

## **Entrepreneurship education in Italian universities: trend, situation and opportunities**

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### ABSTRACT

The aim of this paper is to provide an analysis of the present situation and recent evolution in entrepreneurship courses and curricula in Italian universities. The analysis is based on a census of entrepreneurship courses and curricula run by Italian universities in 2004 and 2010. Entrepreneurship education in Italian universities is in its early development. Up to 2004 only a few universities had courses dedicated to entrepreneurship and the majority of them dealt with the development of the business plan. This situation has only slightly improved in the following years. Courses and curricula are mostly within business schools while very few exist in engineering and science schools. This situation contrasts with the need for entrepreneurship education in the Italian economy. Given the importance of traditional sectors in Italian industry we need to stimulate start-up in high-tech sectors: the development of entrepreneurship courses in engineering and in other science curricula could play an important role in this sense. At the same time we need to favour the growth process of small firms; this requires people who are able to play an entrepreneurial role in established firms.

Keywords: entrepreneurship education, university courses, intrapreneurship, entrepreneurial competences.

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## 1. Introduction

The economic and institutional transformations experienced by the main industrialised countries during the last few decades have led to a re-evaluation of the entrepreneur's role in economic development and wealth creation (Zoltan J. Acs & Audretsch, 1993; Zoltan J. Acs, Desai, & Hessels, 2008; Gorman, Hanlon, & King, 1997).

There are several theories on entrepreneurship and on its role within the economy (Wennekers & Thurik, 1999). Entrepreneurship literature has expanded the scope of entrepreneurial studies; nevertheless they remain focused on two main issues: opportunity recognition and new venture creation (Ucbasaran, Westhead, & Wright, 2001). The growth in entrepreneurship research over the past decades is reflected in the number of reviews published in handbooks or special journal issues, assessing achievements, progress and future trends in the field (Cooper, 2003), concepts and research paradigms (Bruyat & Julien, 2000; Busenitz et al., 2003; Phan, 2004; Shane, 2004), analyzing research communities (Gartner, Davidsson, & Zahra, 2006) discussing methodological issues (Chandler & Lyon, 2001; Davidsson & Wiklund, 2001), new teaching methods (Hegarty, 2006) or areas of improvement such as the development of sales skills (Birdthistle, 2008).

Moreover, several articles and books review entrepreneurship research in Europe (Chapman & Skinner, 2006; Hisrich & Drnovsek, 2002), discussing the general progress in the field, differences between Europe and the U.S. (Huse & Landström, 1997) and the European position in the entrepreneurship debate (Fayolle, Kyrö, & Ulijn, 2005). All the European reviews conclude that European research differs from U.S. research because of methodological openness (Aldrich & Martinez, 2001) and a strong interest in contextual dimensions of entrepreneurship (Huse & Landström, 1997), that European entrepreneurship research consists of broad and diverse approaches with a bright future (Hisrich & Drnovsek, 2002), that these European approaches reflect the richness and diversity of European cultures and traditions (Fayolle et al., 2005).

Despite the differences in definitions, theoretical approaches and cultural contexts the widespread feeling among researchers and politicians is that entrepreneurship will play an increasingly important role in the development and adaptation of economic systems at local and national level. Several documents by the EU and OECD have emphasized the importance of entrepreneurship for the development prospects of their member countries (European Commission, 2008; OECD, 2001). Moreover, some researchers are convinced that greater entrepreneurial "vitality" is one of the factors explaining the superior performance of the USA economy in generating innovation and employment when compared with that of European countries (Z.J. Acs, Carlsson, & Karlsson, 1999). It is a popular opinion that the recent changes in demand and technology within the main industrialised countries have

determined the transformation from the 'regulated' economy of the fifties and sixties, dominated by managerial firms to the 'entrepreneurial' economy of the eighties and nineties, dominated by small firms (Audretsch & Thurik, 1999). Since the end of the seventies there has also been a shift in attitudes towards the entrepreneurial role in society: "Connotation of the term 'entrepreneur' began to shift from notions of greed, exploitation, selfishness, and disloyalty to creativity, job creation, profitability, innovativeness, and generosity" (K. H. Vesper & Gartner, 1997, p. 406).

As a result of these changes, during the last 25 years there has been an explosion of interest in the USA for the entrepreneurship field that has resulted in the institution of courses and degrees at several levels (undergraduate and graduate). The spread of entrepreneurial courses and the institutionalisation of the field have also promoted the creation of research centres, academic journals and associations. Most European countries have followed the same trend, although with some delay. Courses about entrepreneurship have grown steadily in all the main countries. Moreover, an increase in the presence of entrepreneurial courses in university curricula has been advocated by several academic and governmental studies (European Commission, 2008).

In this context the Italian situation is rather 'anomalous', both with regard to research and teaching activity. Until a decade ago there were no courses of entrepreneurship in Italian universities or permanent positions in this field. In a comparison made in 1996 regarding the chairs in entrepreneurship in the main European countries, Italy appeared with the number 0, together with Denmark and Hungary, far from the first ones in the list: the UK with more than 12 chairs, France and Finland with 11 (Frank & Landstrom, 1997). Moreover, while in almost all European countries the development of entrepreneurial courses continued to grow in the second half of the nineties, the Italian situation remained practically unchanged.

Nor is the situation different when we examine research rather than teaching. In 2003 there was only one research centre dedicated to the field (at the Bocconi University in Milan). At present there are still only a few: the "Centre of youthful entrepreneurship" at the University of Verona, the "Centre of technological innovation and entrepreneurship" at the University of Bologna and the "Entrepreneurial Lab, research and service centre", at the University of Bergamo. Apart from these centres, research in the field of entrepreneurship is carried out by individual researchers in a non-systematic way. This is in marked contrast with the large number of studies by Italian researchers on small firms and, specifically, on industrial districts (Bellandi, De Propriis, & Becattini, 2009). Although within these studies some attention has been paid to the phenomenon of firm start-up, the theme of entrepreneurship has remained a marginal one. Indicators of this situation are the following: a) the absence of specialised journals dedicated to the field of entrepreneurship; b) the marginal presence of Italian scholars on the editorial boards of the main international journals

in the field; c) the scanty presence of articles by Italian researchers in the main entrepreneurship journals.

Given this situation the aims of this paper are: a) to review the presence and characteristics of entrepreneurship courses and curricula in Italian universities; b) to analyze the evolution during the last decade; c) to discuss the limitations and opportunities of entrepreneurial education at university level. The paper covers a lack of research on the attitude of higher education institutions towards entrepreneurship education in Italy. The empirical analysis is based on a census of entrepreneurship courses and curricula run by Italian universities. The information collected and analyzed refers to the academic year 2009-2010. We also provide a comparison with the situation in the academic year 2003-2004. We follow the approach used for studies conducted in other countries (Nabi & Holden, 2008).

The period of analysis is particularly interesting given the fact that since 2001 the Italian university system has experienced a complete reorganization of students' curricula. The survey is mainly based on data and information collected through Internet. Moreover, we have taken advantage of the fact that the information about the curricula offered by Italian universities is collected and organized in a centralized database by the Italian Ministry of Education and Scientific Research. The database is publicly available and allows a search by keywords.

The paper is organized as follows. Section 2 reviews the literature on the presence and trends in entrepreneurial education at international level. Section 3 reports the results of the empirical survey about entrepreneurship courses in Italian universities. Section 4 discusses the reasons explaining the limited presence of entrepreneurship courses in Italian universities and makes some proposals about their characteristics and diffusion. Section 5 draws the main conclusions.

## **2. Trends in entrepreneurship education**

One of the first reviews of entrepreneurial courses in the USA, made at the end of the seventies, indicated that there were around 130 curricula with one or more entrepreneurial courses, more than ten times the 1967 figure (K.H. Vesper, 1982). They were concentrated in the schools of business and engineering. During the eighties and nineties curricula with entrepreneurial courses increased steadily: 250 in 1985, 370 in 1992, around 400 in 1995. In 1997 there were about 50 universities in the USA which offered 4 or more courses in entrepreneurship, allowing students to obtain degrees or to major in this field (K. H. Vesper & Gartner, 1997). In the same period there were 160 permanent chairs in the USA in the field of entrepreneurship, an indication of the fact that it had emerged as a discipline in its own right. This is also testified by the creation of research centres, academic associations and academic journals dedicated to the field.

It has been stated that in the USA at the end of the nineties there was a “complete educational infrastructure, consisting of more than 300 endowed positions, more than 100 centres, more than 40 refereed academic journals and more than a dozen professional organizations” (Jerome A. Katz, 2003). The author believes that the ‘entrepreneurship education industry’ has entered its mature stage in business schools, while there is still scope for growth in schools of engineering, agriculture and science. Other authors disagree with this conclusion and feel that there is still scope for expansion even in American business schools (Kuratko, 2003). Whatever the opinion about the ‘life cycle’ state of entrepreneurship education in the USA, researchers agree on the fact that it is still a growing field.

Other authors underline the importance of entrepreneurial activity because new firms make two indispensable contributions to market economies (Minniti & Bygrave, 2004). Firstly, they are an integral part of the renewal process that pervades and defines market economies. Entrepreneurial firms play a crucial role in the innovations that lead to technological change and productivity growth. In short, they are important for competition because they are able to change market structure. Secondly, new firms are the essential mechanism by which millions of people, including women, minorities, and immigrants, access the pursuit of economic success (Kuratko, 2005).

Some authors underline the importance of encouraging a continuous study and refinement of the entrepreneurial profile, particularly for young students (Harris & Gibson, 2008). Other authors highlight the recent growth and development in curricula and programmes devoted to entrepreneurship and new-venture creation as a response to this trend in growth. The number of colleges and universities that offer courses related to entrepreneurship in the USA has grown from a handful in the 1970s to 1,600 (Jerome A. Katz, 2003; G. Solomon, 2007).

Compared with the abundance of studies and research on the problems of entrepreneurship education in the USA (J. A. Katz & Green, 1996; G. T. Solomon, Duffy, & Tarabishy, 2002; K. H. Vesper & Gartner, 1997) there are fewer works dealing with the subject outside the USA. This reflects the delay with which entrepreneurship education has developed outside the USA and the fact that in no other countries (with the possible exception of Canada and the UK) has it reached a degree of development comparable to that observed in the USA.

Citing previous surveys on the topic, Ibrahim and Soufani (2002) note that at the end of the nineties there were 53 Canadian universities offering courses in entrepreneurship and small business management. This survey reveals that Canadian entrepreneurship courses tend to focus more on the pre-venture creation process and less on the management of established small businesses. According to the authors, another weakness is the insufficient spread of entrepreneurship courses in engineering schools, given the roles young engineers could play in developing new technology firms (Ibrahim & Soufani, 2002).

Outside North America, the UK is probably the country that has the highest number of courses and programmes dedicated to entrepreneurship education. The relevance attached to the issue is documented by the presence of studies addressing the effectiveness of entrepreneurship courses and curricula (Carter & Collinson, 1999; Deakins, Morrison, & Galloway, 2002). Recent literature explores the challenges and considerations of how new and innovative entrepreneurship education programmes may be inculcated into UK higher education institutions (McKeown, Millman, Sursani, Smith, & Martin, 2006; Smith, Collins, & Hannon, 2006) and the impact that entrepreneurship education can have on entrepreneurial outcomes (Matlay, 2008). Entrepreneurship courses and programmes are also present in most north European countries: Sweden, Finland, The Netherlands, Ireland, etc. Some universities in these countries host worldwide recognised entrepreneurship research centres and also PhD programmes in entrepreneurship (like Vaxio and John Hopkins in Sweden).

Interest in entrepreneurship education has also increased considerably among the transitional economies of East European (Mitra & Matlay, 2004) and Asian countries (Dana, 2001).

A study conducted on Polish students found that they had limited prior entrepreneurial experience and expectations and welcomed the opportunity to undertake enterprise education. The findings suggested that an equal proportion of male and female students aged 18-24 favoured a future entrepreneurial career (Jones, Jones, Packham, & Miller, 2008). Moreover, a quarter of all respondents welcomed an immediate entrepreneurial career after graduation and found value in the development of a business proposal. The findings suggested that entrepreneurial education informs entrepreneurial intent and career aspirations. Concerning Asian countries, in general the design of business school curricula in these countries has followed the traditional model, based on functional expertise (strategy, human resource management, marketing, finance, etc.). Nevertheless, courses about entrepreneurship, new venture creation and business planning have become more and more common in undergraduate and Master's curricula. China is a particularly interesting case given the exceptional growth rate of its private sector in the last decade. It was not until the middle of the nineties that MBA courses were introduced in Chinese universities. According to recent surveys there are 56 business schools in China that run accredited MBA programmes (Li, Zhang, & Matlay, 2003). Like MBA programmes in other countries, even in China courses tend to focus on functional skills. Nevertheless, a survey conducted on 26 top business schools found that six of them offer business venturing programmes and five are more focused on entrepreneurship modules (Li et al., 2003). However, recent literature shows that entrepreneurship education in China is not widespread and that there is a need to improve entrepreneurship curricula, entrepreneurship competition and entrepreneurship research (Zhi-rong, 2006).

### 3. Entrepreneurship education in Italian universities

To assess the presence and characteristics of entrepreneurship education in Italian universities we conducted a survey of courses and curricula on entrepreneurship run by Italian universities in the academic years 2003-2004 and 2009-2010. The survey is based mainly on data and information collected through Internet. In some cases the Internet survey was supplemented by direct collection of material about the courses. The Internet source is appropriate for the aim of this study as all Italian universities supply information on their curricula and courses through this means. All of them give basic information about the courses on their website and most of them also supply detailed information about the content of the courses. The information was collected in 2004 for courses run in the academic year 2003-2004; this academic year was chosen as it coincides with the full implementation of the reformed university curricula. The survey was repeated in 2010 for the courses and curricula run by universities in the academic year 2009-2010.

Figure 1 shows the organization of university curricula in Italy resulting from the reforms implemented in 2001. With the exception of medicine and architecture that retained a curriculum of 6 and 5 years respectively, in all the other fields curricula are based on a 3 year first degree and a 2 year second level degree (*laurea magistrale*). Universities are also allowed to run Master courses at the end of the first degree (first level Master) or at the end of the second level degree (second level Master)<sup>1</sup>. After completing the 3 + 2 curriculum students can access doctoral programs<sup>2</sup>.

As is common to surveys about entrepreneurship courses, one of the problems is to separate courses and curricula specifically devoted to entrepreneurship from those referring, more generally, to small business or innovation. In the analysis we included only those courses which specifically refer to entrepreneurship (we therefore excluded courses about small business management and courses about the economics of innovation). In some cases we retained courses on the management of innovation when they have a large part dedicated to entrepreneurship issues.

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<sup>1</sup> Before the reform 'Masters' were not recognized as part of the official curricula offered by Italian universities. Master courses (especially in the field of management) were (and are) offered by a large number of private and public institutions, sometimes associated with universities. Nevertheless there was little control over their characteristics. The reform has not changed this situation. To distinguish the Master courses offered by universities from those offered by other institutions the former are called 'University Masters'. Unlike other Master courses, that have no regulation whatsoever of their characteristics, the University Masters are subject to some general rules set down by the law: for example, they require a work load of 60 university credits (each credit being equivalent to 25 hours student study time).

<sup>2</sup> Even in the case of doctoral programmes there are some differences between the Italian system and those prevailing in North American and North European countries. All doctoral programmes start at the beginning of each academic year (October or November) and run for three years. Each doctoral programme has a fixed number of posts. The candidates receive grants from the state and are assigned through a public selection. Part time students who do not receive grants are also allowed to participate (in a fixed proportion to the financed ones), but they also have to complete the programme in three years. Exceptionally, a one year extension of the programme can be agreed upon.

Table 1 and Table 2 show the list of entrepreneurship courses run in Italian universities in the academic year 2003-2004 at graduate and post-graduate level respectively. Table 3 shows the situation in the academic year 2009-2010. Given the small number of courses no statistical analyses have been carried out, but only a qualitative analysis of their content and of their position within the curriculum.

Concerning the first academic year analyzed (2003-2004), only a few universities in Italy offered entrepreneurship courses. They are the universities where there are researchers interested in the field. Most of them (Bologna, Ancona, Urbino, Modena and Reggio Emilia) are located in the so called 'third Italy', that part of Italy dominated by the presence of small firms. The only university located in the south is the University of Naples with a course on the management of innovation within the engineering faculty. Only the Universities of Bologna and Urbino offered more than one course in entrepreneurship. This is because these universities had curricula specifically dedicated to entrepreneurship or innovation. In the case of Bologna it was a two year post-graduate course in management with a curriculum called 'Firm and innovation'. In Urbino there was a specific curriculum within a three year first degree called 'Entrepreneurship and small firms'. In all other cases entrepreneurship courses were part of curricula in general management.

Looking at the content of the courses, most of them were dedicated to the various aspects of start-up: how to develop the business plan and how to raise finance. Two courses were dedicated to the management of innovation in existing firms, with specific emphasis on the development of new ventures. Only three courses dealt with the general aspects of entrepreneurship, from its role in the economy to the specificity of entrepreneurship as opposed to management. However, even these courses devoted a significant amount of time to business planning.

Above all three aspects characterized entrepreneurship courses in Italian universities:

- a) they were present almost exclusively in economics and management faculties;
- b) their main focus was the start-up of new business;
- c) their main aim was to transfer knowledge and competences on the evaluation of new businesses and on the development of the business plan.

Only two universities offered a specific curriculum in entrepreneurship. Marche Polytechnic University (Ancona) started a first level Master programme in 'Entrepreneurship and management of innovation' in 2003. It was addressed to students with a first degree (three year course) in management or engineering. Despite the title, within the curriculum there were just a few modules addressing specific issues associated with entrepreneurship (management of innovation, business planning). The rest of the Master was organized around traditional management functions (strategy, marketing, finance, accounting, etc.).



The PhD programme in Entrepreneurship and innovation at the University of Naples II appeared to be the only one specifically devoted to the subject during the academic year 2003-2004. This PhD programme was not confirmed in the following years.

The situation changed during the second half of the decade. Compared with the situation in 2003-2004, in the academic year 2009-2010 there was a significant increase in courses and in the number of schools offering entrepreneurship courses both at undergraduate and graduate level. However, the main issue of these courses continues to be the management of innovation rather than entrepreneurship as such<sup>3</sup>.

Only a few universities offer a specific curriculum about entrepreneurship. LUISS University (Rome) provides a curriculum in Entrepreneurship and Market within the first degree in Economics and Business. The University of Valle D'Aosta offers a first degree in Entrepreneurial development of tourism districts and the Universities of Bolzano and Molise offer a post-graduate degree in 'Entrepreneurship and Innovation'. The other courses in entrepreneurship, management of innovation and business planning are offered within the first degree or post-graduate degree by economics and engineering schools. Apart from the latter schools, the school of Sport and Exercise Science at the University of Verona offers a Laboratory of entrepreneurship, while the school of Political Science at the University of Milan provides a course in business planning.

The proportion of courses in entrepreneurship and innovation offered by business and economics schools<sup>4</sup> and engineering schools remained almost the same during the period: in the academic year 2003-2004, 13 courses were offered by 8 schools of economics versus 2 courses offered by 2 schools of engineering; in the academic year 2009-2010, 68 courses were offered by 42 schools of economics versus 15 courses offered by 9 schools of engineering.

Concerning the Master programmes, Table 4 shows that there was a significant increase in the supply of curricula during the observed period. However, these Masters are proposed mainly by schools of economics and most of them refer to the management of innovation. Only Alma Mater Studiorum and the University of Bolzano propose a Master in Innovation Engineering.

The limited presence of entrepreneurship courses and curricula in Italian universities does not mean that the issue of entrepreneurship is completely neglected in their activities. Recognising the importance of favouring entrepreneurship, several Italian universities have started a number of extra-curricular initiatives dedicated to stimulating the start-up of new firms, especially among students and researchers. The most widespread activity in this area is the organization of business plan competitions. Within these competitions courses on

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<sup>3</sup> Appendix A provides a full table of courses, faculties and curricula.

<sup>4</sup> In Italy economics and business are traditionally within the same school. For simplicity the term school of economics will be used to refer to schools of business and economics.

business planning are normally offered. In all cases these initiatives and courses continue to be outside the official university curricula.

#### **4. Demand and supply factors in entrepreneurship education**

The complete absence of entrepreneurship courses and curricula in Italian universities until a decade ago and their slow growth after the reform of 2001 can be analyzed and explained by referring to the two sides of the market: demand and supply. We think that in the Italian situation the latter factor is definitely more important than the former. Moreover we also believe that the actual supply of courses and curricula does not always respond to the demand for entrepreneurial competences not only in quantitative but also in qualitative terms.

The slow pace with which Italian universities are following the global trend in the development of entrepreneurship courses and curricula depends on two main factors related to the supply side: the presence of a cultural tradition that does not favour entrepreneurship education and the rigidity of the Italian university system when changing courses and curricula.

As regards the cultural traditions prevailing in the Italian university system the one that has the greatest impact is the separation between theoretical and practical knowledge, the former being considered superior to the latter. Universities are the places where theoretical knowledge is developed and transmitted, with less attention paid to its practical use. This is reflected not only in the content of courses but also in the teaching methodology which is almost exclusively based on lectures (*ex cathedra*) with little consideration for the active role of students. This situation is somewhat different in engineering faculties, given their technical orientation. In Italy the distinction between theoretical and practical knowledge regards not only each discipline but is also associated with the difference between the humanities and technical and scientific subjects, the former being considered superior because of the more practical orientation of the latter<sup>5</sup>. The preeminence given to theoretical rather than practical knowledge and the association of the former with the humanities is responsible for 'diffidence' about new fields of knowledge, especially when they have a practical orientation and are not easily reconciled with the codified branches of knowledge.

Besides these general reasons, we believe that the most important factor is the rigidity of the Italian academic system, with its strict definition of the contents of scientific fields and the subsequent codification in pre-defined scientific sectors. This 'codification' is not only

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<sup>5</sup> The high school which is still considered the best within the high school curricula is the 'Classical Lyceum' where, as is obvious from the name, preeminence is given to classical humanities (ancient Greek, Latin, literature and arts). Despite its name, even in the 'Scientific Lyceum' there is a prominence of humanities (Latin, philosophy and history) over scientific subjects. Technical schools, called 'Industrial Technical Institutes' although normally considered good school for a technical background were traditionally considered not suitable for university entry. Until 1968 only students from the two lyceums were allowed access to universities.

rooted in tradition; it is also officially recognized by the application of a rigid scheme of scientific disciplinary fields to which each researcher and each course are necessarily associated<sup>6</sup>.

The contents of these subfields were codified at national level in 1999 and have not been changed since then. Remaining within the boundary of the initially chosen subfield is very important for young researchers as the rather complicated recruitment and career system in Italian universities is based on these disciplinary fields. Interdisciplinary work receives no incentives within this system, especially in the case of young researchers who still have to go through various stages in their career that, with rare exceptions, will be carried out within the same disciplinary field. The disciplinary field is also the basis for the allocation of research funds; this is another reason for the scarce incentives for researchers to collaborate with colleagues belonging to different areas. None of the disciplinary definitions within economics or business mention the subject of entrepreneurship. This does not exclude the possibility for academics belonging to these disciplinary fields to study entrepreneurship but it exposes young researchers to the risk of investing in a non-recognized field.

Until the application of the new curricular system in 2001, not only were the disciplinary fields codified at national level but also the names of possible courses that universities could choose within these fields were defined. This situation changed with the application of the reform. Since 2001 universities have been free to choose the name of curricula and courses; however, for the latter the disciplinary field it belongs to must be indicated as this is important in order to identify the academics who can run them.

Since entrepreneurship is an interdisciplinary field, it does not come as a surprise that the courses on this subject run in Italian universities belong to different disciplinary subfields of management and economics. Some of them also belong to the field of managerial engineering. As long as the system retains this rigid definition of, and separation between, disciplinary fields it will be difficult for entrepreneurship to become a 'recognized' field for research and teaching.

To summarize, on the supply side the main obstacles to increase courses in entrepreneurship offered by Italian universities are: a) the bureaucratic culture and organizational inertia inside higher academic institutions; b) the conflicting academic philosophies of the role of entrepreneurship in higher education; c) the lack of cooperation among different departments/schools; d) the fact that only a minority of academics are really committed to the subject. Moreover, as observed in other countries, even in Italy there are no established systems for evaluating entrepreneurship programme results (European Commission, 2008).

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<sup>6</sup> As an example, the field of economics and business (SECS-P) is divided into 13 subfields spanning political economy (01) econometrics (05), accounting (07), finance (09), etc..

As far as the aims and contents of entrepreneurship courses are concerned, the recent trend and present situation in Italian universities raises two main issues:

- a) the role of education as opposed to training;
- b) the adequacy of university courses to address the needs of the economic system and the changes in entrepreneurial and managerial models.

With regard to point a) the large number of courses about business planning seems too short-term oriented, i.e. stimulating the start-up of firms, rather than addressing a more long-term aim of raising the entrepreneurship awareness and capabilities of individuals. For this reason some university courses overlap with the proliferating private and public initiatives dedicated to entrepreneurship training, that typically focus on business planning skills.

In our opinion, together with developing specific skills for business start-up, entrepreneurship education in universities, especially those at first degree level, should pursue the following objectives:

- a) to enhance knowledge about the phenomenon of entrepreneurship and its role in the economic system and in society as a whole;
- b) to favour a positive attitude to entrepreneurship and, in turn, to promote entrepreneurship as a useful and respectable career prospect for graduates (Kolvereid & Moen, 1997);
- c) to develop those competences, like relational and leadership competences, that can contribute to the development of entrepreneurship.

Specifically, by referring to Johannisson's taxonomy (1991), educational programmes on entrepreneurship should aim at developing the following levels of learning:

- entrepreneurial attitudes, values and motivation;
- ability to develop networks and relational skills in general;
- creativeness and intuition;
- knowledge of institutional facts about entrepreneurship.

In a more general perspective entrepreneurship education should help students increase their "entrepreneurship awareness" and enlarge their perception and vision of social and institutional facts. At a more advanced level (Master and post-graduate courses) students can acquire the technical abilities (use and scope) for the evaluation of new business opportunities and for new venture creation. At present only a few courses reflect these contents and aims.

In addition to stimulating an entrepreneurial career in university students, we are also convinced that entrepreneurship education should aim at a more general change in the entrepreneurial attitudes and culture of Italian small firms. Although Italy has a high entrepreneurial rate and a great number of small firms, the main problem for those firms is that they are not sufficiently oriented to growth and innovation. Evidence from entrepreneurship courses reveals that they fail to address these problems. For example they

pay little attention to developing transversal competences (like relational competences) while focusing on technical skills. One of the transversal competences which should be largely developed to solve the problem of the “dimensional trap” of small Italian firms is the psychological attitude towards innovation and growth. The entrepreneurship courses in Italian universities seem more oriented to stimulate student self-employment rather than to propose a social and economic role for the entrepreneur. A modification in the latter direction would be helpful in two ways: a) it would contribute to the long-term change in the cultural attitude of entrepreneurs; b) it could develop a pro-active attitude of managers and employees within existing firms.

A further reason for the scarce presence of entrepreneurship courses in Italian universities and for their orientation towards self-employment could be related to the fact that entrepreneurship is not considered a learnable skill but rather a personality trait, and therefore impossible to transfer by teaching. Empirical research shows that managerial competences (not associated with functional skills) are acquired through experience, where informal mechanisms, long-term relationships and firm-specific competences prevail. In this context entrepreneurship education, and also managerial education, should be focused on psychological, behavioural and relational competences oriented to growth and innovation rather than self-employment and start-up.

Besides creating a more clear-cut distinction between education and training, entrepreneurship education should be aware of, and address, the long-term needs of the economic system. Italy is characterized by the following weaknesses (Minniti, 1999):

a) although the start-up rate is among the highest in Europe, new businesses are concentrated in traditional sectors while there are too few start-ups in high-tech sectors;

b) after start-up firms tend to remain small, rather than pursuing rapid growth. This is also the result of the pervasive family ownership and control in small firms.

One of the ways to stimulate start-up in high-tech sectors could be the spread of entrepreneurship courses in engineering and science faculties. Even in this case they should not exclusively be focused on business plan development (entrepreneurship skills) but rather on enhancing entrepreneurship attitudes and awareness among students. The aim of stimulating start-up in high-tech sectors could be better fulfilled by post-graduate training programmes and structures, which can be addressed to more specific targets and be focused on more specific fields.

Entrepreneurship education in scientific and technical schools could play a specific role in promoting academic spin-offs. Since 2003 there has been an increasing spread in this phenomenon in Italian universities and other public research institutions. An analysis of the survival and growth of Italian spin-offs has identified two main problems: the imbalance of the sponsor team towards technical skills and the lack of entrepreneurial figures. The lack of personnel with management skills could be balanced by recruiting staff with appropriate

characteristics. On the contrary, what cannot be balanced is the motivation for entrepreneurship, since it is closely connected with the motivation of the single promoters (Iacobucci, Iacopini, Micozzi, & Orsini, In press). Entrepreneurship education could play a decisive role in fostering the number of spin-offs and their growth.

## 5. Conclusions

The economic slowdown in many industrialized countries has revalued the instrumental role of entrepreneurship in promoting economic growth. As a result there has been an increase in research about entrepreneurship and the development of a wide array of policies and measures to promote and support entrepreneurship. Among these measures is the diffusion of entrepreneurship courses.

The aim of this paper is to analyze the recent trend and present situation of entrepreneurship education in Italian universities. We conducted our study starting with the consideration that entrepreneurship is something that can be stimulated and learned<sup>7</sup>. Moreover, literature provides evidence of the positive relationship between entrepreneurship education and the number of venture start-ups.

The empirical analysis highlights several weaknesses in the present situation of entrepreneurship education in Italy.

- The development of entrepreneurship courses is a recent phenomenon, almost absent until 2004, causing a delay compared with other industrialized countries.
- The diffusion in recent years of entrepreneurship courses mainly involves faculties of business and economics. This is due to a ‘supply side bias’ as in these schools there are academics who have skills to teach entrepreneurship.
- In our opinion entrepreneurship courses could be more effective in technical and scientific schools rather than in schools of business and economics.
- Another weakness concerns the topics of the courses: entrepreneurship education should include technicalities but also the development of personal attributes and skills that form the basis of an entrepreneurial mindset and behaviour (creativity, sense of initiative, risk-taking, autonomy, self-confidence, leadership, team spirit, etc.), raising the awareness of students about self-employment and entrepreneurship as possible career options and providing specific business skills and knowledge of how to start a company and run it successfully.

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<sup>7</sup> Peter Drucker, recognized as one of the leading management thinkers of our time, has said, “The entrepreneurial mystique? It’s not magic, it’s not mysterious, and it has nothing to do with the genes. It’s a discipline. And, like any discipline, it can be learned” (Drucker, 1985). Concerning this point of view, Gorman and Hanlon reported, “. . . most of the empirical studies surveyed indicated that entrepreneurship can be taught, or at least encouraged, by entrepreneurship education” (Gorman et al., 1997, p. 63).

The role of universities in this context is to develop a strategy for teaching and research in entrepreneurship rather than simply starting a course. One possible solution could be to establish entrepreneurship centres that can be hubs within the universities for research and teaching in the entrepreneurship field. Indeed, we think that entrepreneurship courses are more effective when they are included in a set of actions and measures (like the creation of industrial liaison offices, incubators, etc.) developed inside and outside the university to promote entrepreneurial culture and foster start-ups by former students.

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**Table 1 – Italian Universities offering entrepreneurship courses (2003-2004)**

University	Faculty	Course title	Curriculum <sup>1</sup>	Access	Credits	Tenure
Bocconi University	Economics	Business planning	Several FD and PG curricula	Optional	6	Professor
LIUC - Castellanza Free University	Economics	Entrepreneurship development	FD in Management	Optional	5	Professor
Polytechnic University of the Marche	Economics	Entrepreneurial dynamics and business projects	PG in Management	Compulsory	10	Professor
University of Bologna	Economics	Business planning	PG in Management (firm and innovation)	Compulsory	5	External contract
University of Bologna	Economics	Start-up and small firm management	PG in Management (firm and innovation)	Compulsory	5	External contract
University of Bologna	Economics	Private equity and venture capital	PG in Management (firm and innovation)	Compulsory	5	External contract
University of Bologna	Economics	Management of innovation	PG in Management (firm and innovation)	Compulsory	5	Professor
University of Bologna	Engineering	Start-up lab*	FD Management engineering	Optional	6	External contract
University of Bologna (Forli)	Economics	Entrepreneurship	PG in Management	Compulsory	4	Professor
University of Florence	Economics	Entrepreneurial start-up	PG in Firm's governance	Compulsory	6	Professor
University of Modena and Reggio Emilia	Economics	Start-up and development of firms	PG in Management and consulting	Compulsory	4	Professor
University of Perugia	Economics	Analysis of business start-up	PG in Management of firm's risks	Compulsory	6	n.a.
University of Urbino	Economics	Entrepreneurship and small firms	FD in Management (entrepreneurship and small firms)	Compulsory	5	External contract
University of Urbino	Economics	Business start-up	FD in Management (entrepreneurship and small firms)	Optional	5	External contract
University of Naples	Engineering	Management of innovation	FD in Managerial engineering	Optional	n.a.	Professor

<sup>1</sup> FD = first degree (three year first degree or “Laurea”); PG = post-graduate degree (two year post-graduate degree course or “Laurea magistrale”)

\* This is not a real course but a laboratory activity to assist students in developing a business plan

**Table 2 – Universities offering a curriculum in entrepreneurship (2003-2004)**

University	Faculty	Curriculum title	Level	Students	Starting year
Polytechnic University of the Marche	Economics	Entrepreneurship and management of innovation	Master (one year)	15 (degree in management and engineering)	2003
University of Naples II	Economics	Entrepreneurship and innovation	PhD programme (three years)	4	2002

**Table 3 – Italian Universities offering entrepreneurship courses (2009-2010)**

Type of courses	Schools		
	Business and economics	Engineering	Other
Courses in entrepreneurship	28	2	1
Courses in management of innovation	32	13	
Courses in business planning	8		1

**Table 4 – Italian Universities offering a Master in entrepreneurship (2009-2010)**

University	Schools <sup>1</sup>	Level	Title
University of Bolzano	Business and economics	I	Master in Entrepreneurship and innovation
University of Bolzano	Engineering	I	Innovation Engineering
Alma Mater Studiorum, University of Bologna, Ferrara, Modena-Reggio Emilia, Parma	Business and economics	II	Culture of innovation, market, start-up
Alma Mater Studiorum	Engineering	I	Innovation Engineering
Sda Bocconi	Business school		Entrepreneurship and strategies
Bocconi University	Business and economics	I	Economics and Management of Innovation and Technology
University of Palermo	Business and economics	II	Management of Innovation in SMEs
University of Pavia	Business and economics	I	Social entrepreneurship and territorial governance
University of Trento and Scuola superiore Sant'Anna	Business and economics		Master in Innovation Management
University of Verona	Business and economics	II	Management of Innovation
European university of Rome	Business and economics	I	Management of innovation and Change management

## Appendix A

University	Faculty	Curriculum <sup>1</sup>	Course Title
Luiss University	Business and economics	FD in Economics and Business, Curriculum Entrepreneurship and market	Corporate start up and development
University of Florence	Business and economics	PG in Management	Laboratory – Company Start-up
Bocconi University	Business and economics	PG in Management	Entrepreneurial values and managerial behaviour
Del Sannio University	Business and Economic Science	PG in Business Economics	Entrepreneurship and fostering of new companies
Luiss University	Business and economics	FD in Economics and Business, Curriculum Entrepreneurship and market	Entrepreneurship and Venture capital
University of Bolzano	Business and economics	FD in Management of tourism, sport and events	Entrepreneurship and development of SMEs
University of Bolzano	Business and economics	PG in Entrepreneurship and innovation	Entrepreneurship A
University of Bolzano	Business and economics	PG in Entrepreneurship and innovation	Entrepreneurship B
University of Bolzano	Business and economics	PG in Entrepreneurship and innovation	Social Entrepreneurship
Luic- Castellanza Free University	Business and economics	FD in Business Economics, curriculum management	Education to Entrepreneurship
Luic- Castellanza Free University	Business and economics	FD in Business law and economics	Education to Entrepreneurship
Luic- Castellanza Free University	Business and economics	PG in Economics and management	Entrepreneurial Strategy
Cattolica University	Business and economics	PG in Market and strategy	Entrepreneurship and management of SMEs and no profit companies
John Cabot University	Business and economics	PG in Business administration	Introduction to Entrepreneurship
John Cabot University	Business and economics	PG in Business administration	Entrepreneurial Management
University of Florence	Business and economics	PG in Management	Entrepreneurship and innovation (I)
University of Florence	Business and economics	PG in Management	Entrepreneurship and innovation (II)
University of Molise	Business and economics	PG in Entrepreneurship and innovation	Economics of innovation, entrepreneurship and SMEs
University of Bologna	Business and economics	PG in Economics and management of cooperative and no profit companies	Social Entrepreneurship
University of Bologna	Business and economics	PG in Management	Entrepreneurship and tools to develop a new company
University of Bologna	Business and economics	PG in Economics and management	Management of innovation and entrepreneurship
University of Cassino	Business and economics	PG in Management and corporate finance	Creative Economics and entrepreneurship
University of Catania	Business and economics	PG in Management	Entrepreneurship, start-ups and business planning
Tor Vergata University	Business and economics	PG in Economics and management	Start-ups and entrepreneurship
University of Salerno	Business and economics	FD in Economics	Start-up and management of innovative companies
University of Valle D'aosta	Business and economics	FD in Entrepreneurial development of tourism districts	Entrepreneurship and tourism
University of Urbino	Business and economics	PG in Marketing and communication	Entrepreneurship and SMEs
University of Urbino	Business and economics	PG in Economics and management	Entrepreneurship and SMEs
University of Bologna	Business and economics	PG in Economics and management	Strategic control of innovative companies and start-up
Del Sannio University	Business and Economic Science	PG in Business Economics	Economics and management of innovation
Luiss University	Business and economics	FD in Business Economics, Curriculum marketing	Economics and management of innovation

University	Faculty	Curriculum1	Course Title
Luiss University	Business and economics	FD in Economics, market, financial broker, Curriculum political economics	Economics and management of innovation
Luiss University	Business and economics	FD in Economics and Business, Curriculum Entrepreneurship and market	Management of Innovation
Luiss University	Business and economics	FD in Economics and Business, Curriculum Entrepreneurship and market	Economics and Management of innovation
Luiss University	Business and economics	FD in Economics and Business, Curriculum E-Business and Management of Information Systems	Economics and management of innovation and networks
University of Bolzano	Business and economics	PG in Entrepreneurship and innovation	Innovation Management
Luic- Castellanza Free University	Business and economics	PG in Business Economics, curriculum Economics and management	Innovation and product development
Cattolica University	Business and economics	PG in Market and strategy	Innovation, brand and licence
University of Florence	Business and economics	PG in Management	Laboratory – Innovation
Bocconi University	Business and economics	FD in Business Economics and Management	Management of Technology, innovation and operations
University of Cagliari	Business and economics	PG in Management	Economics and management of technological innovation
University of Insubria	Business and economics	FD in Economics, Curriculum in Economics and management	Management of innovation
University of Bergamo	Business and economics	FD in Business Economics	Management of innovation and projects I e II (entrepreneurship)
University of Padova	Business and economics	FD in Economics and management, Curriculum International Economics and Management	Economics of Networks and Management of Innovation
University of Pavia	Business and economics	PG in Economics and management	Management of innovation
University of Perugia	Business and economics	FD in Business Economics	Economics and management of innovation
University of Perugia	Business and economics	FD in Economics and corporate Law	Economics and management of innovation
University of Perugia	Business and economics	FD in Financial Economics	Economics and management of innovation
University of Perugia	Business and economics	PG in Management	Management of innovation
University of Perugia	Business and economics	PG in Finance and Statistics	Management of innovation
University of Perugia	Business and economics	PG in Economics and management	Management of innovation
La Sapienza University	Business and economics	FD in Economics, finance and corporate law	Management, innovation and internationalization
La Sapienza University	Business and economics	PG in Economics	Management of innovation
Tor Vergata University	Business and economics	FD in Economics and management	Economics and Management of innovation
University of Salerno	Business and economics	PG in Economics and innovation Management	Management of innovation
University of Torino	Business and economics	PG in Economics	Economics and Management of innovation
University of Verona	Business and economics	PG in Management	Leadership and innovation management
University of Macerata	Business and economics	PG in Management	Economics and Management of innovation
University of Trieste	Business and economics	PG in Economics and management of innovation	Management of innovation
University of Trieste	Business and economics	PG in Financial markets and innovation	Management of innovation
University of Modena and Reggio Emilia	Business and economics	PG in Management	Business Planning
University of Modena and Reggio Emilia	Business and economics	PG in International management	Business Planning
Tor Vergata University	Business and economics	PG in Economics and management	Business Planning

University	Faculty	Curriculum <sup>1</sup>	Course Title
University of Venezia	Business and economics	FD in Business Economics	Corporate strategies and business planning
University of Trieste	Business and economics	PG in Economics and management of innovation	Business Planning
University of Trieste	Business and economics	PG in Financial markets and innovation	Business Planning
Roma Tre University	Business and economics	FD in Management	Business Planning
University of Chieti	Management Science	PG in Valuation methods, forecast and control of social-economic systems	Business Plan Laboratory
University of Sannio	Engineering	PG in Engineering management	Management of innovation and projects
Polytechnic University of Marche	Engineering	PG in Automation engineering	Economics and management of innovation
University of Bologna	Engineering	PG in Engineering management	Management of innovation projects
University of Padova	Engineering	PG in Engineering management	Management of innovation and projects
University of Palermo	Engineering	PG in Engineering management	Statistical methods for risk management and innovation
University of Perugia	Engineering	FD in Engineering management	Economics and Management of innovation
University of Perugia	Engineering	FD in Engineering management	Corporate Management and management of innovation
University of Perugia	Engineering	PG in Engineering of materials	Management of innovation and competitive European strategies
Tor Vergata University	Engineering	PG in Engineering management	Management of innovation and projects
University of Siena	Engineering	PG in Engineering management	Management of innovation and projects
Polytechnic of Milan	Engineering	PG in Engineering	Management of innovation
Polytechnic of Milan	Engineering	PG in ICT Engineering	Management of innovation and projects
Polytechnic of Milan	Engineering	PG in Engineering management	Management of innovation and projects
Polytechnic of Milan	Engineering	PG in Automation Engineering	Start-up of technological companies
Polytechnic of Milan	Engineering	PG in Engineering management	Start-up of technological companies
University of Verona	Sport and Exercise Science	FD in Motor Science	Entrepreneurship Laboratory
University of Milan	Political Science	FD in Business economics, curriculum European Economics	Business Planning

<sup>1</sup> FD = first degree (three year first degree or “Laurea”); PG = post-graduate degree (two year post-graduate degree course or “Laurea magistrale”).