, leadership and teamwork skills; belonging to an entrepreneur family and being involved in a dependency context.

CV_m: Control variables that can affect to the entrepreneurial activity intention as gender, age, years between undergraduate studies and MBA studies, type of background studies, country of residence previos to the MBA studies.

For the second case, the probit model proposed is the following one

$$(2) \quad ENT_ACT_{in} = \alpha_0 + \beta_1 ENT_ACT_IMT_{ij} + \sum_{j=1}^J \beta_j EV_{ij} + \sum_{m=1}^M \lambda_m CV_{im} + \varepsilon_i$$

Where ENT_ACT (entrepreneurial activity) is a function of Entrepreneurial activiy intention and the rest of variables described for the first model.

In this case, it is important to remark that in this part of results we will also report the main motivation explained by the MBA students that explain that finally they decided to start-up their own business.

4. RESULTS

4.1 Entrepreneurial activity intention

Table 3 captures all the results obtained from the econometric análisis shown in the previous part to test all hypotheses. Column (1) reports the general model captured by equation (1) and it will help us to test hypothesis H1-H4. On the other hand, columns (2) to

(6) show the cross effect impact of gender on the entrepreneurial activity intention, but moderating the explanatory variables as it is postulated by hypothesis H1a-H4a. Respect to these hypotheses, Table 3 only reports those statistically significant models, so not all the hypotheses moderated by gender are shown, only the significative ones.

Table 3: Entrepreneurial activity intention

Variables	(1) General model (H1-h4)	(2) H2a	(3) H3a-1	(4) H3a-2	(5) H3a-4	(6) H3a-5	
TRAINING	.0883 (0.736)	.1024 (0.698)	.087 (0.737)	.0842 (0.748)	.077 (0.767)	.083 (0.750)	
LEVEL_EDUC	-.294 (0.330)	-.339 (0.267)	-.279 (0.354)	-.293 (0.332)	-.286 (0.343)	-.287 (0.342)	
FAM_ENT	.4122** (0.041)	.284 (0.184)	.409** (0.042)	.408** (0.043)	.408** (0.043)	.413** (0.040)	
GENDER*FAM_ENT		.622** (0.048)					
RISK_TYPE	.3149** (0.013)	.319** (0.012)	.280** (0.024)	.313** (0.013)	.314** (0.013)	.316** (0.013)	
GENDER*RISK_TYPE			.133* (0.075)				
CREATIVITY	.2174 (0.111)	.221* (0.106)	.217 (0.111)	.196 (0.150)	.219* (0.108)	.219* (0.109)	
GENDER*CREATIV.				.106* (0.086)			
LEADER	.2168	.172	.210	.215	.201	.205	

	(0.252)	(0.358)	(0.265)	(0.254)	(0.283)	(0.277)	
INITIATIVE	-.266 (0.176)	-.267 (0.175)	-.263 (0.181)	-.271 (0.168)	-.285 (0.149)	-.272 (0.167)	
GENDER*INITIATIV.					.097* (0.088)		
TEAMWORK	-.117 (0.480)	-.104 (0.531)	-.113 (0.496)	-.117 (0.479)	-.124 (0.456)	-.137 (0.412)	
GENDER*TEAMW.						.0927* (0.092)	
GENDER	.429* (0.087)						
DEPENDENCY	.1225 (0.608)	.1471 (0.542)	.120 (0.614)	.119 (0.618)	.126 (0.596)	.127 (0.593)	
YEARS_DEGMBA	.004 (0.706)	.0063 (0.554)	.003 (0.720)	.0038 (0.714)	.004 (0.683)	.004 (0.684)	
ENG_STUD	.174 (0.619)	.207 (0.557)	.149 (0.668)	.164 (0.637)	.167 (0.632)	.173 (0.620)	
BUS_STUD	.329 (0.329)	.351 (0.304)	.294 (0.383)	.315 (0.351)	.314 (0.353)	.326 (0.335)	
AM_NAT	.253 (0.324)	.254 (0.324)	.260 (0.311)	.259 (0.313)	.265 (0.303)	.251 (0.329)	
AFR_NAT	.262 (0.625)	.248 (0.647)	.280 (0.602)	.271 (0.614)	.274 (0.610)	.248 (0.643)	
AGE	-.008 (0.549)	-.008 (0.554)	-.008 (0.563)	-.008 (0.539)	-.008 (0.532)	-.008 (0.540)	
CONST.	-2.235** (0.045)	-2.119* (0.054)	-2.098 (0.056)	-2.09* (0.057)	-2.043* (0.061)	-2.07* (0.058)	

Nº observaciones	198	198	198	198	198	198
Chi² (p-value)	23.70	24.72	23.94	23.71	23.66	23.61
	(0.09)	(0.075)	(0.09)	(0.096)	(0.097)	(0.099)
Pseudo R²	0.09	0.1	0.095	0.094	0.094	0.094

Column (1) shows that specific training/education on entrepreneurship along lifetime (TRAINING)) does not have a positive impact on entrepreneurial intention developed by MBA students. So, we can not accept hypothesis 1. Neither if this specific training/education has been received after university period. Hypothesis 1a is also rejected, because the model obtained once we cross this initial effect with gender is not significant.

On the other hand, results in Table 3 gives empirical evidence to support hypothesis 2, given that we find a positive relationship in variable FAM_EMT. So, we can conclude that individuals are more likely to develop their entrepreneurial activity intention if they belong to an entrepreneur family. Besides this result, it is very important to analyze the effect of gender in this relationship. Column (2) shows this cross effect of gender with entrepreneur family. As it can be seen, the individual effect disappears, but it seems that female gender explain this positive effect of having entrepreneurial intention if she is a female student with a family with entrepreneurial experience. So we find empirical support for hypothesis 2a.

Respect to personality characteristic effects on entrepreneurial activity intention we have different empirical results (Hypothesis 3). Analyzing Column (1) for the general model, we can see that only those non-risk averse individuals (RISK_TYPE) are more likely to develop their entrepreneurial intention. The rest of personality variables seem not to be significant in this case. But, once we cross the effect of gender with each of these personality characteristics, we show how gender has a moderate effect on them. Particularly, Columns (3) to (6) capture these significant effects. Column (3) shows how female non-risk averse

individuals are more likely to develop an entrepreneurial intention (EI), even higher than the general case, so this supports hypothesis 3a.

Creativity skills (CREATIVITY) seems not to be significant in the general model. But, once we cross it with gender (Column 4), the marginal effect of female creativity seems to be positively significant. So, it means that female with creativity skills are more likely to develop entrepreneurial intention, supporting hypothesis 3a).

Leadership skills (LEADER) is the unique variable of the model that do not affect the likelihood of developing a significant effect on entrepreneurial intention neither alone nor crossed with the gender variable.

Respect to the variable associated to an individual that takes the initiative to make decisions (INITIATIVE), it is not significant in the general model, but once we cross it with gender, it can be seen the positive marginal effect of female (Column 5). So we can conclude that female individuals with initiative to make decision are more likely to develop entrepreneurial activity intentions (support Hypothesis 3a).

Finally, the personality characteristic associated to teamwork, that it is not significant in the general model, becomes marginally significant once we cross it with gender (Column 6). This means that female individuals with teamwork skills are more likely to develop entrepreneurial activity intentions. So, again we find support for Hypothesis 3a.

According to Hypothesis 4, we do not find empirical evidence to support it. So, it seems that it is not relevant as we expected, neither when we cross it with gender variable.

Although the results have not been shown in the table, some other different econometric analysis have been made to test if the cross effect of the country origin could moderate

the effect of explanatory variables on entrepreneurial activity intention. These results are not significant in any case.

4.2 Entrepreneurial activity

The probit model proposed for the real entrepreneurial activity in equation (2) does not have a significant effect so we do not show the empirical results derived from them. One of the reasons for this situation could be that the correlation coefficient is 0.36 but statistically significant ($p < 0.05$).

For this reason, we consider that in this case, it could be more representative to show from a descriptive point of view the direct reasons that the MBA students have to start-up their own businesses. This is a question in the survey, so Table 4 reports the information about which are the main factors that motivate MBA students to start up their own companies.

Table 4: Motivational factor to start-up their own company

Motivational factors	% of students that choose this factor as the relevant one.	# obs.
Entrepreneurial vocation (Career flexibility)	9.86 %	21 obs
Business opportunities	8.45%	18 obs
Economic Crisis	1.88%	4 obs
Unemployment	1.41%	3 obs
More flexibility for Family	0.47%	1 obs

(family-friendly policies)		
Personal growth or advancement	5.63%	12 obs
Creating wealth	2.82%	6 obs
No other alternatives (necessity)	0.94%	2 obs
Spouse/co-career employment issues	0.94%	2 obs

Table 4 reports that the main reason why MBA students decide to start-up their own businesses is based on entrepreneurial vocation (career flexibility) and to discover business opportunities. These results are coherent with the other ones for entrepreneurial activity intention.

Specific training/education on entrepreneurship

Table 5 shows the perception of MBA students about the degree to what the training or education on entrepreneurship received at different levels have contributed to their real entrepreneurial activity (start-up their own companies). It is classified in four levels (Primary School, High School or Technical School, University and MBA programme). For each of them, a Linkert scale is describe from 1 (none contribution) to 5 (very much contribution). Table 5 shows the percentage for each level.

Table 5: Perception about degree of training/education on entrepreneurship and start-up own business.

Educational levels	Linkert scale (1-5)				
	1 (none)	2	3	4	5(very

					much)
Primary School	29%	36%	11%	7%	18%
High School/ Technical School	10%	17%	24%	24%	24%
University (Degree)	-	3%	6%	41%	50%
<i>On-line</i> MBA	-	3%	7%	34%	55%

Given the results in Table 5, we can see how important is the education/training received by on-line MBA students on their entrepreneurial skills to start-up their own companies. So, many efforts should be done by the governments and educational institutions to promote entrepreneurial activity in the economies. Also, it seems relevant the training obtained at university level. But, the decisions made by the students to study a MBA programme help them to feel self-confident with their entrepreneurial intention.

5. CONCLUSIONS AND FUTURE RESEARCH

The purpose of this paper is to analyze the motivation of MBA students to start-up their own companies for an international sample. We have considered students from all over the world given that the MBA considered was an on-line programme. Also, it is very interesting for us, given the results found for United States and United Kingdom, to analyze the moderate effect that gender can cause in this relationship.

The sample was built through a questionnaire sent to the total number of MBA students that since 2002 started to study the *on line* MBA programme until 2010. The respondent ratio was a 23% (213 answers from a population of 930).

Respect to the effects on entrepreneurial activity intention (EI) and start-up their own company, results show the following conclusions:

- Specific training/education on entrepreneurship seems not to have a significant impact on EI. But, once we analyze the perception on starting-up their own companies, they recognize the relevant and positive impact of training/education received at university and mainly at the online MBA programme on their final decision of starting-up their own company. So, one of the lesson we can learn from this research is that many efforts should be done by the governments and educational institutions to promote entrepreneurial activity, given the relevance it has in economic growth even now that we are in a period of economic crisis and unemployment. All the public politics in this sense will help to wake up our economies.
- It seems very relevant the family entrepreneur culture to get MBA students to make the decision of starting-up their own company. Even, when the MBA student is female, this effect is reinforced. So, this could be a signal of the professionalization intention of family firms, that try to get family members trained and educated with high level of educational studies like MBA programmes.
- Respect to the impact of personality characteristics on entrepreneurial activity intention, results show that they are very relevant. In this sense, results show that in general the most important characteristic is non-risk averse. But, once gender is taken into account, empirical evidence is found to support that other personality characteristics associated with females can explain the entrepreneurial intention. The results show that female more creative, more taking initiative individuals, non-risk averse and with teamwork skills are more likely to develop entrepreneurial intention.
- On the other hand, the results do not perform significant effects for dependency context.

According to the fact that students start-up their own businesses, the results show that the main factors that motivate this situation are the entrepreneurial vocation (career flexibility) and the business opportunities. These results seem to tell us the relevance of education

given to the students trying to affect on individuals vocation, so tyhe necessity of promoting entrepreneurship educations, but also the necessity that real economic activity appears, so the business opportunities appear and can be carried out by potential entrepreneurs that can be found in our countries.

This research comes to cover the lack of research evaluating policies based on education at different levels and its impact on entrepreneurial activity intention and real activity.

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Table 1: Previous studies in the literature (in chronological order)

<i>Author (Date)</i>	<i>Data used in the Study</i>	<i>Location of the Study</i>	<i>Summary</i>
Vesper and Gartner (1997)			The authors examine how universities design program entrepreneurial wing formation. The article concludes with a discussion of the criteria in education pilot course for the Malcolm Baldrige National Quality Award, what may be considered useful for measuring progress in entrepreneurship education.
Low, van Eeden, Bosh & Venter (2003)	Sampling method with 1,215 undergraduate selected tertiary institutions: University of Port Elizabeth, the Port Elizabeth Technician, and Vista University.	Republic of South Africa	The primary objectives of this article are to report on the levels of students' entrepreneurial traits, to establish whether these traits are interrelated, and to determine the extent of the impact that demographic variables have on these entrepreneurial traits. The best developed entrepreneurial traits observed included: "Competing against self-imposed standards", "Self-confidence" and "Dealing with Failure". Statistically significant relationships were also identified between the entrepreneurial traits of students and the tertiary institution attended, and students' gender, race and age.
McLarty (2003)	Interviews with 39 graduate business owners within 5 years of start-up.	England (East Anglia)	The article focuses on a detailed study into entrepreneurial activities of graduates and examines issues impacting on their business. One of the main conclusions was that the students were poorly prepared for business activity in marketing and finance.
Rosa (2003)	2 surveys of graduate career aspirations of 5,375 students drawn from 10 Universities and 594 students drawn from Scottish Institutions	England and Scotland	The article re-examines and compares data from surveys conducted in the 1980s on the entrepreneurial careers aspirations of graduates. The data show and unimaginative businesses. The study shows that the type of business started is significantly determined by the nature of the course taken.
Luthje and Franke (2003)	Survey of 512 students or MIT School of Engineering	USA	The study uses covariance structure model to test and identify the causes of entrepreneurial intent among engineering students. The study shows that personality traits have a strong impact on the attitude to self-employment and are linked to intentions to start a new venture. Entrepreneurial intent was also viewed to be directly affected by perceived barriers and support factors.
Peterman & Kennedy,	Survey 117 students undertaking Young Achievement Australia, using	Australia	The authors examine the effect of participation in an enterprise education program on perception about the desire and possible feasibility of starting a business. It measured changes in perceptions of students enrolled in the Young Achievement Australia enterprise program using a pre-test and post-test control group. After being involved in the

(2003)	a control group		programme students reported significantly higher perception (desirability and feasibility) when compared to the control group.
DeMartino & Barbato (2003)	1,763 alumni graduating from a <i>Business School</i> after year 1978.	USA	They analyses the motivational differences between female and male MBA entrepreneurs (who are similar in terms of business education, educational credential, etc.). They used a logistic regression to measure the relationship between career motivations and gender. The main conclusions were that women entrepreneurs preferred career that gave them flexibility and allowed them to balance career and family obligations meanwhile male entrepreneur are motivated by careers that would allow creating wealth. Both differences become higher when comparisons are between married women and male with dependent children.
Wang and Wond (2004)	5,326 students undergraduates technical fields from National university of Singapore	Singapore	The authors examine what determine the attitudes of undergraduates students to entrepreneurship. Three factors were fund to have an impact gender, family experience with business and educational level. Inadequate business knowledge was found to present a key barrier to students in engineering and science who were interested in entrepreneurial activity. Used a multivariate regression model to explore seven hypotheses using hierarchical regression. The paper fond that undergraduate entrepreneurial interests are high, mirroring Western countries, but preparedness to take risk and lack of business knowledge were found to be key barriers.
Gürol & Atsan (2006)	Random sample of 400 students of fourth year university from two Turkish universities.	Turkey	The question “what are you planning to do after graduation?” was asked to students in order to discriminate between those who are entrepreneurially inclined and those who are not. Respondents who have a response saying that “I’m planning to form my own business venture” are accepted as potential entrepreneurs. Then, the entrepreneurial traits of these students are subjected to a comparative analysis with other students who do not plan to start their own businesses, and thus are not included in the group of potential entrepreneurs. In short, a 40-item questionnaire is administered to students, with questions related to demographic variables, entrepreneurial inclination, and six entrepreneurial traits above cited. The results of the t-tests showed that, except for tolerance for ambiguity and self-confidence, all entrepreneurial traits are found to be higher in entrepreneurially inclined students, as compared to entrepreneurially non-inclined students. That is, these students are found to have higher risk taking propensity, internal locus of control, higher need for achievement and higher innovativeness
Veciana, Aponte &	University students in Catalonia (Spain) and Puerto Rico, using a sample of 837	Spain & Puerto Rico	The authors present an empirical study aims at assessing and comparing the attitudes towards the entrepreneurship and enterprise training between these two groups of students. Results reveal a positive entrepreneur’s image. Both samples have a favourable perception of desirability of new venture creation, although

Urbano (2005)	and 435 students, respectively.		the perception of feasibility is by far not so positive and only a small percentage has the firm intention to create a new company.
Souitaris, Zerbinati & Al-Laham (2007)	232 students, 154 in London and 78 in Grenoble. Control group: 220 students, 148 in London and 72 in Grenoble.	UK (London) and France (Grenoble)	The authors test the effect of entrepreneurship programmes on the entrepreneurial attitude and intentions of science and engineering students. Among the main results the article shows that the programmes raise some attitudes and the overall entrepreneurial intention and the inspirations is the programmes' most influential benefit.
Wilson, Kickul, & Marlino (2007)			Intent to reach to knowledge of the interactions of gender with entrepreneurial self-efficacy and entrepreneurial career intentions. The authors <u>found a strong gender</u> effects on both entrepreneurial self-efficacy and intentions at the middle/high school level, supporting earlier research on self-efficacy differences in those career areas that seem to reflect gender-based role expectations. While they did not measure gender stereotyping for different career paths, the results, taken together with previous research on self-efficacy and career intentions, suggest that entrepreneurship may still be perceived as a "male" field, and that young women may be limiting their career aspirations because they feel that they do not have the requisite skills and abilities.
Coduras, Urbano, Rojas & Martinez (2008)	National Spanish GEM Survey Adult Population (2006)	Spain	The article examines the statistical relationship between university support and the level of entrepreneurship activity. The main results show that this relationship is not significantly relevant.
Matlay, H. (2008)	64 graduate entrepreneurs from 8 HEIs (High Educations Institutions)	United Kingdom	The authors explore the impact that entrepreneurship education can have on entrepreneurial outcomes. The author aims to investigate the perceived influence that various entrepreneurship education courses have had on a cohort of Semi-structured, in-depth telephone interviews were conducted annually over a ten year period (1997 to 2006) to document, measure and analyse respondent progression from graduation and into entrepreneurship. Results indicate that graduate needs for entrepreneurship education does not match actual outcomes in terms of entrepreneurial skills, knowledge and attitudes. This mismatch influences an entrepreneur's perceptions of actual and future educational needs. Most of the graduate entrepreneurs, however, seem to be satisfied with the outcomes of their entrepreneurship education, both in relative and in absolute terms.

Wright, Piva, Mosey & Lockett (2009)	42 interviews with technology transfer, business school deans, and business school entrepreneurship faculty and scientists from 8 Universities.	United Kingdom	They want to identify and understand the challenge to business schools contributing to the transfers of knowledge to enable academic entrepreneurship. The findings suggest that the ability of business schools to fill knowledge gaps in the development of business academic entrepreneurship is constrained by the institutional structures of universities which influence: strategies of the universities and the business school; links between business schools and process issues relating to differences in language and codes.
Athayde (2009)	Cross group control-sectional design was used to investigate impact of participation in a Young Enterprise company Program, with was based on the U.S. Junior Achievement model, in 6 secondary schools in London, (UK)	England (London)	Using an instrument developed by her, measures what she calls " <i>enterprise potential</i> " this is the attitudes towards the characteristics associated with entrepreneurship. Among the main results she found that exist differences between groups based on demographics (eg. ethnic groups) or family history.
Levi, Hart and Anyadike-Danes (2009)	5,000 adults aged 18 to 44 GEM-UK database	United Kingdom	This paper attempts to overcome methodological challenges in demonstrating the effect of enterprise training on opportunity perception and entrepreneurial skills perception of trainees. Logistic regression shows that, controlling for demographic effects, experience and attitudes, different types of training had different effects on opportunity perception and entrepreneurial skills perception. The results suggest that a combination of college-based training and work placements may provide a better all-round entrepreneurial capability for both graduates and non-graduates.
Zellweger, Siege & Halter (2010)	Information from 87 universities form 8 countries.	Austria Belgium	They investigate how intentional founders, successors, and employees differ in terms of locus of control and entrepreneurial self-efficacy as well as independence and innovation motives. We find that transitive likelihood of career intent depends on degree of entrepreneurial self-efficacy and the independence motive. Unexpectedly, we see that high levels of internal locus of control lead to a preference of employment, which challenges traditional

		<p>Hungary</p> <p>Finland</p> <p>Germany</p> <p>Norway</p> <p>New Zealand</p> <p>Switzerland</p>	<p>entrepreneurship research and suggests that the feasibility of an entrepreneurial career path does not automatically make it desirable. Our findings suggest that students with family business background are pessimistic about being in control in an entrepreneurial career, but optimistic about their efficacy to pursue an entrepreneurial career.</p> <p>Our findings offer a nuanced perspective on career choice intentions of students with family business backgrounds. We not only provide a prospective and detailed analysis of their underlying motives and behavioural control perceptions, but also explicitly compare intentional founders, successors, and employees. We contribute to research in a number of ways and hope to inspire other researchers to conduct additional work in the fascinating field of entrepreneurial intentions.</p>
<p>Source: Pittaway, and Cope (2007) and authors' research.</p>			



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