

## **Fostering Entrepreneurship: The Role of Higher Education, Trento, Italy, 23-24 June 2005**

### **Assessing Entrepreneurial Education in Higher Education in Portugal**

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**Abstract:** The main purpose of the paper is to assess how entrepreneurship is developed in Higher Education in Portugal. To accomplish this, we did an analysis of courses related with entrepreneurship offered by Public Universities in Management Degrees. To assess every course, a search on websites of each institution and a content analysis of reports produced by External Committees of Higher Education Performance Assessment were used. Results indicate that entrepreneurship is not a key structuring objective in Higher Education. The governmental authorities overlook entrepreneurship as a goal to be pursuit by Universities.

## 1. Introduction

Entrepreneurial activity is a direct result of an “individual’s perception about the existence of market opportunities, capacity and economic viability of those business opportunities” (GEM, 2002:8). Entrepreneurship corresponds to a situation where an individual believes that an opportunity could provide higher returns than an alternative occupation, or when in an unemployment situation the need becomes an imperative drive to solve the problem.

The Global Entrepreneurship Monitor (GEM) study, with ten framework conditions<sup>1</sup>, indicates that entrepreneurial activity varies across countries and refers that an “*entrepreneurial country*” must provide business opportunities, the infrastructure and creates the adequate business environment in order to help new entrepreneurs to set up new -ventures and to run their business.

The last GEMs study, indicate Portugal as a one with the lowest rates of Total Entrepreneurial Activities – TEA, among the 34 countries analysed. The average rate is 9,3%. (GEM, 2005a). Between 2001 (GEM, 2002) and 2004, the rate of entrepreneurial activity in Portugal decreased about 3 percentage points - from 7% in 2001 to 4% in 2004, compared with an average rate of 9,3% in 2004 (GEM, 2005a). This decline was justified not only due economic environment, but also due the Portuguese educational system, especially in its approach to business issues and because it lacks the encouragement of creativity and autonomy. The other lies in the centralization of science parks in Lisbon and Oporto and the inefficient linkages between Universities / Research centres and firms as to transfer of technology. We may also refer a national culture where individuals’ responsibilities and entrepreneurial risk-taking are not emphasizing (GEM, 2005b).

Comparing GEM and Entrepreneurship Eurobarometer (2004) does show interesting results. Eurobarometer indicates that 78% of Portuguese wish to have their own business, ranking Portugal in second position among all countries. However, when we look to business creation motives, need appears as the main drive, when compared with EU and USA. The evaluation of entrepreneurial difficulties highlights the fear of failure, reinforcing the negative effects of cultural attitudes on entrepreneurs’ decision. However, all other risks weight more when compared with EU and the USA, revealing the assumption that new ventures creation depend, mainly, from actions taken by others. This can hide the lack of competences to set up and manage new business. So it is fundamental to identify constrains that determine this pattern of behaviour.

These studies confirm that wishes, in Portugal, are higher than potential entrepreneurial capacity, which is a signal of an attitude where action is missing. One may ask why this happens. The study of attitudes, including the entrepreneurial attitudes, is integrated on the field of Social Psychology. This concept is defined as “the identification of a specific individual facing a social reality” (Lima, 1993:169). Attitudes are “included in the social representation of a social group and reflects, the favourable or unfavourable evaluation of the persons towards situations” (Pereira, 2001: 79). Therefore, they are determinant of social behaviour and perceptions about a reality.

One possible answer for this insufficient action could be anchored in the lack of human capital. The tasks involved in setting up and managing a new firm are complex and requires special skills. Portuguese people realize that they are not well prepared for running new business due to low educational level. Another possible explanation relies on educational system. Basic and high schools, as well as higher education institutions (HEI) are not oriented to develop competences such as autonomy, risk taking, responsibility, decision making, and self-confidence, which are

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<sup>1</sup> Financial support, Government policies, government programmes, education and training, research and development transfer, commercial and professional infrastructure, internal market openness, access to physical infrastructure, cultural and social norms, protection of intellectual property rights.

fundamental in entrepreneurship (European Commission, 2002; GEM, 2002, 2005b). One can say that intellectual infrastructure it is not playing their role in two ways: firstly, is failing at cultural values nurturing. Attitudes such as autonomy, and risk taking are not instilled in the youth, which constitutes a discouragement to course of action. Secondly, basic skills and competences that are crucial to setting up new firms as well to manage them are not developed properly in educational system. We can argue that entrepreneurial education is a very recent trend in Portuguese Educational system, from basic to higher education. Despite this lack of tradition, some steps were taken in a recent past, deserving an accurate analysis.

Taking this scenario, this paper has three main purposes. Primarily, we want to characterize the courses dealing with entrepreneurship in Portuguese Higher Education system. To accomplish this goal, an internet search was performed to identify all possible courses related with entrepreneurship in Management Degrees available at Public Universities. Additionally, Post-Graduated degrees devoted to Entrepreneurship will deserve same attention. Besides this characterization, it is crucial to look at expectations that authorities have about entrepreneurship education in Universities. This was done through a content analysis of Public Reports produced by External Committees of Higher Education Performance Assessment. Secondly, and shifting from a macro to a micro level, latent entrepreneurship in higher education students was assessed, as well as their main determinants and constraints, based on a survey, and complemented with suggestions from a focus group. Finally, some recommendations are made.

## **2. Entrepreneurship Education in Portuguese Universities**

Higher Education Institutions (HEI) can assume an essential role in entrepreneurial process. They could develop essential skills and capabilities as well as attitudes towards entrepreneurial behaviours that can contribute decisively for new venture creation and for intrapreneurship. Entrepreneurial process is anchored in entrepreneurs that take decisions and act (Schumpeter, 1934). However those actions occur supported on business ideas. HEI as knowledge creators' are privileged sources for new business ideas. One the other hand, they could develop essential skills on students that provide the essential knowledge to set up and manage new ventures. Subjects as legal procedures in new venture creation, financial management, human resources, marketing, business plans and so on, support general management competences for potential entrepreneurs. Accumulating these basic skills is not, however, sufficient to increase the number of new firms and speed out the number of young entrepreneurs. Another field of intervention should be on attitudes towards entrepreneurial behaviour and development of awareness of entrepreneurial spirit, because there are some behaviours and attitudes that facilitate the emergence of new firms such as: risk taking, pro-activeness, autonomy, and perception of self-efficacy (Baron, 1998; Krueger, 2003; Reynolds *et al*, 2004; Shane, 2003).

Across the world, in last few years, HEI awake for entrepreneurship education (Dana, 2001; Dubbini and Iacobucci, 2004; Fayolle, 1998; Hytti et al, 2002; Katz, 2003; Lüthje and Franke, 2002; Paasio and Nurmi, 2004; Postigo et al, 2003; Roux et al, 2004; Vesper and Gartner, 1997), following the example of USA. Small courses on under graduated degrees, masters and even PhD programmes were developed by Universities, despite some of them look to entrepreneurship as something outside of their core business (Paavi and Nurmi, 2004). This growth went together with academic enthusiasm on entrepreneurship, recognised as an autonomous field of science (Shane and Venkataraman, 2000).

If is true that entrepreneurship courses increased, there is no consensus on what entrepreneurial education at higher education level is. Despite this lack of consensus one can say that there are some common dimensions (Hytti at al, 2004): education for entrepreneurial attitudes and skills;

training how to create a business; awareness of entrepreneurship as a career choice. The question is how to develop such dimensions. Most part of HEI is concentrated in development of functional skills and business plans (Dubbin and Iacobucci, 2004; Hytti et al, 2004; Li et al, 2003).

In Portugal, only recently, entrepreneurship was recognised as an important subject by HEI. Management colleges were first movers in implementing autonomous disciplines in under graduated degrees. In last few years, there was a spread to new fields as economics; tourism; eco-agro-tourism; and engineering. Another trend is related with contest of ideas and/or Business Plans, promoted in association by Universities, Public Institutes and Private Associated devoted to Entrepreneurship Promotion.

Considering the advanced experience of management colleges, we decided to analyse the presence of entrepreneurship disciplines and their characteristics in under graduated courses on general management in Public Universities. This survey was carried out through Internet, supported on data available on official sites of each institution or, when available, in official pages related to each course. When some doubts arise or the information was not available on websites, mail and phone contacts were used. The information gathered is based on present academic year, 2004/2005. The same method was used to search post-graduated studies were also searched using the same method.

## 2.1 Entrepreneurship in Under Graduated Degree in Management

The search carried out allows us to identify eighteen different degrees in management in Public Universities. In the first cycle of higher education there is not yet any specific degree in entrepreneurship. Nevertheless, in the last few years, a number of courses related with entrepreneurship had appeared. Overall results are shown in Table 1.

**Table 1- Entrepreneurship Courses in Portuguese Universities – Management Degrees**

University	Course Title	Access
Aberta University	---	Not existent
Catholic University of Braga	---	Not existent
Catholic University of Lisbon	Business Initiatives	Optional
Catholic University of Oporto	---	Not existent
Coimbra University	---	Not existent
ISCTE	Entrepreneurship and Organizations	Optional
Minho University	Entrepreneurship	Optional
Nova University of Lisbon/Faculty of Economics	Entrepreneurship	Optional
Technical University of Lisbon - ISCSP	---	Not existent
Technical University of Lisbon - ISEG	Entrepreneurship	Optional
University of Algarve	---	Not existent
University of Aveiro	Leadership and Entrepreneurship	Obligatory
University of Azores	---	Not existent
University of Beira Interior	Entrepreneurship	Obligatory
University of Évora	Entrepreneurship	Optional
University of Madeira	---	Not existent
University of Oporto/ Faculty of Economics	---	Not existent
University of Trás-os-Montes and Alto Douro	Theory and Practice of Entrepreneurs	Obligatory

In the eighteen degrees identified, 9 Faculties offer a specific course on the field of entrepreneurship, while remain 9 do not. In the faculties where courses of entrepreneurship are present, only 3 consider it as a compulsory subject. The last 6 offer it as an optional access. When we look to overall objective of each degree, where courses on entrepreneurship are delivered, only one University (Évora) states clearly that intends to promote the creation of new ventures by students. However, the course of Entrepreneurship is Optional.

Their main propose is to instil entrepreneurial spirit into students, providing the first contact with the subject. Generally, the contents include the different stages of entrepreneurial process: starting with identification, evaluation and implementation of new business opportunities; warn the challenges and constraints that entrepreneurs face; and development of a Business Plan. Concerning pedagogical methodologies, traditional classes are used, complemented with case studies discussions as well as with workshops and seminars where entrepreneurs are invited to share their experiences. One can say that there are two main objectives: increasing awareness of entrepreneurship and their economic relevance, and training for new venture creation.

## 2.2 Post Graduated Studies

In the second cycle of higher education there are more specific courses devoted to entrepreneurship. In general, their purpose is to develop competences concerning entrepreneurship, providing specific education in several fields of management. The supply of specific courses in the area of entrepreneurship is recent in Portugal. There is only one master, known as *Inovação e Empreendedorismo Tecnológico na Engenharia* (Innovation and Technological Entrepreneurship in Engineering) - first edition in 2004/2005- of the Faculty of Engineering from Oporto University, in cooperation with the Faculty of Economics from same University, Management School of Catholic University and the HITEC Center at the College Management at North Carolina State University. It has the purpose of encouraging the excellence and the innovation in engineering and technological entrepreneurship, providing training in management, specifically oriented for the creation of products and business from a technological base. In general, this master aims to awake the entrepreneur and innovator spirit, as agent of change, creating the necessary conditions for the emergence of technological entrepreneurship in the engineering area. This course is specifically oriented for engineering students. Thus, main recipient students are from technological base courses, engineering and related. They also admit candidates that possess degrees in other areas, but prominent professional experience in the scientific and technical areas is required.

There is a concentration of subjects in the area of engineering: *Avaliação e Comercialização de Tecnologias* (Evaluation and Commercialization of Technologies), *Empreendedorismo Tecnológico* (Technological Entrepreneurship), *Implementação de Estratégias de Comercialização de Tecnologia* (Implementation of Technologies Commercialization Strategies). There are also some optional disciplines from courses of engineering of the Faculty of Engineering. During the course, students develop a technological project in laboratory that aims to create technological products and business. The master also includes a dissertation.

In another level, six Portuguese Universities, either public or private, offer Post-Graduate, but where a dissertation is absent. All the six are presented in Table 2.

**Table 2 – Post-Graduated Studies in Portuguese Universities**

University	Degree Title
Autónoma University of Lisbon	Business Management, Entrepreneurship and New-Ventures Creation
ISCTE – INDEG	Entrepreneurship and New-Ventures Creation
Lusíada University of Lisbon	Management and New-Ventures Creation
Moderna University of Lisbon	Micro-Firms Creation and Small Business in XXI century – Management Tools
University of Beira Interior	Entrepreneurship and New-Venture Creation
University of Évora	Entrepreneurship and Innovation

These studies are in an embryonic stage. Three of them were launched this academic year (Management and New-Ventures Creation; Micro-Firms Creation and Small Business in XXI century – Management Tools; Entrepreneurship and Innovation), another one (Entrepreneurship and

New-Venture Creation) will start in next year. Two others were set up in 2003/2004 (Business Management, Entrepreneurship and New-Ventures Creation) and in 2002/2003 (Entrepreneurship and New-Ventures Creation). However, only this last one had attracted enough candidates to begin and had run for three editions. Institutions faced a shortage of demand from potential candidates which can reveal some lack of awareness by potential entrepreneurs or the newness of the field in higher education in Portugal

Despite some specificity in each course, one may group their subjects in five broad areas:

**Basics of Entrepreneurship** – a set of disciplines that comprise: a framework of entrepreneurial process, in general, and more specifically in Portugal; a clarification of concepts related with identification, evaluation and implementation of new business opportunities; the challenges and constraints that entrepreneurs have to face; case studies; and in some courses, aspects like financing of new business or social entrepreneurship.

**Functional Skills** – a set of disciplines that offer an assembly of knowledge and technical competences in the following areas: management; financial analysis; investment projects evaluation; marketing; management of human resources; strategic management; accounting; information systems management; business law; and legal aspects in firms' establishment process.

**Innovation and Knowledge** – disciplines that exploit subjects like economics of innovation, strategic innovation; knowledge management; creativity; and value creation.

**Business Plans** – during the course the students develop their own business plan and sometimes they have to prepare a public presentation.

**Cooperation with External Actors** - seminars and workshops are present in all degrees, where speakers with prominent experience in the area of entrepreneurship (academics and entrepreneurs) are invited to discuss themes like public incentives to entrepreneurship, business projects finance, and successful cases.

### 2.3 Higher Education Performance Assessment: What Role for Entrepreneurship?

Higher Education Performance Assessment (HEPA) was formally established in Portugal about a decade ago through the Higher Education Assessment Act (Law 38/1994) with the broadly stated purpose of stimulating “quality improvement of [higher education] activities”. This governmental initiative follows pressures to institute formal accountability mechanisms in Higher Education (HE) due to the particular conjuncture experienced in Portugal in the educational sector in the late 1980s and throughout the 1990s.

The situation required attention as the escalating offer of HE courses was felt as posing problems linked with processes of proliferation, namely the qualitative/quantitative trade-off (Simão, Santos & Costa, 2002). Also, changes experienced with European funding opportunities for enterprises, the emphasis placed on stimulating young entrepreneurs and the unprecedented sector-wide privatisation highlighted the leverage role of HE as a strategic economic and social asset. HE accountability was then placed on the top row of Academic and Government agendas with the establishment of a national council for HEPA (CNAVES) supervising both Universities and Polytechnic Institutes, public or private. The intermediate product of this supervision was intended to be a course accreditation and the end product a dynamic, international linked, market oriented, social and economically concerned Academia.

Reinforcing this trend, through the HE Quality Act (Lei 1/2003) the Portuguese authorities made a partial amendment to Act Lei 38/1994 hardening actions taken against HE organizations that fail to comply or to reach the minimum standards. In addition to sanctions already previewed in 1994, namely non-accreditation of the courses, reduction in funding, and suspension of course

registration, the HE Quality Act of 2003 extended the sanctions to the compulsory shutdown of organizations themselves.

The harshness with which these measures could be perceived was somehow attenuated by the option of having this system operating as an improvement opportunity rather than a threat to the present status quo. Subsequently, authorities conceived the activities as within an assessment system (implying self-assessment as a starting basis) rather than an auditing system that would treat the HE institutions as examinees instead of partners (Karapetrovic & Wilborn, 2001).

The HEPA program was launched with a twofold structure: firstly organizations would constitute an internal committee charged with performing the self-assessment of e.g. a given course. This follows broadly defined performance criteria in what seems to be a desire of respecting the axiological autonomy of each HE Institution. This internal committee is required to produce a self-assessment report. Following the self-assessment phase, an external evaluation committee would analyze the self-assessment report and, after meeting with several bodies of the organization (e.g. students, junior and senior faculty, administrative staff, managing organs) the external committee is required to produce a report (RAE) comprising their impressions, qualitative evaluation plus recommendations.

The RAEs (external evaluation reports) follow a programmed structure (matching the HEPA criteria) that leaves much room for the external committee to specify many aspects that were considered as contingent to the course and institution under evaluation. Within these aspects, performance indicators (that is, the operational definitions of criteria) were also defined in an *ad hoc* fashion.

Committees are composed of prominent scholars and professionals working in companies. Although varying in composition, choices seem to reflect the intention of instilling an instrumental approach to HE. This follows a general concern of governing authorities with actionable knowledge and changing curricula to promote job-related skills (Bertsch, 2000). This is particular critical for public HE institutions due to its state funding dependency and the emerging phenomenon of skilled unemployed rising in official statistics (Bewley, 1995).

As regards to entrepreneurship, these reports constitute a rich source of information as to the importance given to this issue both by authorities (predetermined criteria) and by committees (*ad hoc* generated criteria). Therefore we set ourselves to content analyze reports concerning Management related courses. These courses were chosen because we see them as a natural field where entrepreneurship is explored and taught. So, our empirical data comes from 13 RAEs produced for Management and Administration courses that took place in 2002. These reports cover all Management & Administration courses offered in Public Universities (to the exception of military HE teaching units).

Content analysis followed an exploratory strategy starting with a keyword search complemented with a meaning oriented approach (Mucchielli, 1998). The unit of registry was the proposition having the paragraph or section as the unit of content (Bardin, 1997).

Keywords selected for search were terms related with giving primacy to entrepreneurship: entrepreneurship, entrepreneur, creation, initiative, autonomy, self-employment, risk, self-efficacy, proactive, (in Portuguese: empreendedorismo, empreendedor, criação, iniciativa, autonomia, emprego próprio, risco, auto-eficácia, proactividade). Words associated with ruling out entrepreneurship were job search, job market, career management (corporate), employment, and employability (in the sense of being employable, not being capable of creating own employment) which in Portuguese were: procura de emprego, mercado de trabalho, gestão de carreira (organizacional), emprego, empregabilidade.

### 2.3.1 Results from content analysis

As regards to entrepreneurship, a clear under representation of entrepreneurship and related concepts was found in the analysis of the RAEs set. Entrepreneurship seems to have no central role in HEPA for the time being. In other words, the notion of what is Academic mission for authorities and entities involved in the HEPA process – to the exception of a single committee – does not grant entrepreneurship a high status within the purposes and outcomes of HE activity.

Results for entrepreneurship and related concepts are presented in Table 3 and contrasted with no-entrepreneurship and related concepts found in the same set of RAEs.

**Table 3 – Entrepreneurship vs no-entrepreneurship in RAEs**

RAE	Entrepreneurship, entrepreneur, Start up, Creating firms, Initiative, Autonomy, Self-employment, Risk, Self-efficacy, Pro-activity	Job search, job, job offer, employability, job market, management career (corporate), company integration, professional placement
	<ul style="list-style-type: none"> <li>• Autonomy to set professional standards (8/8 Rae)</li> <li>• Sense of autonomy of the student (2 times/ in 1 Rae)</li> <li>• Development of student’s initiative (1/1 Rae)</li> <li>• “One intends to stimulate the entrepreneurial spirit in young BsCs, so that they create their own business” (3/1 Rae)</li> </ul>	<ul style="list-style-type: none"> <li>• Job market (36/10 Rae)</li> <li>• Professional &amp; Job placement (19/10 Rae)</li> <li>• Interview and resume training/ job search (7/6Rae)</li> <li>• Obtaining a job (7/6 Rae)</li> <li>• Career (7/5 Rae)</li> <li>• Job offer/opportunities (3/2 Rae)</li> <li>• Corporate integration (3/1 Rae)</li> <li>• Employability (2/2 Rae)</li> <li>• Job (2/1 Rae)</li> </ul>

The emphasis is clearly on pressing for an HE performance bounded by criteria such as judging activity by the degree in which curricula is being job market-oriented (36 mentions in 10 occasions), concerned with professional and job placement (19 mentions in 10 occasions) employability (always in the perspective of a dependent worker), with preparing students for a career within the area of training, or the existence and quality of job placement services within the school. So, the HEPA process seems concerned mainly with eradicating the long-established indifference of Academia as to professional or entrepreneurial concerns, namely, the availability of qualified HR.

### 3. A Case Study on Latent Entrepreneurship of Business Students

Former analyses look to Higher Education System at macro level. However, this is a too broad picture. Further analysis, more clinical, is necessary to recognize latent entrepreneurship on undergraduate. In this vein, it is crucial to assess if higher education is promoting entrepreneurship as well as to point out new perspectives on entrepreneurial education. To reach these tasks a survey, complemented with focus group, was used.



### 3.1 – Survey Analysis

The sample comprises 355 subjects, all students at a Portuguese Business School, with a compulsory course in Entrepreneurship in four of five courses supplied. The sample is mostly feminine (61%), singles (93%), with modal age between 21 and 25 years old, and composed mainly of 1<sup>st</sup> and 4<sup>th</sup> graders (95%). Course representation is fairly homogeneous with equivalent proportions in the sample to the exception of Information Systems Management which is underrepresented compared with other courses (adjustment chi-square =11.577, 4df, p<.05). All the details are shown in Table 4.

Table 4 – Sample characterization

	N=355	%	
<b>Age</b>			
≤ 29 years old		28	
21-25		56	
> 25		16	
<b>Gender</b>			
Feminine		61	
Masculine		39	
<b>Civil status</b>			
Single		93.2	
Married		5.1	
Divorced		0.3	
Marital status		1.1	
Other		0.3	
<b>Year of matriculation</b>			
1 <sup>st</sup> grader		55.2	
2 <sup>nd</sup> grader		4.2	
3 <sup>rd</sup> grader		0.8	
4 <sup>th</sup> grader		39.7	
<b>Course</b>			
Accountancy		20.3	
HRM		24.5	
Marketing		21.7	
Logistics Management		20.0	
Information Systems Management		13.5	

Data analysis showed that:

- Around 37% of students are unenthusiastic about creating their own business; 52% think that they need some professional experience before starting a venture; finally, 11% are ‘hot’ potential entrepreneurs, wishing to start a new-venture one year after completion of the degree as show in Table 6.

- Gender had a clear relation with the intention of starting a business (chi-square=14.539, 3df,  $p < .001$ ) being men more willing to create a company than women (in a proportion of 74% of men willing to create against 56% of women in same condition).

- Senior students (3rd plus 4th graders) tended to adhere less to the idea of starting a business as compared with junior students (1st plus 2nd graders) in a proportion of 56% of seniors willing to create against 68% of juniors in same condition (chi-square=17.368, 3df,  $p < .001$ ), as we can see in Table 5. This is particularly true as to the option of starting a business 1 year after completion of the course compared with the “no” option (34% juniors willing to create against 7% seniors, chi-square=16,547, 1df,  $p < .000$ , Fisher exact) while it fails to be true when considering only the “5 years after completion” option (44% juniors willing to create against 40% seniors, chi-square=0.405, 1df,  $p < .590$ , Fisher exact). There seems to be a progressive discouragement as to the idea of starting a business within less than 3 years after completion of the course. This might be considered a “get real” effect, i.e, leveling unrealistic expectations. However the idea of completing a course to start a business is definitely not nurtured along the course, otherwise we would expect to find bigger proportion of students intending to start a business as soon as ready to exercise the profession.

**Table 5 – New Ventures Creation \* Graders Crosstabulation**

	Graders		Total
	Juniors	Seniors	
cria_emp No	68	64	132
1 year after	35	5	40
3 years after	55	33	88
5 years after	53	42	95
Total	211	144	355

- For the Student condition gender had a clear relation with the intention of starting a business (chi-square=14.153, 3df,  $p < .003$ ), being men more willing to create a company than women (in a proportion of 76% of men willing to create against 55% of women in same condition). However, for the Worker-Student condition gender had no relation with the intention of starting a business (chi-square=2.586, 3df,  $p < .460$ ) being men as willing to create a company as women. Therefore, we found a significant moderator effect of worker-student status on the gender relations with the intention of starting a business, as shown in Table 6.

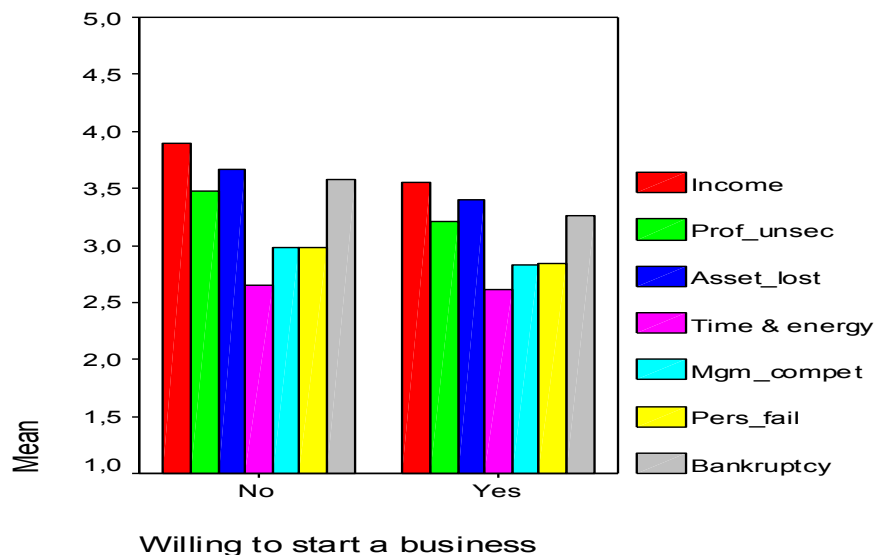
One cannot say that worker-student status had a moderator effect on the abstract relation between course and intention of starting a business. However, at the concrete course level, the proportion of individuals against and pro starting a business varies considerably depending on being a student or a worker-student, especially in Accountancy and Human Resources, where significant differences are found.

**Table 6 - New Ventures Creation \* Worker Student Condition**

<i>Worker-Student condition</i>	Course					Total
	Accountancy	HRM	Marketing	Logistics	Info systems	
NO against YES						
No	5	12	5	5	3	30
Yes	19	6	11	12	5	53
Total	24	18	16	17	8	83

- On the average, individuals unwilling to start a business are significantly more frightful as to Income uncertainty [F(1, 356)=13.192, p<.000], Professional insecurity [F(1, 356)=7.128, p<.008], Personal Asset loss [F(1, 356)=6.207, p<.013], and Bankruptcy [F(1, 356)=6.001, p<.015], as we can see in Figure 1.

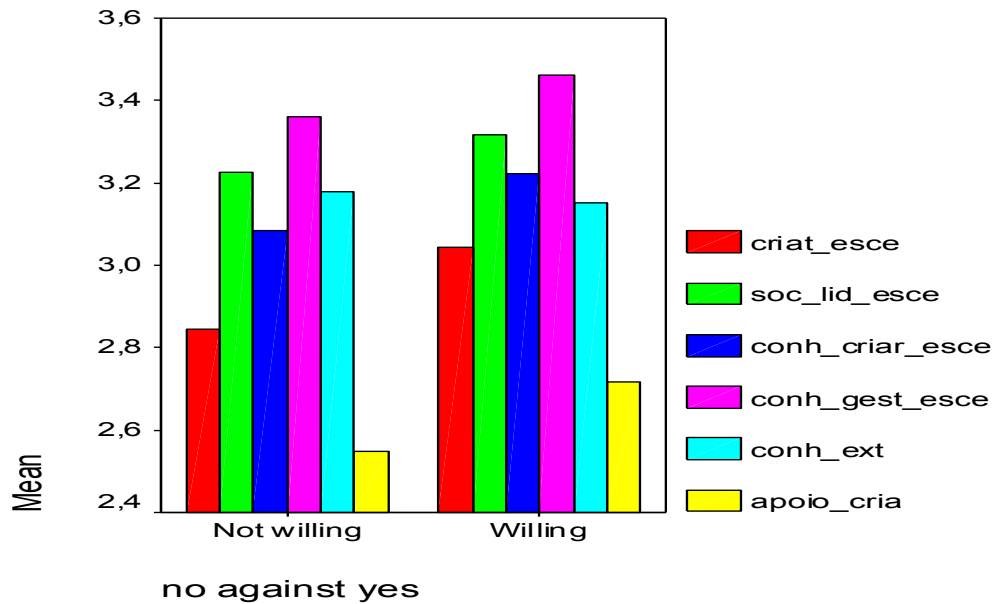
**Figure 1 – Attitudes Towards Risk**



- Latent entrepreneurs differ from those who do not want to set up a firm in the perception of “creative climate” existent at school [ F(1, 363) = 4,524, p<.034 ]. Variables as management and leadership competences, activities that promote the relationships with external actors and organizations, as well as supporting new venture creation do not discriminate both groups, as shown in Table 7 and Figure 2.

**Table 7 – Results of ANOVA for School Perceptions by Students**

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
criat_esce	Between Groups	3,440	1	3,440	4,524	,034
	Within Groups	275,228	362	,760		
	Total	278,668	363			
soc_lid_esce	Between Groups	,691	1	,691	,976	,324
	Within Groups	256,284	362	,708		
	Total	256,975	363			
conh_criar_esce	Between Groups	1,744	1	1,744	2,462	,117
	Within Groups	254,977	360	,708		
	Total	256,721	361			
conh_gest_esce	Between Groups	,936	1	,936	1,303	,254
	Within Groups	259,416	361	,719		
	Total	260,353	362			
conh_ext	Between Groups	,028	1	,028	,032	,859
	Within Groups	323,382	361	,896		
	Total	323,410	362			
apoio_cria	Between Groups	2,141	1	2,141	2,454	,118
	Within Groups	313,266	359	,873		
	Total	315,407	360			



Management as well as social and leaderships competences got highest scores, while creativity environment ongoing at school and support provided to set up a business rank lowest.

### 3.2 Focus Group Sessions

Two Focus group sessions (Malhotra, 1999; Zikmund, 2000) held with 2<sup>nd</sup> and 3<sup>rd</sup> graders in HRM course showed that there were contrasting attitudes among the students as to the course emphasis on entrepreneurship. Either the students tended to be extremely favorable to the idea of starting a business or the students were particularly distasteful as to that possibility. Recurrent arguments supporting each side's positioning were advanced as follows.

Pro-entrepreneurship was enthusiastic as to the fact that:

- Some courses highlight the notion that risk should be taken as opportunity rather than threat.
- Entrepreneurship is a better way “because we can test our ideas” and “reflect my own values, my image and my principles”
- There are companies that finance startups and that share the risk with the entrepreneur.
- Higher Education provides more at ease to take the initiative.
- Students do not want to take the initiative. Students want everything done, fast food generation.
- “The important is not people that learn recipes but people that are capable of solving unexpected problems”.

Anti-entrepreneurship was dismayed with the idea that:

- “The State does not favor anyone who is willing to start up a company
- “A supporting family is needed” (both as to economic as emotional support)
- “The Portuguese people is risk averted”

- “There is a will to give it a try but the problem lies in capital needed”
- First it would be important to gain experience by working somewhere else as an employee and then one could give it a try.
- Not part of the organizational culture of the college.

#### 4. Conclusions and Recommendations

The main purpose of the paper is to assess how entrepreneurship is developed in Higher Education in Portugal. To accomplish this, we did an analysis of courses related with entrepreneurship offered by Public Universities in Management Degrees. To assess every course, a search on websites of each institution and a content analysis of reports produced by External Committees of Higher Education Performance Assessment were used. Results indicate that entrepreneurship is not a key structuring objective in Higher Education. Each course is relatively new in the Portuguese Academia. The subject is missing in about half of courses analysed, and acquired an obligatory status in three cases only. Their main objectives are training to create a business reinforcing the awareness of entrepreneurship. Additionally, the governmental authorities overlook entrepreneurship as a goal to be pursued by Universities. Neither the HEPA criterias nor the ad-hoc measures established by External Committees consider the development of competences related with entrepreneurship as an objective to achieve. Conversely, they put emphasis on other goals such as obtaining a job, employability or career development.

It is imperative to overcome this weakness in order to fulfil the proposals of European Commission, namely to instil entrepreneurial spirit among youth and turn Europe to a more entrepreneurial society. In this line, Public authorities may consider the development of entrepreneurial competences as a key goal in HEPA. Universities should consider the introduction of subjects related with entrepreneurship in their curricula in an obligatory status, trying to develop entrepreneurial attitudes and skills as well as entrepreneurship as a career choice. Moreover, in the context of Bologna Process, entrepreneurship must be assumed as a generic competency to be developed in all degrees, from education to engineering, from economics to biotechnology, and so on.

In a micro level, sex roles still seem to constrain women entrepreneurial activity is reserved to man. However, the changing demographics experienced in Higher Education, with women prevailing at Universities, a change at the horizons is foreseeable. Women should be considered as a priority in a planned intervention in curricula with regards to entrepreneurial learning.

Older students reveal a weak desire to become entrepreneurs (set up a firm) as compared with younger ones. This can reveal a “get real” effect. It seems that they progress from dreamers to unwilling students, as they realize all the difficulties to set up and develop a venture. However, one may acknowledge that learning methods in use contribute to this lack of willingness, as one can infer by suggestions made in a focus group session: “there should be intermediate training periods so that students may contact with real professional settings during the course duration even if “we were only making xeroxs”; “would like to work with real company documents”; “too much theory, too little practice”. We should approach this problem from a cooperative level, involving all courses and teachers and not relying on the efficacy of a single subject on entrepreneurship. This practical approach seems to be very useful to promote the desire to set up a firm as we can see when both man and women worker-students are compared. In this case, there are no statistical differences between both groups.

Additionally, active methods with strong involvement of students are needed to reverse the situation. Ideas bookkeeping, where students list all the possible ideas identified, so that they can be discussed with teachers and members from firms. Ideas contests, business plans contests, organization of seminars and development of case studies by students to be presented to the community, deserve a further attention. But, it is fundamental to bring the community into the school. Business angels and venture capitalists may take benefits from sponsor business plans contests. Seminars where entrepreneurs are sharing their experiences should be encouraged.

The data analysed highlights the notion that we are dealing with heterogeneity among students on what entrepreneurship concerns. This reality demands a portfolio of several approaches to entrepreneurial education. Not all the students will become firms' owners, but they could be developed to act entrepreneurially.

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