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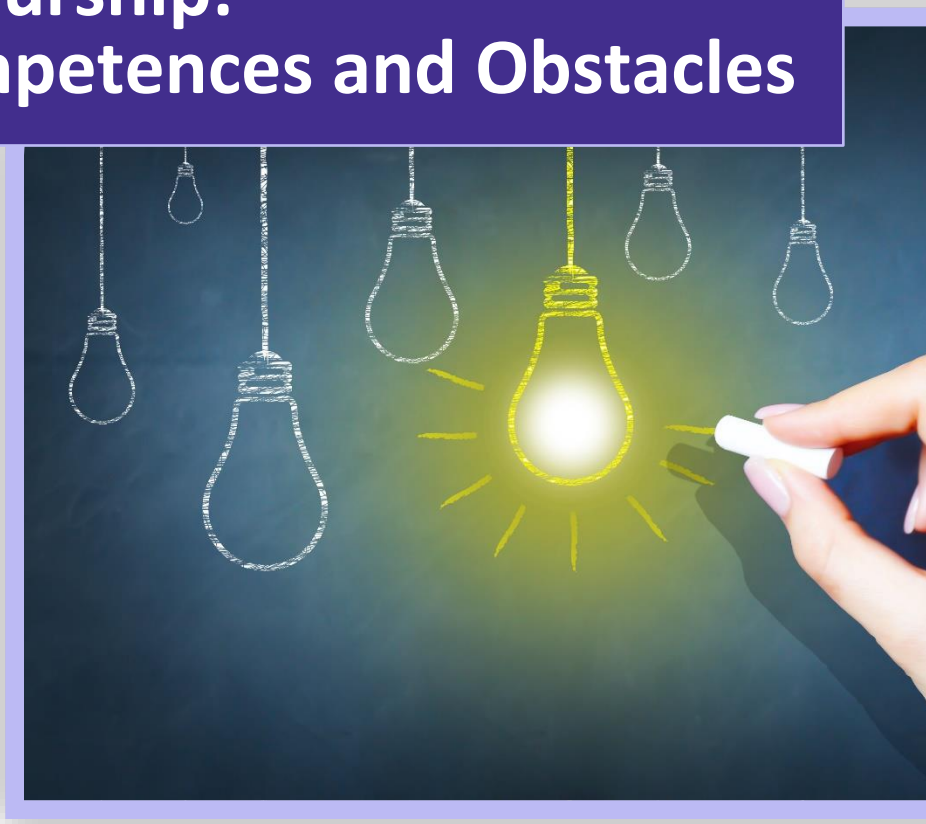
Student Entrepreneurship: Demographics, Competences and Obstacles



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ABSTRACT

In this report, we use a population-based approach to explore the entrepreneurial activities of 61,115 students, alumni of the 64 Italian universities that are members of the AlmaLaurea consortium, in the second half of 2014. Data were collected through a newly developed section of the AlmaLaurea survey, which will be consolidated in future rounds to allow to continue mapping student entrepreneurship in Italy and to provide robust empirical evidence to longitudinal analyses. Our results show that student entrepreneurs represent 2.7% of the sample whereas nascent entrepreneurs and non-entrepreneurs account for 3.8% and 93.5%, respectively. We profile and compare the three groups across several dimensions, such as demographics, mobility, field of study, sources of stimuli and competences, perceived obstacles, and support for entrepreneurship. The results shed light on the timely and relevant, yet understudied, phenomenon of *student entrepreneurship*, offering implications for both policy and practice.

This report is the first output of a joint research project on entrepreneurship among university students and graduates. The partners of the project are: (a) Consorzio Interuniversitario AlmaLaurea; (b) Entrepreneurship and Innovation Center (Department of Business of Bologna University); (c) ImprendiLab (Department of Economics and Law of the University of Cassino and Southern Lazio).

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EXECUTIVE SUMMARY

STUDENT ENTREPRENEURSHIP

Entrepreneurship is becoming an increasingly attractive employment option, not only among highly skilled and experienced individuals, but also among young people, like university graduates. This is evidenced by the increasing rate of new venture creation by students and the rising demand for entrepreneurship educational programs and entrepreneurship support structures at universities across the globe (OECD, 2015a).

Over the last 30 years, scholars and policymakers have extensively studied universities, acknowledging their relevance in creating the right context for entrepreneurship (Grimaldi et al., 2011). Yet, to a very large extent, the analysis has been focused on entrepreneurial activities by academics (e.g., Fini et al., 2011), and scant research has focused on new venture creation by students. Moreover, with specific reference to the Italian economy, different analyses show that the share of entrepreneurs with tertiary educations is quite low, and this is also the case of the younger generation (GEM, 2014, Unioncamere, 2014). Robust empirical evidence suggests that education is an important positive determinant of entrepreneurial performance (e.g. Bates, 1999; Ferrante, 2005), and according to some studies (Bugamelli et al., 2011; Schivardi and Torrini, 2011; Federici and Ferrante, 2014), the poor economic performance of the Italian economy in the past 15 years or so can be partly ascribed to entrepreneurial styles and strategies determined by a poor endowment of human capital.

To fill part of this void, researchers have recently started to investigate entrepreneurship by university graduates (Roberts & Eesley, 2011; Astebro et al., 2012). However, because of data paucity and a focus on a limited number of institutions (primarily located in the US), results are biased and only partially representative of the phenomenon.

With this report, we provide the first in-depth analysis of student entrepreneurship in a country. We focus on the population of students graduated from 64 Italian universities in 2014. We characterize their entrepreneurial activities, competencies, and perceived obstacles, thereby providing some robust evidence on the phenomenon, which could be useful for implementing effective actions to support entrepreneurship among university students.

STUDENT ENTREPRENEURSHIP IN ITALY

A growing number of students are looking at entrepreneurship as a realistic career option, with numerous examples of students who founded their new business ventures during university studies or soon after graduation (Lindholm Dahlstrand and Berggren, 2010). In this report, for the first time, we profile the student entrepreneurship phenomenon in Italy. The main findings are summarized as follows:

The respondents

- ✓ 61,115 undergraduate (bachelor) and graduate (master) students, who graduated between September and December 2014 from the 64 Italian universities members of the AlmaLaurea Consortium[1], completed the "Student Entrepreneurship Survey". Data show that 1,664 (2.7%) are student entrepreneurs (i.e., students who have created a new venture during their university study or before starting university), 2,232 (3.8%) are nascent entrepreneurs (i.e., students who are currently engaged in some entrepreneurial activities), and 57,219 (93.7%) are non-entrepreneurs (i.e., students who are not engaged in any entrepreneurial activity)[2].

Age, Gender, and Citizenship

- ✓ The highest percentage of student entrepreneurs (more than 50%) is 27 years old (or more) at graduation, with an average age of 30 years old. Nascent entrepreneurs are younger with less than 40% of them being 27 years old (or older), with an average age of 27. The non-entrepreneurs are the youngest, with an average age of 25.5 years and the highest frequency (more than 30%) are between 23-24 years old.
- ✓ About 40% of student entrepreneurs are women (672). This percentage is consistent among nascent entrepreneurs (925), although it significantly increases -up to 60%- among non-entrepreneurs (35,087). These figures are remarkable if compared with the percentage of women involved in entrepreneurial activities in Italy, which is about 20% (Osservatorio Imprenditoria Femminile, Unioncamere-Infocamere, 2014).
- ✓ Less than 3% of students are foreign-born. This percentage doubles among entrepreneurs (5.5%) and nascent entrepreneurs (5.1%), with 92 and 115 foreign-born students engaged in entrepreneurial activities, respectively.

[1] The members of the AlmaLaurea Consortium were 64 at the time of the survey (2014) and 73 in 2016 (see the appendix for the list of universities included in the sample).
[2] The population size was 64.710, and the response rate was 94%.

Geography and Social Mobility

- ✓ About 42% of non-entrepreneurs are enrolled at universities located in the north. This percentage drops to 33% and 38% for entrepreneurs and nascent entrepreneurs, respectively. Entrepreneurship therefore seems to substitute for a lower number of job opportunities in central and southern Italy, as well as the islands.
- ✓ Almost 60% of student entrepreneurs reside in the same province of their alma mater. This figure drops to about 50% for nascent entrepreneurs and non-entrepreneurs. Only 0.5% of the non-entrepreneurs reside abroad, whereas this figure increased to more than 1.0% among both entrepreneurs and nascent entrepreneurs.
- ✓ Entrepreneurship happens across all social classes, independent of the scholarly level of the household. For instance, about 30% of non-entrepreneurs belong to a household with at least one parent with a university degree. This figure is consistent for both entrepreneurs (28%) and nascent entrepreneurs (30%). Moreover, about 48% of non-entrepreneurs belong to lower classes; this figure is similar for both entrepreneurs (45%) and nascent entrepreneurs (45%).

Fields of Study

- ✓ About 60% of student entrepreneurs have completed a Bachelor's degree, as opposed to about 30% who earned a Master's degree. These figures are quite different for both nascent entrepreneurs (about 55% and 35%, respectively) and non-entrepreneurs (almost 65% and 25%).
- ✓ About 50% of student entrepreneurs completed a degree in social sciences (i.e., Economics-Statistic, Education, Law, Linguistics, Political-Social and Psychology), about 40% in STEMM disciplines (i.e., Science, Technology, Engineering, Math and Medicine); the remainder studied humanities or physical education. The same pattern is found among nascent entrepreneurs. Both entrepreneurs and nascent entrepreneurs graduated mostly in Economics and Statistics, Medicine, Political-Social, and Engineering. Among non-entrepreneurs, the highest percentage of students got a degree in STEMM disciplines (about 50%).

Stimuli, Competences, Obstacles, and Support

- ✓ For both, student entrepreneurs (76%) and nascent entrepreneurs (77%), the decision to engage in entrepreneurship was influenced by family followed by students from the same university program. As for entrepreneurial competences, university professors provided the most useful competences to both entrepreneurs and nascent entrepreneurs.
- ✓ The most relevant obstacles experienced by entrepreneurs and nascent entrepreneurs were related to high taxation and excessive bureaucracy. Nascent entrepreneurs also experienced significant difficulties in obtaining funds and finding the right partners.
- ✓ Almost 80% of student entrepreneurs and nascent entrepreneurs indicated that there were no entrepreneurship courses in their universities programs; we asked them to what extent it would have been important to have one. On average, nascent entrepreneurs attributed a

higher importance to the presence of an entrepreneurship course than the group of entrepreneurs.

Active vs. Non-Active Entrepreneurs

- ✓ At the time of the survey, about 63% of the student entrepreneurs were still involved in their ventures, whereas the remaining 37% were not (either for exiting the company or because the venture is not active anymore). About 43% of non-active entrepreneurs indicated that the most important reason for closing the business was that revenues/profit were lower then expected, followed by market issues and conflicts among shareholders.

Novice vs. Serial Entrepreneurs

- ✓ Among the 1,664 entrepreneurs, about 84% are novice entrepreneurs (i.e., they have started only one business) whereas the remaining 16% are serial entrepreneurs (i.e., they have started more than one businesses).

CONCLUSIONS AND RECOMMENDATIONS

Student entrepreneurship is a hot topic for both universities and individuals who engage in it. Universities all over the world are investing heavily in the development of students' entrepreneurial skills, through formal programs as well as extracurricular activities, aiming to foster entrepreneurial mindsets (Kauffman Foundation, 2013). Recent evidence suggests that a growing number of students have started to consider entrepreneurship as a real option.

In this report, we aimed to explore—for the first time—the entrepreneurial activities of the population of the Italian university students who graduated in 2014. Our goal was to provide a rigorous assessment of the phenomenon, which could be a valid starting point to engage university administrators, teachers, and policymakers as well as managers and entrepreneurs, on how to effectively support entrepreneurship among young people.

Our evidence suggests that, first, even if more males currently engage in entrepreneurship, the rate of female entrepreneurship among students is double that of female entrepreneurship in Italy. Second, student entrepreneurship does not happen in STEMM disciplines only; entrepreneurship from social sciences is tantamount the one spurring from hard science. Third, even if Italian universities are not fully receptive in terms of foreign-born students, their rate doubles among entrepreneurs and nascent entrepreneurs. Finally, as exhibited by our data once more, entrepreneurship could mitigate regional job-market inefficiency.

We also explored the extent to which the social and environmental context affected students in their decision to become entrepreneurs. First, family plays a relevant role and it influences students' entrepreneurial attitudes. Second university professors have the highest impact for the acquisition and development of their competences. Third, student entrepreneurs experienced lots of difficulties in the first phases of venture creation mostly because of bureaucratic and administrative issues. Finally, about 80% of entrepreneurs and nascent entrepreneurs reported

that their curricula did not offer any entrepreneurship courses but nascent entrepreneurs, more than student entrepreneurs, indicated that they would have been happy to take some.

We believe that this report can significantly contribute to advancing our knowledge of how entrepreneurship happens among university students.

Yet, as these figures may help to do make some sense of the phenomenon, several questions remain. For instance, what is the impact of entrepreneurship by university students and alumni? How can the university curricula be effectively designed to empower entrepreneurial mindsets? To what extent does the interaction between universities and local contexts create knowledge ecosystems to foster the enactment of entrepreneurial behaviors?

The inclusion of the "Student Entrepreneurship Survey" section piloted in this study in future AlmaLaurea surveys will consolidate the dynamic assessment of these observations. Other complementary studies will make it possible to address many of the still unresolved questions.

CONTENTS

1 INTRODUCTION

1.1 BACKGROUND

Entrepreneurship is the engine of economic growth; it contributes to the creation of new businesses and jobs, to the development of new capabilities and skills. It makes economies more competitive and innovative (Kauffman Foundation, 2013). Entrepreneurship is defined as one of the most important activities of modern economic life, and it has the potential to improve economic opportunities for all (Hart et al., 2015; OECD, 2015a).

Over the past 30 years, universities have therefore been encouraged to foster entrepreneurial activities through different mechanisms, from professionalized technology transfer offices to dedicated policies supporting academic spin-offs (Grimaldi et al., 2011). Several scholars around the world have—over the years—provided a diverse set of analyses and models trying to rigorously assess the impact of academic entrepreneurship, its consequences on universities' research and teaching activities, the role of inter-institutional differences, and the effect of different policies and supporting mechanisms (Bolzani et al., 2014a; Dahlander and McFarland, 2013; Perkmann et al., 2015)[3]. The diffusion of attention to these phenomena in many different parts of the world is coupled with an increasing number of comparative analyses, which offer a rather developed framework of the many different elements that constitute an entrepreneurial university together with its limits and opportunities (Fini and Grimaldi, 2016).

Despite these efforts, we still know very little about the role played by students in these processes. And yet, because the pioneering study conducted at MIT first in 2001 and implemented in 2003 on a larger scale (Roberts and Eesley, 2011), the data speak for themselves: for any new company started by a faculty member or based on a technology licensed by the TTO, more than 20 companies are started by former students. In the case of MIT graduates, the press quickly picked up the finding that if all the companies created by its graduates formed an independent nation, it would be equivalent to the eleventh-largest economy in the world (Roberts et al., 2015). Looking at a cross sectional sample based on US STEM graduates, Astebro et al. (2012) confirmed that start-ups by students in science or engineering are an order of magnitude larger than those created by faculty members, and, in general, students are more likely to start a new business than are their professors. The MIT analysis was replicated for Stanford in California (Lazear, 2005) and Tsinghua University in China (Eesley et al., 2009). These works quickly inspired other scholars to focus on their alma maters. Approximately 42% of alumni from Chalmers University'

[3] See, for example, the MIMIR project in the US (http://nlp.stanford.edu/projects/mimir.shtml), the TASTE project in Italy (http://project-taste.eu), and the TRIC project in the UK (http://goo.gl/jzpEOp). Accessed 10/12/2015.

entrepreneurship school in Sweden started a new venture (Lindholm Dahlstrand and Berggren, 2010). Lerner and Malmendier (2013) reported that 5% of alumni from Harvard Business School create a new venture within one year after graduation. In Italy, a study conducted at Politecnico Milano, showed that 3% of alumni have founded a company between the year of enrollment in the second cycle degree and five years after graduation (Colombo et al., 2015).

However, while clearly based on some of the most vibrant universities in the world, these studies lacked a more widespread perspective on the overall phenomenon and the data needed to approach several interesting theoretical and empirical questions on entrepreneurship theory and practice. Indeed, if gathering systematical and rigorous data from a single institution over several cohorts of former students is in itself a difficult task, extending the effort to achieve a multi-campus comparison or a full-country study raises the bar considerably. An attempt to move in this direction, and also work on an inter-country comparative base, is the GUESS project, which was launched in 2003 by the Swiss Institute for Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG)[4] and focused on the entrepreneurial intent and activity of students. The project, now in its six biannual edition, gathers data through a network of national correspondents who identify a certain number of courses and universities in now 34 countries where students are asked to complete an online survey (Sieger et al., 2014). The GUESS project is the first multi-country comparison that allows us to analyze trends and changes over time, but suffers from the differences in the type of students profiled in the various editions as well as the differences in the approaches and choices of the national correspondents in the selection of the courses and universities.

In joining the aforementioned conversation and in an attempt to contribute to the state of the art of the research on entrepreneurship and students, this report presents the results of the first country-level analysis of entrepreneurship by university graduates in Italy. In the following section, we describe the characteristics of the study, the goals, how it contributes to overcome some of the limitations of previous studies, as well as its impact.

1.2 THE STUDY

The study is based on a specific survey, the "Student Entrepreneurship Survey," which was created as a new module included in the yearly annual survey of Italian university graduates administered by AlmaLaurea. AlmaLaurea is an inter-university consortium that supplies data to governing bodies, assessment units, and committees dealing with teaching activities and career guidance. Since 1994, AlmaLaurea has been profiling the graduates of the universities that participate in the consortium, following them over time for up to 5 years after graduation. To date, AlmaLaurea covers almost 90% of Italian graduates with a total of 2.2 million surveys gathered up to June 2015. The survey is administered on a yearly basis, and it gathers demographic and primary data

[4] See the project www.guesssurvey.org. Accessed 10/12/2015.

information with a response rate of about 90%. Respondents are further followed 1, 3, and 5 years after graduation to monitor the employment situation.

Since 2013, we worked to develop a new section of the survey to achieve three goals. First, to build a reliable and comprehensive dataset of student entrepreneurship in Italy to foster a national debate on the role of universities, institutions, context, and family in supporting entrepreneurship among students. Second, to contribute to the international debate on student entrepreneurship, overcoming the single-university approach or the lack of representativeness of the student population of larger scale studies. Third, to link primary and secondary data, in order to model individuals' intentions and attitudes with respect to companies' performance and impact.

The survey is organized into three main sections. The first section is administered to the whole sample, and profiles all students (entrepreneurs, nascent entrepreneurs, and non-entrepreneurs). The following sections target the entrepreneurs and nascent entrepreneurs only. In particular, the second one focuses on the role of universities, people, and institutions in fostering students' entrepreneurial skills and preferences. The third section addresses the status of the companies, investigating de-novo and serial entrepreneurship. In addition to the "Student Entrepreneurship Survey," respondents completed the main AlmaLaurea survey that collects demographic information, universities' attributes and experiences, family background, and students' future career intentions. Finally, data on the Italian context were collected from other sources (e.g., Italian Companies' House) to highlight any similarity or difference between the phenomenon under scrutiny and the Italian entrepreneurial context[5].

As for the analysis, we follow a three-pronged approach. First, we focus on two general questions: (1) Who are the student entrepreneurs[6]? (2) Who are the students interested in becoming entrepreneurs? In answering these questions, we compare both groups to their peers who have no entrepreneurial experience or show no interest in entrepreneurship. We then examine the extent to which the both the social and environmental contexts affected student entrepreneurship. Finally, we dig deeper on the specific characteristics of student entrepreneurs and analyze those who are still managing a business, and those who are not. Particular attention is given to the so-called "serial entrepreneurs", academic graduates who have funded more than one company.

To our knowledge, this is the first population-based study of university-student entrepreneurship ever conducted. As with any survey-based-project, response rate is an important metric to consider the representativeness of the analysis, and we can here rely on a 90% level, which limits the non-response bias. Questions and wording were structured based on previous research (see, for example, Fini et al., 2012), but we cannot exclude the usual interpretation biases or that self-

[5] The questionnaire has been translated into English and is available upon request.

[6] We define the student entrepreneurs as those who have founded a company during their university studies or before joining university.

reported data correspond to real facts. Finally, this first edition of the report relies on primary cross-sectional data only. Future editions will address these issues.

1.3 THE RESPONDENTS

Data were collected between September and December 2014, from 64.710 students who graduated from the 64 Italian universities in the same period. The data cover nearly 80% of Italian university graduates, representing a quite accurate picture of the national system[7]. As for the territorial area, AlmaLaurea graduates are underrepresented in the northwest because most of the universities in this area were not included in the AlmaLaurea consortium at the time of the survey[8].

The students' mean age at graduation is 24, with 25.7% in the category "younger than 23 years," and 22% in "27 years old and over." About 60% of respondents are female. These distributions are consistent with the previous studies conducted by AlmaLaurea (2015) that have always showed a predominance of female and students between 24 and 27 years old. Almost all respondents are Italians (96.88%), with a small percentage coming from Europe (1.89%), Asia (0.68%), Africa (0.44%), and Americas (0.32%).

As far as territories are concerned, 41% of respondents attended a university in the north, 26% in the center, 24% in the south, and 9% in the islands of Sicily and Sardinia. Focusing on single universities, 8.6% of respondents are graduates of the University of Bologna, 7,8% of "La Sapienza" in Rome, 6,3% of the University of Padua, and 5.9% of the University Federico II of Naples. Together they account for 28.6% of students, which aligns with the percentage of enrolled students that these four large universities represent in the whole country.

In terms of degree level, 63% of respondents have completed a Bachelor's degree, 26% a Master's degree; the others have concluded a full cycle (i.e., one long cycle degree course that lasts five or six years) and a very small percentage of those students have accomplished a pre-reform degree (before the Bologna Process took place[9]). Of graduates, 19% have completed a degree in a scientific field, which constitutes the largest group of the sample; followed by the group of graduate students in the pharmaceutics field (14%), geo-biologic, (13%), medical (8%), and engineering (7%).

[7] See the appendix for the list of universities involved in the survey.
[8] In particular, Politecnico of Milano, University of Pisa, and University of Palermo are not included in the sample.
[9] The Bologna Process is aimed at harmonizing various systems of European higher education, to facilitate the mobility of students and graduates and to increase the EU international competitiveness. It was introduced in 1999 (www.unibo.it/en/international/agreements-and-networks/bologna-process/bologna-process). Accessed on 1/12/2015.

2 STUDENT ENTREPRENEURSHIP IN CONTEXT

2.1 ENTREPRENEURS, NASCENT ENTREPRENEURS, AND NON-ENTREPRENEURS

Entrepreneurship literature has extensively researched the determinants of entrepreneurship, emphasizing motivational aspects (Shane et al., 2003), skills and prior knowledge (Shane 2000; Lazear 2005), and environmental influences (Sørensen 2007). In an attempt to illuminate some of these dimensions, we focus not only on those individuals who have already entered entrepreneurship but also on those who are in the process of starting a new business. Along these lines, an important contribution has been given by the Global Entrepreneurship Monitor (GEM), which is the largest and most developed project meant to assess entrepreneurial activities in the world. This project aims to contribute to the entrepreneurship knowledge, focusing on, among other issues, individuals involved in early-stage entrepreneurial activities (GEM, 2015). These individuals, defined as "nascent entrepreneurs" are currently taking actions to start a new business (Davidsson, 2006; Wagner, 2006). All this notwithstanding, these two groups of individuals may or may not display (dis)similar features and characteristics. Our analysis provides a sound answer to that.

Specifically, we grouped students into three main categories: student entrepreneurs, nascent entrepreneurs, and non-entrepreneurs. Following previous studies (Astebro et al., 2012; Davidsson, 2006), we define "student entrepreneurs" as those students who have already created a new venture before joining university or during their university studies; "nascent entrepreneurs" are those who are currently engaged in some activities to create a new venture (e.g., writing a business plan or searching for financial support); and as "non-entrepreneurs" those students who have never been involved in entrepreneurial activities.

2.2 WHO ARE THE STUDENTS ENGAGING IN ENTREPRENEURSHIP?

About 2.7% of graduated students in Italy are entrepreneurs. Of these, 66% have created a new venture during their university studies whereas 34% before joining a university. Nascent entrepreneurs represent 3.8% of the sample. The remainder of the sample (93.5%) includes students who have never engaged in entrepreneurship (Table 1).

As for demographic characteristics, we observe that 50% of entrepreneurs are 27 or older at graduation, with an average age of 30. The average age at graduation is lower for both nascent entrepreneurs (27.5 years), and non-entrepreneurs (25.5). These figures may be explained by the fact that those who are entrepreneurs (or engage in entrepreneurial activities) are involved in

both university studies and venture management, thus subtracting some time from their university-related activities, compared to those who do not engage in entrepreneurship.

The two groups of students involved in entrepreneurship-student entrepreneurs and nascent entrepreneurs-are composed approximately of 60% men and 40% women. This is an unexpected result, because, in Italy, according to the "Comitato Imprenditoria Femminile" (2014), the percentage of women engaging in entrepreneurship is about 20% and only for very few cases (for the regions of Molise and Basilicata) it rises to 30%, confirming the well-known gender gap in entrepreneurship. According to a recent report of the Committee on Women's Rights and Gender Quality "almost twice as many men as women are involved in early-stage entrepreneurial activity" (European Parliament, 2015). In our context, the gap among women and men seems to be less evident: women with a high level of education are involved in entrepreneurial activities at a higher percentage than the national rate.

Moreover, the percentage of foreign students who are entrepreneurs or nascent entrepreneurs is around 5%. This result is not surprising, if we compare this figure with the percentage of ventures created by foreign entrepreneurs in Italy in 2014, they represent 8,2% of the total ventures created in that year, and this percentage has increased between 2009 and 2012 by 16,5% and by 4,4% between 2013 and 2014 (Confederazione Nazionale Artigianato, CNA, 2014).

Table 1 - Demographic variables by students' group

		Entrepreneurs (n=1,664)		Nascent Entrepreneurs (n=2,232)		Non-Entrepreneurs (n=57,219)	
Variable		**n**	**%**	**n**	**%**	**n**	**%**
Gender	Male	992	59.6	1,307	58.5	22,132	38.6
	Female	672	40.4	925	41.5	35,087	61.4
Citizenship	Foreigners	92	5.5	115	5.1	1,548	2.7
	Italians	1,572	94.4	2,117	94.9	55,670	97.3
Age at Graduation	Under 23 years	170	10.2	309	13.8	15,382	26.9
	23-24 years	292	17.5	571	25.6	17,940	31.3
	25-26 years	326	19.5	538	24.1	12,341	21.6
	27 years and over	876	52.6	814	36.5	11,556	20.2
		Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Age at Graduation		30.7	8.8	27.2	5.2	25.5	4.4

2.3 ARE STUDENT ENTREPRENEURS STAYERS OR MOVERS?

Student's geographic and social mobility are two relevant issues for the quality and value of the university systems, in particular if we consider the socio-economic gap between the North and South of Italy.

Table 2 shows that, in the case of student entrepreneurs, 56% reside in the same province of their alma mater; about 23% reside in another province in the same region, whereas 19% are from another region. Only 1% of them reside abroad. In the group of nascent entrepreneurs, we observe a high percentage of students (almost 50%) who studied at universities not in their province of origin. This shows that student entrepreneurs are less willing or have fewer opportunities to leave their native territories compared to the group of nascent entrepreneurs. One explanation could be found in the family-business phenomenon. In Italy, as of the end of 2014, family business are estimated to be around 784,000, which corresponds to more than 85% of the total number of business, accounting for around 70% of employment (Associazione Italiana delle Aziende Familiari, AIDAF, 2015). In our sample, about 23% of student entrepreneurs indicated that their company is a "family business". Another explanation may be that some student entrepreneurs were already engaged in entrepreneurial activities before starting university and so they did not move far from their residence area. On the other hand, nascent entrepreneurs may be more prone to move from their residence because of opportunities or because they are attracted by relevant entrepreneurial ecosystems.

Table 2 - Social variables by students' groups

		Entrepreneurs (n=1,664)		Nascent Entrepreneurs (n=2,232)		Non-Entrepreneurs (n=57,219)	
Variable		**n**	**%**	**n**	**%**	**n**	**%**
Residence (in relation to the university where the student graduated)	Same province	938	56.3	1,159	51.9	29,316	51.2
	Other province-same region	392	23.6	544	24.4	15,025	26.3
	Other region	317	19.1	506	22.7	12,566	22.0
	Abroad	17	1.0	23	1.0	312	0.5
Household Educational Profile	Both parents have a university degree	210	12.6	238	10.7	6,098	10.7
	Only one parent has a university degree	253	15.2	423	19.0	9,752	17.0
	Secondary school certificate	682	41.0	1,054	47.2	27,729	48.5
	Lower educ. qualify-cation or no e. q.	415	24.9	434	19.4	11,860	20.7
	Not available	104	6.3	83	3.7	1,780	3.1
Social Class	Middle class	449	27.0	570	25.5	12,046	21.1
	Clerical middle class	315	18.9	566	25.4	15,786	27.6
	Lower middle class	477	28.7	531	23.8	11,747	20.5
	Working class	283	17.0	470	21.1	15,361	26.8
	Not available	140	8.4	95	4.2	2,279	4.0

The majority of student entrepreneurs (41%) have parents with a secondary school certificate; 25% have both parents with lower educational qualification or no educational qualification, and this percentage is higher compared to the other two groups. Only 13% of entrepreneurs have two

parents with university degrees. These results are not surprising. In Italy, in 2014, the percentage of adults (55-64 years old) who attained tertiary education was about 12%, which is one of the lowest percentages between European countries (OECD, 2015b). Moreover, a similar trend is observed among the proportion of 30-to-34 years olds with tertiary educational attainment: just over one third (34.6%) of the European population has tertiary education; in Italy, less than 22% of the population has completed tertiary education (Eurostat, 2013).

Finally, as for students' social background, entrepreneurs and nascent entrepreneurs, belong to both upper and lower social classes. Indeed, student entrepreneurs are equally distributed between upper (46%) and lower classes (46%). The group of nascent entrepreneurs follows a similar pattern, with a slightly higher percentage of nascent entrepreneurs belonging to the working class.

2.4 WHAT DID THE STUDENT ENTREPRENEURS STUDY?

Table 3 shows that 58% of student entrepreneurs have completed a Bachelor's degree, 28% a Master's degree, and 9% a single-cycle degree. Among nascent entrepreneurs, we observe a higher percentage of students who completed a Master's degree compared to the groups of entrepreneurs and non-entrepreneurs.

Table 3 - University variables by students' groups

		Entrepreneurs (n=1,664)		Nascent Entrepreneurs (n=2,232)		Non-Entrepreneurs (n=57,219)	
Variable		**n**	**%**	**n**	**%**	**n**	**%**
Degree Type	Bachelor's Degree	968	58.2	1,219	54.6	36,100	63.1
	Single-Cycle Degree	150	9.0	175	7.8	5,861	10.2
	Master's Degree	470	28.2	800	35.8	14,276	24.9
	Others	76	4.6	38	1.7	982	1.7
Field of Study	STEMM	706	42.4	957	42.9	28,995	50.7
	Social Science	804	48.3	1,074	48.1	23,159	40.5
	Others	154	9.3	201	9.0	5,065	8.8

Note: STEMM = Science, Technology, Engineering, Math, and Medicine; Social Sciences = Economics-Statistic, Education, Law, Linguistics, Political-Social Psychology; Others = Humanities and Physical Education.

The highest percentage of student entrepreneurs is in social science (48.3%) with a relevant percentage represented by students of economics and statistics (18.,0%) followed by those with a political-social degree (11.3%). Of nascent entrepreneurs, 22.0% have a degree in economics and statistics and 10.9% a political-social degree. Focusing on STEMM disciplines, we observe a

high percentage of entrepreneurs in the field of medicine (15.0%) followed by those in the field of engineering (11.0%) and architecture (5.2%). Among the nascent entrepreneurs, we find a higher percentage of engineers 13.6% followed by graduated students in medicine 10.8% (Table 4)[10].

Table 4 - Field of study by students' groups

		Entrepreneurs (n=1,664)		Nascent Entrepreneurs (n=2,232)		Non-Entrepreneurs (n=57,219)	
Variable		**n**	**%**	**n**	**%**	**n**	**%**
Field of Study	Agriculture and Veterinary	62	3.7	87	3.9	1,435	2.5
	Architecture	86	5.2	106	4.7	2,135	3.7
	Chemistry-Pharmaceutical	40	2.4	66	3.0	2,030	3.5
	Economics-Statistics	300	18.0	491	22.0	7,924	13.8
	Engineering	179	10.8	304	13.6	7,276	12.7
	Education	82	4.9	78	3.5	2,359	4.1
	Geology-Biology	42	2.5	85	3.8	3,000	5.2
	Law	123	7.4	108	4.8	2,855	5.0
	Linguistics	40	2.4	62	2.8	2,899	5.1
	Literature	114	6.9	149	6.7	3,862	6.7
	Medicine	255	15.3	241	10.8	11,276	19.7
	Physical Education	38	2.3	51	2.3	1,177	2.1
	Political-Social	189	11.4	243	10.9	4,701	8.2
	Psychology	70	4.2	92	4.1	2,421	4.2
	Scientific	42	2.5	68	3.1	1,843	3.2

2.5 WHERE ARE THE STUDENT ENTREPRENEURS LOCATED?

The highest percentage of student entrepreneurs comes from universities located in central (28.5%) and southern (26.6%) Italy (Table 5). For the group of nascent entrepreneurs, we found a relevant percentage of students hailing from the south of Italy (25.2%), but the percentage of students from the north becomes higher (14.4% vs. 12.6%), as opposed to that among the entrepreneurs. The non-entrepreneurs are equally distributed throughout the country, with a higher percentage in the northern region (42.0%). As previously mentioned, the figures related to the northwest (see Table 5) and, in particular, the region of Lombardy (see Figure 1 and Figure 2), are underestimated, because some universities in that region were not members of the

[10] To date, we have not collected data about the nature of the companies, and so we still do not have information about the companies created. The aim is to fill this gap by collecting further data by the Italian Companies' House to gather information for all companies with any legal status and within any sector of economic activity, with headquarters or local branches within the country. See Bolzani et al. (2014b) for a similar approach.

AlmaLaurea Consortium at the time of the survey. The same issue, but less severe, occurs in Tuscany (University of Pisa is not included) and Sicily (University of Palermo is not included).

These results may seem counterintuitive, but they have to be contextualized in the Italian landscape. As of the end of 2014, the registration rate of new ventures (calculated as the number of new ventures over the total ventures operating in the previous year) is 7.1% in the south of Italy; 6.8% in the center; and 6.3% in the north (Infocamere, 2014). This trend has been quite stable in recent years. However, looking at the data on innovative startups (i.e., companies that develop, produce, and trade innovative goods or services having a high technological value), the aforementioned trend is quite different. The highest percentage of innovative startups is recorded in the north of Italy and in some central regions (Infocamere, 2015). Along these lines, opportunity-based and necessity-based entrepreneurship (Davidsson, 2006) might be useful concepts to frame these trends. In particular, as for the former, an individual may become an entrepreneur by taking advantage of a business opportunity that has been identified; as for the latter, an individual engages in entrepreneurship because (s)he is driven by necessity (i.e., meaning that entrepreneurship is the best/only option to enter the job market). Necessity-based entrepreneurship may help to explain the high percentage of entrepreneurs who are located in the south of Italy, a context characterized by a severe unemployment rate among youth (more than 60%) (Istat, 2014). By contrast, opportunity-driven entrepreneurship may help explain the highest number of innovative start-ups appearing in the north of Italy, a context characterized by an innovation-driven economy and by well-developed entrepreneurial ecosystems.

Table 5 - Geographic distribution by students' groups

		Entrepreneurs (n=1,664)		Nascent Entrepreneurs (n=2,232)		Non-Entrepreneurs (n=57,219)	
Variable		**n**	**%**	**n**	**%**	**n**	**%**
Geographic Distribution of Universities	North-west	210	12.6	322	14.4	7,529	13.2
	North-east	350	21.0	548	24.6	16,570	29.0
	Central	475	28.5	545	24.4	14,602	25.5
	South	443	26.6	562	25.2	13,420	23.5
	Islands	186	11.2	255	11.4	5,098	8.9

Figure 1, 2 and 3 show the data distributed by regions normalized for the population of the region. The highest numbers of student entrepreneurs are located in Lazio (5.8 per 100,000 inhabitants) followed by Campania (3.9 per 100,000 inhabitants). Among nascent entrepreneurs, the highest number is located in Emilia Romagna (7.0 per 100,000 inhabitants) followed by Lazio (5.8 per 100,000 inhabitants).

Figure 1 - Student entrepreneurs

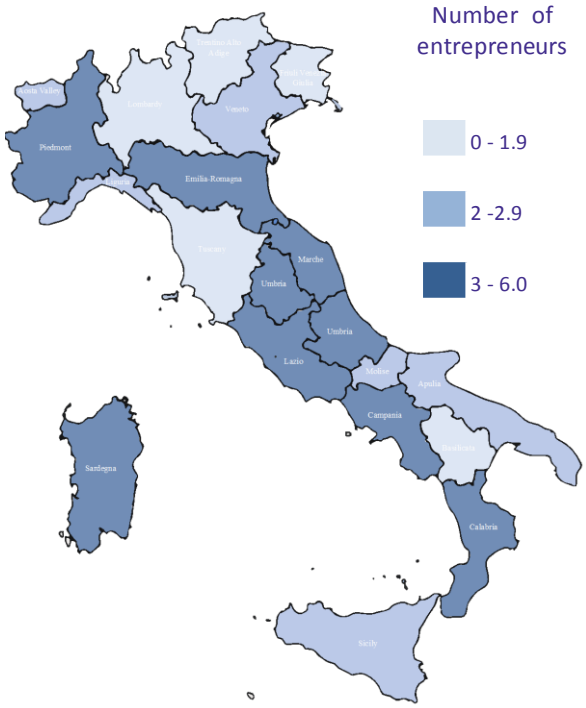


Figure 2 - Nascent entrepreneurs

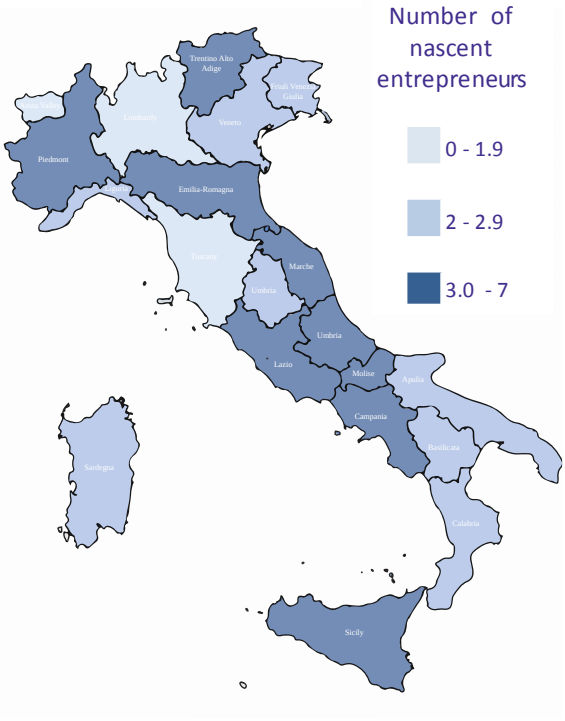


Figure 3 – Student non-entrepreneurs

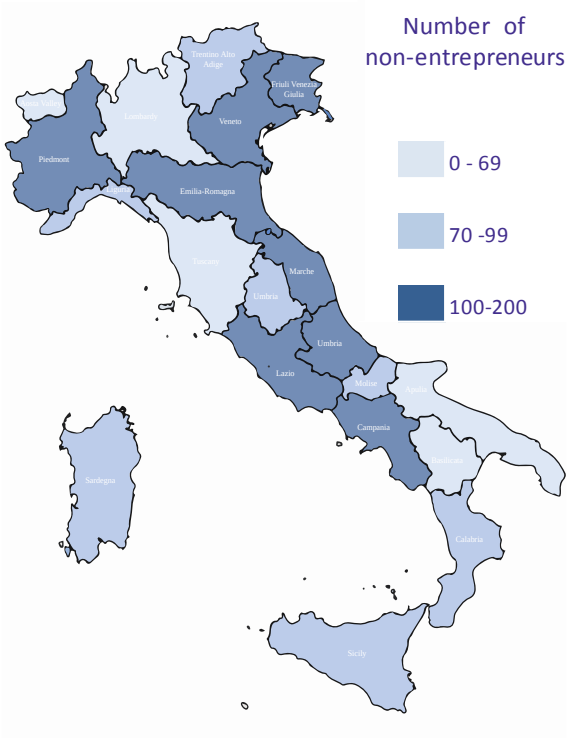
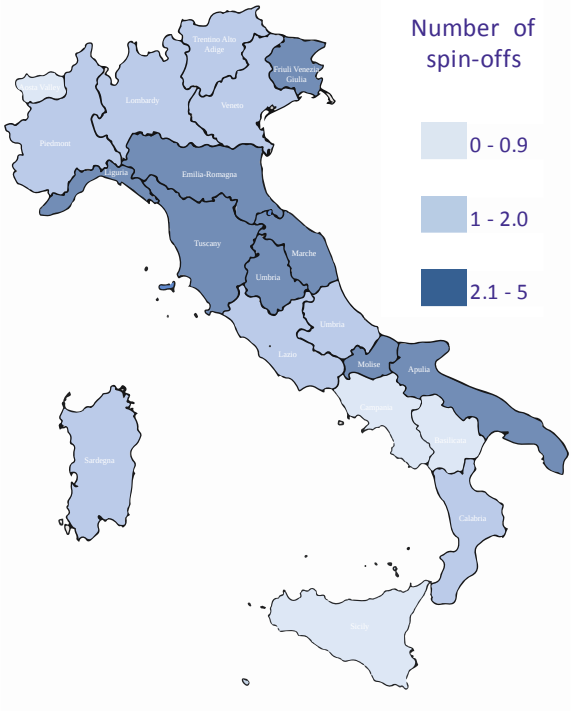


Figure 4 – Academic spin-offs



Note: Numbers normalized for the inhabithants of the region. Figures are expressed in 100,000 inhabitants.

In addition, we also compared student entrepreneurs and nascent entrepreneurs to academic entrepreneurs (see figure 4). Using data from the TASTE project (TAking STock: External engagement by academics; see Bolzani et al. (2014b) we computed the cumulative number of academic spin-offs by regions, established up through 2014, normalized for the inhabitants of the region. We observe that the highest relative number of academics spin-offs is located in the north-part of the country and in some central regions. Specifically, the highest relative number of spin-offs occurs in Friuli-Venezia Giulia (4.7 per 100,000 inhabitants), followed by Emilia Romagna (3.0 per 100,000 inhabitants) and Umbria (3.2 per 100,000 inhabitants). In the south, we observe the region of Apulia that accounts 2,1 spin-offs per 100,000 inhabitants. These data, consistent with the figures related to innovative companies, exhibit an opposite trend when compared to the occurrence of student and nascent entrepreneurship.

2.6 STUDENTS' PERFORMANCE AND ENTREPRENEURIAL BEHAVIOURS

Table 6 shows how students' performances vary across the three groups. In particular, the graduation grade is 100.6/110 for student entrepreneurs; it increases to 101.3 for student nascent entrepreneurs, and goes up to 103.2 for student non-entrepreneurs. These figures should be considered in the context of the average duration of the studies. Specifically, we observe that the delay in graduation is higher for student entrepreneurs if compared to others. Moreover, these results may be influenced by the type of degree and by the fields of study; in fact, the latest report of AlmaLaurea (2014) shows that the gradation mark is higher among students who completed a Master's degree and it changes remarkably among fields of study. As per our analysis, by wearing the double hat of students and entrepreneurs, individuals who engage in entrepreneurship are late in degree completion compared to non-entrepreneurs and their performance is less brilliant (possibly because of time and energy spent for their venture).

Table 6 - Performance by students' groups

	Entrepreneurs (n=1,664)		Nascent Entrepreneurs (n=2,232)		Non-Entrepreneurs (n=57,219)	
Variable	Mean	SD	Mean	SD	Mean	SD
GPA (Grade point average)	25.8	2.3	25.9	2.2	26.3	2.1
Degree Mark	100.8	9.4	101.3	9.3	103.2	8.6
Average duration of studies (years)	5.3	4.2	4.5	2.9	4.1	2.5
Delay in degree completion time (years)	2.0	3.8	1.4	2.5	0.9	1.9
University enrollment delay (years)[(1)]	1.4	0.5	1.3	0.5	1.2	0.4

[(1)] University enrollment delay is calculated considering the registration age of 19 years old (or younger age).

3 ENTREPRENEURS AND NASCENT ENTREPRENEURS: PERCEPTIONS, OBSTACLES, AND SUPPORT

This section investigates the extent to which the social and environmental context affected student entrepreneurs and nascent entrepreneurs in their decision to engage in entrepreneurship. First, we focus on the sources of stimuli and competences, analyzing the extent to which these have influenced the students' entrepreneurial attitudes and behaviors. Then, we focus on the main obstacles perceived by the entrepreneurs and the nascent entrepreneurs in the process of venture creation. Finally we investigate the perceived effectiveness of teaching entrepreneurship at universities.

3.1 STIMULI AND COMPETENCES

In the survey, we asked both student entrepreneurs and nascent entrepreneurs to what extent family, university classmates, university professors, friends, and courses organized by the alma mater or other institutions have affected their choice to become entrepreneurs. As reported in Figure 1, for both student entrepreneurs and nascent entrepreneurs, the role of family is key (76% and 77%, respectively). A sizable percentage of nascent entrepreneurs indicated as important the role of students from the same university program, students from other university programs and friends outside university. Very few individuals indicated as relevant the courses organized by secondary school, their university, or other institutions. Finally, some students indicated university professors as a stimulus in their choice to enter entrepreneurship.

As for entrepreneurial competences (Figure 6), we found that for a relevant proportion of student entrepreneurs and nascent entrepreneurs (46% and 54%), university professors had the highest impact for the acquisition and development of their competences. The role of family is still important, especially among student entrepreneurs (39%). For nascent entrepreneurs, the courses organized by university or other institutions are also relevant for the acquisition of entrepreneurial competences.

Figure 5 - Entrepreneurial stimuli

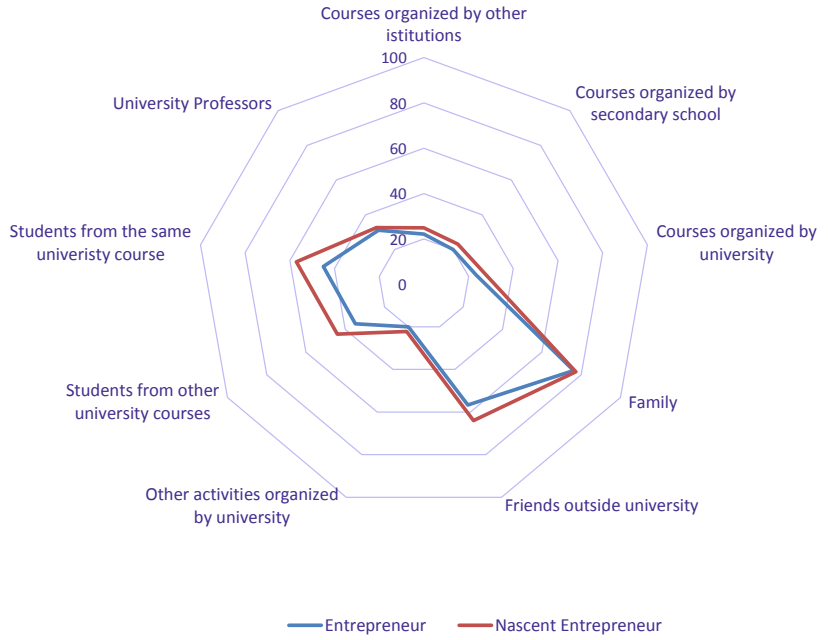
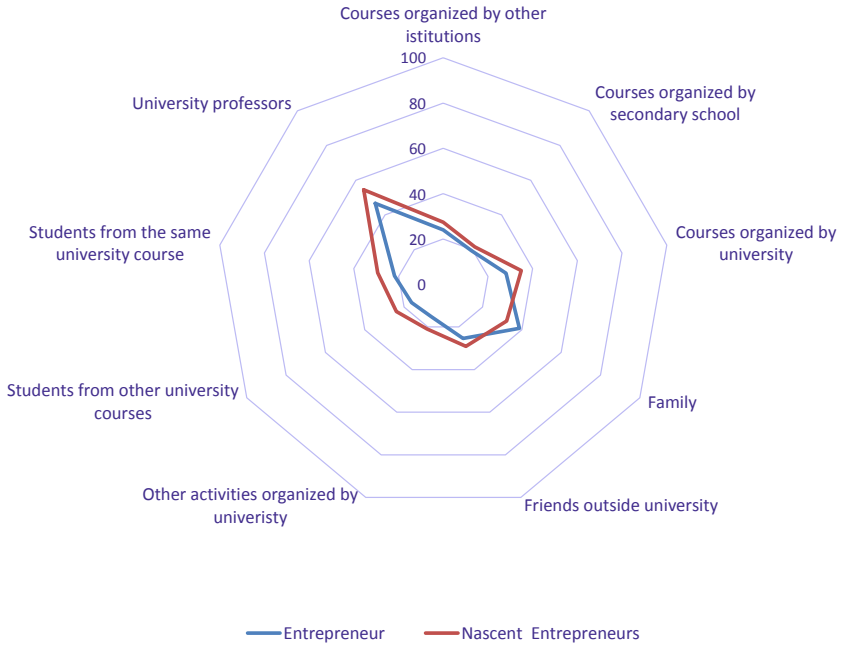


Figure 6 - Entrepreneurial competences



3.2 OBSTACLES AFFECTING NEW VENTURE CREATION

Throughout their journey, entrepreneurs may also face some challenges, especially during the new venture creation phase. In this regard, we asked entrepreneurs and nascent entrepreneurs to indicate the extent to which they have experienced some difficulties or obstacles -from a given list, ranging between 1 and 7- when seeking to found a new venture. Table 7 shows that the most relevant obstacles experienced by entrepreneurs and nascent entrepreneurs are related to high taxation as well as to administrative issues. Nascent entrepreneurs, as opposed to entrepreneurs, reported that the financing process and difficulty in finding partners were relevant obstacles in the process of venture creation. Finally, both entrepreneurs and nascent entrepreneurs experienced significant difficulties related to the lack of market information. Both groups did not experienced relevant obstacles related to the lack of technical and managerial skills. These results reflect the general national condition of new ventures. For instance, the results from the most recent survey of Unioncamere (2015) reported that the most relevant difficulties for new ventures are related to bureaucracy and funds.

Table 7 - Obstacles affecting new venture creation

	Entrepreneurs (n=1,664)		Nascent Entrepreneurs (n=2,232)	
Variable	Mean	SD	Mean	SD
Bureaucratic and administrative difficulties	5.3	1.9	5.5	1.6
Difficulties in finding financial support	4.9	1.9	5.5	1.7
Difficulties in finding partners	3.8	2.2	4.2	2.0
High tax and contributions	5.6	1.7	5.6	1.6
Lack of adequate managerial skills	3.8	1.8	3.9	1.8
Lack of adequate technical skills	3.6	1.8	3.8	1.8
Lack of market information	4.2	1.9	4.3	1.8

3.3 ENTREPRENEURIAL EDUCATION AND TRAINING

As for support for entrepreneurship, consistent with the Entrepreneurship Action Plan 2020 proposed guidelines, we asked students about entrepreneurship courses and business competitions. In particular, we asked if some courses focused on entrepreneurship were planned and to what extent these courses and competitions were important for the development of a new venture. Only 11.5% of student entrepreneurs and 17.2% of nascent entrepreneurs enrolled in an entrepreneurship course during their studies and both groups indicated the importance of this course for their venture development. Almost 80% of student entrepreneurs and nascent entrepreneurs indicated that there were no entrepreneurship courses offered by their universities. So we asked students to rate to what extent it would have been important for them to follow an entrepreneurship course on a 7-point Likert scale, ranging from “not important” to “very important.” On average, the group of nascent entrepreneurs attributed more importance

to the presence of an entrepreneurship course than the group of entrepreneurs (5.1% and 4.7%, respectively). Finally, we asked about participation in a business-plan competition: only 7% of student entrepreneurs and 9.6% of nascent entrepreneurs participated in a business-plan competition.

Table 8 - Entrepreneurship courses

	Entrepreneurs (n=1,664)		Nascent Entrepreneurs (n=2,232)	
	N	%	N	%
Yes, it was in my curricula and I have taken it	192	11.5	384	17.2
Yes, it was in my curricula but I haven't taken it	101	6.1	102	4.6
No, it was not in my curricula	1,318	79.2	1,706	76.4
Missing Values	53	3.2	40	1.8

4 ENTREPRENEURIAL TYPES

4.1 ACTIVE VS. NON-ACTIVE ENTREPRENEURS

New venture failure is one of the key features of the entrepreneurial ecosystem; according to Bloomberg (Wagner, 2013), 8 out of 10 entrepreneurs who start a business fail within the first 18 month in the US. In this section, we first highlight the main features of those individuals who were currently managing a venture at the time of the survey and those who were no longer active. Second, we explore the main reasons that ventures shut down their operations. Finally, we compare novice to serial entrepreneurs.

4.1.1 Who are the active entrepreneurs?

Table 9 shows that almost 60% of active entrepreneurs are male and 40% are female; we observe the same pattern for the group of non-active entrepreneurs. The average age of active entrepreneurs is 28 years old, whereas for the non-active entrepreneurs the average age is about 34.

Table 9 - Demographic variables

		Active Entrepreneurs (n=1,027)[1]		Non-Active Entrepreneurs (n=601)[1]	
Variable		**n**	**%**	**n**	**%**
Gender	Male	615	59.8	357	59.4
	Female	412	40.1	244	40.6
Citizenship	Foreigners	40	3.9	48	8.0
	Italians	987	96.1	553	92.9
Age at Graduation	Under 23 years	130	12.7	37	6.2
	23-24 years	229	22.3	56	9.3
	25-26 years	236	23.0	84	14.0
	27 years and over	432	42.0	424	70.5
		Mean	**SD**	**Mean**	**SD**
Age at Graduation		28.5	7.3	34.2	9.9

[1] Of the 1,664 entrepreneurs, 97% answered the question.

As far as geographic and social mobility, we found no differences among active and non-active entrepreneurs: the majority of them are located in the same province as the university and only

small percentages are located in another province within the same region. In relation to the social mobility, the highest percentages of active and non-active entrepreneurs belong to lower middle class and middle class.

The highest percentage of active and non-active entrepreneurs is located in central Italy and the lower percentage of inactive entrepreneurs is located in the north part of Italy. Finally, as far as university performance, we did not find any remarkable differences between the two groups: the active entrepreneurs completed their university programs in less time than non-active entrepreneurs.

4.1.2 What are the reasons for venture failure?

As mentioned before, new ventures fail and numerous are the reasons for failure. We identify seven main reasons (see table 10) that lead new ventures to fail, and we asked the non-active entrepreneurs why they thought their venture had failed.

Table 10 - Reasons of failure

	Yes		No	
Variable	**N**	**%**	**N**	**%**
Conflicts among shareholders	92	15.3	509	84.7
Identified different job opportunities	179	29.8	422	70.2
Inadequate initial business plan design	55	9.2	546	90.8
Problems related to financing	68	11.3	533	88.7
Problems among the working group	44	7.3	557	92.7
Revenues or profit are lower than expected	259	43.1	342	56.9
Unexpected market events	104	17.3	497	82.7
Other	73	12.1	528	87.9

About 43% of non-active entrepreneurs indicate that the main reason for failure was related to the issue of revenues/profit that were lower than expected and 30% indicated that they identified different job opportunities. Another common reason for failure is related to some market issues (17.3%) and to conflicts among shareholders (15.3%). Raising money for new ventures is a relevant problem and entrepreneurs experience numerous problems obtaining funds: 11.3% of student-entrepreneurs affirmed that this was one of the reasons for venture failure. Finally 9.2% of student entrepreneurs had difficulties in the process of business plan creation and 7.3% experienced problems among shareholders that caused venture failure.

4.2 NOVICE VS. SERIAL ENTREPRENEURS

There is a consensus among researchers and practitioners that entrepreneurs are a heterogeneous group that differs in motivations, interests, performance, and experience (Westhead et al., 2005). In particular, entrepreneurial experience has been analyzed because it affects the process of venture creation (Venkataramen and Shane, 2000). In order to explore how business experience affects the entrepreneurial process, researchers have made a distinction among entrepreneurs: "novice entrepreneurs" and "serial entrepreneurs." Novice entrepreneurs are individuals with no prior business-founding experience but who currently own a new venture. Serial entrepreneurs have prior experience in business ownership and currently own an independent business[11] (Westhead et al., 2005).

4.2.1 To what extent do novice and serial entrepreneurs differ?

In this study, we classified student entrepreneurs into two main groups—novice and serial—to show the differences and similarities between them. Novice entrepreneurs represent 84% of the sample and serial entrepreneurs 16%. The group of serial student entrepreneurs comprised 271 individuals: 69% created two ventures, 19% three ventures, 4% four ventures, and 7% more than five ventures. Serial student entrepreneurs have established an average of 2,5 ventures. As exhibited in Table 11, serial entrepreneurs are 5 years older than the novices. This may be explained by the fact that serial entrepreneurs have more business experience; they may have worked more and so they may have joined university later.

Table 11 - Demographic variables

		Novice Entrepreneurs (n=1,386)(1)		Serial Entrepreneurs (n=271)(1)	
Variable		**n**	**%**	**n**	**%**
Gender	Male	796	57.4	193	71.2
	Female	590	42.6	78	28.8
Citizenship	Foreigners	64	4.6	26	0.1
	Italians	1,322	95.4	245	0.9
Age at Graduation	Under 23 years	156	11.3	11	4.1
	23-24 years	259	18.7	31	11.4
	25-26 years	279	20.1	46	17.0
	27 years and over	692	49.9	183	67.5
		Mean	**SD**	**Mean**	**SD**
Age at Graduation		29.80	7.87	35.26	11.50

(1) Of the 1,664 entrepreneurs, 99% answered the question.

[11] There are also "portfolio entrepreneurs." Portfolio entrepreneurs are defined as individuals currently engaged in more than one independent business (Westhead et al., 2005).

Among novice entrepreneurs, 57.4% are male and 42.6% are female: as shown, the gender gap seems to be less evident among highly educated entrepreneurs related to the general trend of the country. Among serial entrepreneurs, however, the percentage of women decreases dramatically to 28.8%. As recently reported by Kauffman Foundations (2015) the entrepreneurial gender gap increases with age because women face additional pressures that results in lower rates of entrepreneurship. This may be one important explanation for the differences between these two groups. As far as geographic and social mobility, we found that serial entrepreneurs seem to be more willing to move far from their residence for university studies. Regarding social mobility, we can observe that there are not relevant differences between novice and serial entrepreneurs: the highest percentages of novice and serial entrepreneurs belong to lower middle class and middle class. Finally, as for university performance, we observed that novice entrepreneurs obtained better performances compared to serial entrepreneurs. Novice entrepreneurs completed their university program earlier and with better grades compared to the serial entrepreneurs (data are available upon request).

5 CONCLUSIONS AND RECOMMENDATIONS

In this report, by using evidence from survey data, we assess the entrepreneurial activities of the population of Italian university students who graduated in the second half of 2014. In doing so, we first categorize students into three main groups -entrepreneurs, nascent entrepreneurs and non-entrepreneurs- comparing them in terms of demographic, socio-environmental, and university characteristics. We then investigate the sources of stimuli and competences for enacting entrepreneurial behaviors, as well as provide information on the main obstacles faced and support received during the entrepreneurial journey. We conclude by shedding light on the differences between novice and serial entrepreneurs as well as active and non-active ones.

Overall, we can draw the following conclusions:

Gender. It is common knowledge that men engage in entrepreneurial activities more than do women. However, the entrepreneurial gender gap is less evident in our study. The percentage of women who started a venture is relatively higher if compared to the national figures: university-educated women are more willing to enter entrepreneurship, as opposed to the non-university-educated ones. *Strengthening individuals' human capital as well as empowering entrepreneurial mindsets should be seen therefore as proper tools to reduce the gender gap. Proper family support tools and programs should ensure that this initial equality in the opportunities and talents should not be eroded in later stages of the life of women entrepreneurs.*

Immigration. The percentage of immigrants who completed a university program is still very low in Italy. This figure, however, doubles for both entrepreneurs and nascent entrepreneurs. The trend is in line with the national as well as European ones; according to OECD (2015a), the percentage of businesses founded by immigrants is growing and, in recent years, immigrants have become more entrepreneurial than natives. *Entrepreneurship may therefore help to smooth the integration process for immigrants. It is thus key for policymakers and university administrators to design and implement initiatives to attract and encourage immigrants to engage in entrepreneurship.*

Social class. No major differences are recorded between upper and lower classes as well as in households' educational qualifications. These figures are consistent with national distributions and trends (OECD, 2015a). *Entrepreneurship therefore happens across all social classes, and it can be seen as a means to alter social class segregation.*

Scientific fields. Entrepreneurship does not happen only among students operating in STEMM disciplines. A sizable portion of students in social science and humanities engage in entrepreneurial activities as well. According to our data, about 42% of the entrepreneurs are in STEMM, about 48% in social science, and 10% in humanities. *University policies and mechanisms designed to foster technology-based entrepreneurship only may therefore fall short in tapping entrepreneurial talents from different fields.*

Geography. Almost 70% of student entrepreneurs are based at universities located in central/southern Italy or in the islands. Entrepreneurship may mitigate regional job-market inequalities, being perceived by some students as the only job option. However, it's also important to mention that the rate of science-based and innovative entrepreneurship is higher in the northern part of the country (Bolzani et al., 2014b) and the failure rate is higher in the southern region (data available upon request). *Long-lasting impactful entrepreneurship most likely occurs in scientific and innovative domains; it's therefore key to create the right entrepreneurial ecosystems to support student entrepreneurship.*

Stimuli and competences. Our results show once more the key role of family in inspiring entrepreneurial mindsets. On the hand, university professors turn out to be key in the development of students' entrepreneurial skills and competences. *The social context plays a significant role in inspiring the youngsters. More effort is needed to ensure that our society, university training, exposure, and culture contribute to the development of the right skills and competences to effectively engage in entrepreneurship.*

Entrepreneurial education and training. Only a small percentage of student entrepreneurs have attended an entrepreneurship course or have participated in a business competition; they have indicated the importance of these instruments. However, among those who had no chance to be exposed to these opportunities, about 80% would have liked to. Universities can play a crucial role in fostering graduates' entrepreneurship through entrepreneurial education and training. The latter should be designed and developed more systematically, in both curricula and extracurricular activities. In this regard, the propensity to be involved in a business venture as an occupational option, and the capacity to accomplish it, should be related not only to the development of the appropriate interdisciplinary skills (Lazear, 2005) but also to the improvement of those non-cognitive traits and attitudes, i.e. soft skills, that can be cultivated through entrepreneurial education. *The benefits of entrepreneurial education are not confined to its contribution to the creation of new ventures by graduates; they also derive from the cultivation of an entrepreneurial spirit that can foster university graduates' employability and their contribution to intrapreneurship* (Unioncamere 2014).

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APPENDIX

Universities involved in the survey

#	University	#	University
1	Bari	33	Padova
2	Bari Politecnico	34	Parma
3	Basilicata	35	Perugia
4	Bologna	36	Perugia Stranieri
5	Bolzano	37	Piemonte Orientale
6	Cagliari	38	Reggio Calabria Mediterranea
7	Calabria	39	Roma Campus Bio-Medico
8	Camerino	40	Roma Foro Italico
9	Cassino e Lazio Meridionale	41	Roma La Sapienza
10	Catania	42	Roma LUMSA
11	Catanzaro	43	Roma Tor Vergata
12	Chieti e Pescara	44	Roma Tre
13	Enna Kore	45	Roma UNINT
14	Ferrara	46	Salento
15	Firenze	47	Salerno
16	Foggia	48	Sannio
17	Genova	49	Sassari
18	Insubria	50	Scienze Gastronomiche Bra
19	L'Aquila	51	Siena
20	LIUC Castellanza	52	Siena Stranieri
21	LUM Casamassima	53	Teramo
22	Macerata	54	Torino
23	Marche Politecnica	55	Torino Politecnico
24	Messina	56	Trento
25	Milano IULM	57	Trieste
26	Milano Vita-Salute S. Raffaele	58	Tuscia
27	Modena e Reggio Emilia	59	Udine
28	Molise	60	Urbino
29	Napoli Federico II	61	Valle d'Aosta
30	Napoli L'Orientale	62	Venezia Ca' Foscari
31	Napoli Parthenope	63	Venezia IUAV
32	Napoli Seconda Università	64	Verona