UNIVERSITY STUDENTS AND ENTREPRENEURSHIP: AN EMPIRICAL ANALYSIS ON ITALIAN UNIVERSITIES

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ABSTRACT

This paper investigates the level and the determinant factors of interest to entrepreneurship among university undergraduate students in Italy. The aim of the research is to measure how the attitudes are relevant in the decision-making process that leads the student to approach entrepreneurship and to understand if institutions can support this process. The research is based on a survey carried out under the GUESSS Project in 2016 on 4,446 students from 39 Italian universities.

Keywords: Entrepreneurship, University Students, Attitudes, GUESSS, Statistical Regression, Entrepreneurial Interest.

INTRODUCTION

Entrepreneurship can be broadly defined as the identification and organized exploitation of novel opportunities for value creation and capture, where the intended value outcomes may be commercial, social, institutional, or cultural in nature.

Following the economy crisis that struck the whole globe, the institutions have placed greater interest in entrepreneurship, looking at it as a possible form of economic revival. In this sense, university students and their potential future as entrepreneurs constitute an important area to be covered.

Although there is an increased appreciation for and acknowledgment of the role played by new and small businesses in the economy (Kelley et al., 2010) and entrepreneurship academic education has begun to command the attention of policy-makers and researchers, there remain many unanswered questions about how individual and social factors shape the decisions of academics to engage in entrepreneurial activities.

Entrepreneurial competencies are defined as higher-level, improvable characteristics entailing personality traits, skills, and knowledge that bring about the ability to accomplish something through the use of resources (Rasmussen et al., 2011). Understanding the dynamics shaping the development of entrepreneurial competencies raises theoretically interesting questions as to how entrepreneurs gain competencies and about the extent to which entrepreneurial competencies are the result of individual or contextual factors (Rasmussen et al., 2014; Rasmussen et al., 2015). Many studies focused their research on the influence that education could have on the aspects and aspirations of young people, while few empirical studies have examined the entrepreneurial propensity of university students as a source of future entrepreneurs (Wang & Wong, 2004).

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The GUESSS project-Global University Entrepreneurial Spirit Students' Survey (available at www.guesssurvey.org) is an international research project that investigates the *"entrepreneurial spirit"* of university students. The Project was previously tagged with ISCE (International Survey on Collegiate Entrepreneurship) and it started in 2003 at the University of St. Gallen (Switzerland). The survey is conducted every two years and it is based on an online questionnaire. The survey reaches a sample of over 200,000 students of 50 different nationalities, thanks to the more than 1,000 universities participating in the project.

This article is based on the analysis of data collected and processed in the 7th edition, conduct in 2016. Attention was focused on a sample of 4,446 students belonging to the 39 participating Italian universities.

Primary objective of this research is to identify the key factor affecting the university students' entrepreneurial interest, in order to understand how much their attitude and knowledge of entrepreneurship are likely to shape their inclination to start their own businesses in the future. Paper is organised as follows: section 2 describes the literature review, section 3 introduces hypotheses and research questions, in section 4 research methodology is analyzed.

In section 5, the individual factors that influence the entrepreneurial interest of students enrolled at Italian universities were analyzed.

In section 6, the context factors have been reduced to a single variable, in order to observe the student's behaviour within the environment with which he relates. Thus, two levels of interest were built, the aptitude level and the context level, so as to identify the most predictive level for the entrepreneurial interest of Italian academics.

LITERATURE REVIEW

Student entrepreneurial interest has often been the subject of academic research. Previous research has focused on the career aspirations of university students, in order to understand their level of entrepreneurial interest and identify the factors that positively influence or inhibit it. Literature analysis is divided into different themes: university context, family business experience, socio-economic context, personal skills and gender.

University Context

Academic research has shown that entrepreneurship education increases entrepreneurial intention (Maresch et al., 2016). Based on a large sample survey conducted on university students in Singapore, Wang & Wong (2004) show that entrepreneurship educated students gain more confidence in self-employment. An empirical research conducted on Egyptian university students, focusing on the comparison between intentions of students before and after being exposed to a dedicated course in entrepreneurship, reveals education has significant positive entrepreneurial outcomes (Hattab, 2014). This finding confirms Solomon et al.'s (2008) conclusion that entrepreneurship education is related to becoming an entrepreneur.

In a study conducted in Tunisian universities (Premand et al., 2016) students had the opportunity to participate in an entrepreneurial training course; they had the option to graduate with a business plan instead of a traditional thesis. Participation in an entrepreneurship track led to a small increase in self-employment one year after graduation.

Various authors, such as Barringer et al. (2005), Fayolle et al. (2006), Mueller (2011), Packham et al. (2010), corroborate the positive contribution that entrepreneurship education can have on its participants in terms of skills, know-how and better entrepreneurial attitude.

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Whereas, Gümüsay & Bohné (2018) analyzed inhibitors for the development of entrepreneurial skills on a sample of British university students, among these is the difficulty of accessing and learning certain skills such as negotiation, marketing, management, communication and presentation skills, as well as acquiring the ability to identify and refine entrepreneurial opportunities.

Hattab (2014) proves that business studies students are more inclined towards starting their own businesses compared to computer science students, as their courses are more focused on technical aspects.

Contrary to previous research, Maresch et al. (2016) affirm that the level of entrepreneurial interest for science and engineering students is significantly higher than for business students. In the same study, they demonstrate empirically that education is effective for both groups.

More and more universities have implemented measures to improve their entrepreneurial climate with the aim of fostering the entrepreneurial propensity of students and researchers (Rasmussen & Borch, 2010). Universities can encourage academics and students to look beyond classrooms and laboratories, offering courses in entrepreneurship (Boh et al., 2016). There is growing evidence that the social and organizational context at universities has a substantial impact on the entrepreneurial attitudes and activities of academics and students (Walter et al., 2013).

Family Business Experience

Scott & Twomey (1998) showed that students whose parents owned a business demonstrated higher preference for an entrepreneurial career than a simple employee position. In the Netherlands, De Wit & Winden (1989) found that self-employed fathers had a significant impact on self-employment of children. Brown (1990) observed the same phenomenon in the UK when conducting a training program to assist students in starting their own business.

Entrepreneurial parents can act as a vivid source of entrepreneurship knowledge and socialization for their children (Laspita et al., 2012). By observing and interacting with their self-employed parents, children benefit from the intergenerational transfer of business knowledge, and also understanding opportunities and challenges of an entrepreneurial career (Eesley & Wang, 2017).

Socio-Economic Context

Academic entrepreneurship is affected by a region's knowledge and resources infrastructure (Stam, 2007), including the availability of business schools (Wright et al., 2009), venture capital (Di Gregorio & Shane, 2003), science parks (Caldera & Debande, 2010) and local industry composition (Baldini, 2010). Social networks, in particular, are viewed as critical to entrepreneurial performance (Mosey & Wright, 2007).

Gender

Many studies have observed that male students have stronger entrepreneurship aspirations than females (Wang & Wong, 2004; Bergmann et al., 2018). European women are only half as likely to engage in entrepreneurial activities as men (Herrington & Kew, 2017). There is clear empirical evidence that entrepreneurship is a career choice that is male-dominated

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(Ahl, 2006). Matthews & Moser (1996) affirm that female university students are less interested in entrepreneurship, not because of their risk-averse attitude but due to the lack of entrepreneurial knowledge as well as the possible influence of the traditional social role.

Personal Skills

Schumpeter (1934) was one of the first to suggest that entrepreneurs are not merely risk bearers, but ones who have special skills. The individual perspective portrays the development of entrepreneurial competencies as the result of individual ability and effort, which in turn are linked to venture formation and performance (Chandler & Lyon, 2009). Hayter (2016) argues that it is the individual ability to utilize information and resources provided by a network that contributes to entrepreneurial success. Fiet (2001) stats that entrepreneurial skills distinguish a successful entrepreneur from his competitors.

A study conducted by Clarysse et al. (2011) on the impact of entrepreneurial capacity, experience and organizational support on academic entrepreneurship, shows that individual level attributes and experience are the most important predictors of academic entrepreneurship. Scholars consider individual differences to be the critical factor explaining who becomes an entrepreneur (Shane & Venkataraman, 2000). Entrepreneurial capacity, which we define as the skill which individuals have to spot, recognize and absorb opportunities, has been put forward in the entrepreneurship literature as a necessary individual characteristic to become an entrepreneur (Nicolaou et al., 2008, Shane & Venkataraman, 2000).

Hypotheses and Research Questions

Literature analysis suggests that entrepreneurial student interest depends on both external and individual factors. External factors are the institutions, such as university context, family business experience and socio-economic context. These scenarios can be favourable to the development of the knowledge required to start a business and to introduce the student to the entrepreneurship world. Literature shows a clear connection between the student's willingness to undertake a business and the possibility of accessing the knowledge necessary to do this.

Internal factors are the student entrepreneurial attitudes. The desire to start a business must be motivated by a personal passion, which can derive from past experiences and personal abilities.

All the factors previously analyzed influence the decision-making process of the student, but the purpose of this is to identify the factor that most affects the student's interest in entrepreneurship. Therefore, the first research question is the following:

RQ1: What is the most predictive factor for the entrepreneurial interest of university students?

Literature review current through suggests that the decision to create a business involves two levels (Barba-Sánchez & Atienza-Sahuquillo, 2017): the contextual level and the aptitude level. The first level revolves around the objective reasons for this conduct, which are to be found in the environmental, family conditions which reinforce or hinder this behaviour (Ajzen, 1991; Bandura, 1977). The second level refers to subjective reasons arising from decision-maker expectations, i.e. motivations and personal abilities.

So, there is the need to measure the different influences, in order to understand if the students who do not have entrepreneurial attitudes but who have a good entrepreneurial

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education, can become entrepreneurs, and vice versa. In this sense, we want to understand which of the two factors has the greatest influence, therefore the following research question was formulated:

RQ2: What is the most predictive level, between the aptitude and the context level, for the entrepreneurial interest of university students?

This research question derives from the existence of different lines of thought that lead to conflicting results about the characteristics necessary to undertake an entrepreneurial career and the effect that entrepreneurial education can have on students. Entrepreneurship differs from other careers, because it is difficult to identify and develop the knowledge needed to start a business.

Even though many empirical studies have indicated that entrepreneurship can be taught or at least encouraged by entrepreneurship/business education (Wang & Verzat, 2011), a part of the literature emphasizes that the latter is not sufficient to transform a student to an entrepreneur. Askun & Yildirim (2011) showed that entrepreneurship courses in public universities are not sufficient to provide skills or mindsets that are required for creating entrepreneurs that can contribute to economic growth and employment for students. Even if the entrepreneurial climate in which the student lives influences his interests and his mentality, psychological climate perceptions can differ between individuals who are more or less attentive to certain organizational characteristics or who process perceived environmental stimuli differently (James et al., 1978). So, academic may react in several ways to the same entrepreneurial stimulus arising from institutions (Bergmann et al., 2018).

Even if an entrepreneur can transfer his tacit knowledge to the student (Kram, 1985), teaching how to evaluate business opportunities, how focus on external investments or how form valid teams in the initial phase, the real problem that hinders entrepreneurship education is the non-existence of a general theory that can teach students how to become entrepreneurs. Theory is fundamental since there is no other way to help students anticipate the future, which is the only key to entrepreneurial success in the instant when reference is not made to intuition or luck. Assuming the existence of a valid theory that includes the study of entrepreneurs, whether successful or bankrupt, the first to learn the technique and the second to get around obstacles, this too would lead to medium-term entrepreneurial profiles in the long run. Consequently, to stand out from the media and get better profits, you need to be the first to discover new economic opportunities. Therefore, entrepreneurial success is typically an individual achievement (Fiet, 2001).

METHODOLOGY

Method

Starting from the two main levels of influence (Attitude and Context), it is possible to build a diagram about the possible situations in which the student may be (Figure 1).

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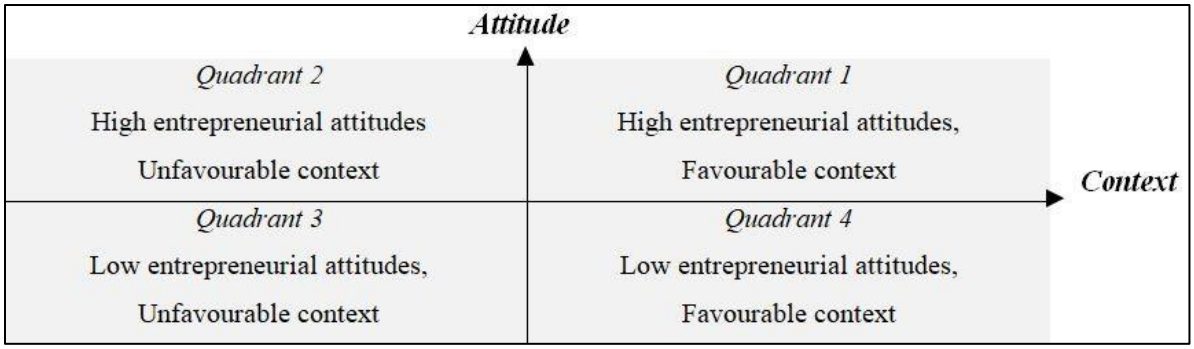

FIGURE 1
CARTESIAN DIAGRAM FOR METHODOLOGY

Quadrants Q1 and Q2 represent the situation in which the student possesses the aptitude skills, unlike the quadrants Q3 and Q4. In the same way, the quadrants Q1 and Q4 represent the situation in which student has the opportunity to assimilate entrepreneurial skills from the environment; on the contrary for Q2 and Q3. Consequently, the quadrant Q3 represents the worst situation, since there are no grounds for starting a business. Instead, the first quadrant represents the best situation, since it offers the optimal conditions for the development of a business. To achieve the research objective, it is necessary to dwell on the situations represented by the quadrants Q2 and Q4.

In order to assign a correct meaning to the data collected, a multiple linear regression analysis was performed. In the first phase of the study the single influencing factors constitute the independent variables. Through the regression study, the cause-effect relationship between each individual factor and dependent variable, represented by the student's entrepreneurial interest, is identified. Then, the two independent variables are represented by the two levels of interest, the aptitude level and the context level. Through the regression study, this time, the level that has the greatest influence on the dependent variable is identified.

The SPSS (Statistical Package for Social Science) statistical software was used to perform the data analysis.

Data

Data used in the analysis are taken from the results of the GUESSS survey (Global University Entrepreneurial Spirit Students' Survey). GUESSS is an international research project that investigates and compares the intentions and entrepreneurial activities of students of 50 different nationalities. Every two years, an online questionnaire is proposed to 120,000 students from over 1,000 universities around the world, with the aim of gathering information about the factors that influence students' entrepreneurial interest.

This article is based on the analysis of data collected and processed in the 7th edition, conduct in 2016. Attention was focused on a sample of 4,446 students belonging to the 39 participating Italian universities.

The Italian sample represents 3.6% of the total sample population; 41.5% of the population considered is male, while 58.5% is female.

Variables

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In order to carry out a correct analysis, the following variables have identified (Table 1 and Table 2):

Table 1 **DEPENDENT VARIABLE**		
Description and measurement		**Data Source**
Y: Entrepreneurial interest	Ordinal variable, taking value 1 to 7 based on the student's entrepreneurial interest	Report GUESSS (2016)

Table 2 **INDEPENDENT VARIABLES**		
Description and measurement		**Data Source**
Variables on the context level:		
X_1: University context	Ordinal variable, taking value 1 to 7 based on the level of university influence	Report GUESSS (2016)
X_2: Family context	Ordinal variable taking value 1 to 7 based on the level of family influence	Report GUESSS (2016)
X_3: Socio-economic context	Ordinal variable taking value 1 to 7 based on the level of socio-economic context influence	Report GUESSS (2016)
Variables on the aptitude level:		
X_4: Attitudes	Ordinal variable, taking value 1 to 7 based on the entrepreneurial attitudes level	Report GUESSS (2016)
X_5: Gender	Binary variable, taking value 0 if the respondent is female, 1 if male.	Report GUESSS (2016)

In order to assign a value to the variables, a study was carried out. Starting from the questionnaire submitted to the students, the groups of questions referring to the categories of interest were identified.

For each student a score is calculated for each variable, able to express how much it influences the entrepreneurial choices of the student. In particular, each question in the questionnaire is assigned a weight, previously calculated using the AHP method. The final score is obtained from the product between the weight and the student's response. The answers of each student are reconstructed so that the highest value (7) corresponds to a major interest or influence, and that the lowest value (1) corresponds to a minor interest or influence. Thus proceeding, a higher score corresponds to a greater entrepreneurial interest, or a greater influence of the variable.

The research is carried out in two phases.

In the first phase, the individual factors that influence the entrepreneurial interest of students enrolled at Italian universities were analyzed.

In second part, the context factors have been reduced to a single variable, in order to observe the student's behaviour within the environment with which he relates. Thus, two levels of interest were built, the aptitude level and the context level, so as to identify the most predictive level for the entrepreneurial interest of Italian academics.

EMPIRICAL RESULTS: FIRST STEP

Descriptive Statistics and Correlations

The descriptive statistics and the correlation study are shown below (Table 3).

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We can see that the highest average score is relative to the variable that represents the attitudes (Table 3).

Table 3
SUMMARY STATISTICS AND CORRELATIONS OF ALL VARIABLES

	Mean	SD	Pearson correlation					
			(1)	(2)	(3)	(4)	(5)	(6)
(1) Y: Entrepreneurial interest	2.96	1.29	1.00					
(2) X_1: University context	3.77	1.38	0.28	1.00				
(3) X_2: Family contest	2.49	2.04	0.15	0.06	1.00			
(4) X_3: Socio-Economic context	3.77	1.03	-0.14	-0.20	-0.02	1.00		
(5) X_4: Attitudes	4.05	1.51	0.57	0.31	0.02	-0.16	1.00	
(6) X_5: Gender	0.44	0.5	0.21	0.12	0.62	-0.46	0.92	1.00

Focusing attention on the first row of the table, we can see that the highest correlation index is assigned to the relationship between the Y variable and the X_4 variable, highlighting a positive and moderate correlation between the attitudinal skills of students and their entrepreneurial interest. We can see a weak positive correlation between the variables X_1, X_2, X_5 and the dependent variable Y. From this analysis it follows that by acting on the dependent variables, it is possible to increase the level of entrepreneurial interest of the students. Between the variable that indicates the socio-economic context and the dependent variable, a single very weak negative correlation is highlighted. This result indicates that the two variables are inversely correlated, therefore a socio-economic context dedicated to industry and entrepreneurship negatively affects the student's entrepreneurial interest, or vice versa.

Multiple Linear Regression Analysis

The regression study allows us to understand which are the independent variables that exert the greatest influence on the dependent variable (Table 4). In this way, it is possible to identify which independent variable must be requested to increase the degree of student entrepreneurial interest.

Table 4
ANOVA[a] Test

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2789.333	5	557.867	532.595	0.000[b]
	Residual	4640.2	4430	1.047		
	Total	7429.533	4435			

a: Dependent Variable: Entrepreneurial interest

b: Predictor: (Constant), University context, Family context, Socio-Economic context, Attitudes, Gender

The statistical significance of the model is evaluated through the F test. The value of the statistical test F (532.595) for the overall regression relation for all the independent variables is less than 0.001, therefore lower than the significance level.

After the results obtained by the test, we reject the null hypothesis and support the research hypothesis that there is a statistically significant relationship between the set of independent variables and the entrepreneurial interest of the students. The socio-economic

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context, the family context, the university context, the gender and attitudinal skills of students constitute a factor of influence on the entrepreneurial choices of students.

Table 5
RESULT OF MULTIPLE REGRESSION ON ENTREPRENEURIAL INTEREST

Coefficients[a]									
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**		**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Lower Bound**	**Upper Bound**	**Tollerance**	**VIF**
(Cost.)	0.631	0.089		7.081	0.000	0.456	0.805		
X_1	0.075	0.012	0.079	6.237	0.000	0.051	0.098	0.87	1.15
X_2	0.08	0.008	0.126	10.54	0.000	0.065	0.095	0.993	1.007
X_3	-0.037	0.015	-0.029	-2.407	0.016	-0.067	-0.007	0.952	1.051
X_4	0.452	0.011	0.528	41.89	0.000	0.431	0.473	0.889	1.125
X_5	0.36	0.031	0.138	11.51	0.000	0.298	0.421	0.979	1.021
a: Dependent variable: Entrepreneurial interest									

To assess the statistical significance of a predictor within a model, the student's t test is used. Looking at the value of t for the five independent variables, then at significance, we can reject the null hypothesis for X_1, X_2, X_4 and X_5: there is a statistically significant relationship between aptitude skills, the family context, the university context, the gender and students' interest in entrepreneurship. Similarly, we accept the null hypothesis for the variable X_3, and we affirm that the statistical relations between the independent variable and Y are random; we cannot say that there is a cause-effect relationship between the socio-economic context and the student entrepreneurship rate.

The confidence intervals suggest that the study can enjoy a good prediction for each factor. Furthermore, each independent variable has a high tolerance index value, so it is poorly correlated with the other independent variables, and ensures a good explanation of the entrepreneurial interest.

The coefficient B associated with the influence of the family context X_2 is positive: there is a direct relationship in which the highest number values for family influence (X_2) are associated with higher values for entrepreneurial interest. After all, both variables are ordinal and it is necessary to examine the encoding for each of them before being able to correctly interpret the relationship. Variable X_2 is coded so that the highest numerical values are associated with the respondents most influenced by the family context. Therefore, the positive value of B implies that respondents who do not have entrepreneurial parents demonstrate a lower entrepreneurial interest. A similar reasoning can be applied to the variable X_1 and to the variable X_4. Therefore, students who do not attend a university that stimulates entrepreneurship will have a minor entrepreneurial interest; in the same way, students who do not enjoy the behavioral aptitudes useful for undertaking an entrepreneurial career will have a lower interest and propensity to start their own business. Variable X_5 is dichotomous and to it corresponds a positive coefficient B (Table 5), so to the highest value of X_5, that is *"1"* (Table 2), we will associate a high entrepreneurship interest. Since value *"1"* is associated with the male gender, we can say that male university students have a higher entrepreneurial interest than female students.

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From the comparison of the Beta coefficients, it emerges that the most predictive factor for the student's entrepreneurial interest is attitudinal behavior, followed by gender, then the family and university context.

This represents an important first result, which offers the possibility of answering the research question RQ1: by relating all the factors of influence examined, there is a clear predominance of the factor that represents attitudinal behavior.

EMPIRICAL RESULTS: SECOND STEP

While the regression study of the single factors of influence is very useful to examine how they act on the student's choices, the study on the two levels of influence is useful to understand if the totality of the institutions can condition the interests of the students or if the attitudes will have anyway a predominant role.

The RQ2 research question expresses the desire to identify which level has the greatest influence on the student's entrepreneurial interest. The two levels compared, the aptitude and the context, are the result of the union of the previously analyzed variables. In particular, by context level we mean the influence given by the family context, the socio-economic context and the university context; while for the aptitude level, we mean the factors that influence the attitudes of the students, therefore the student's skills. Thus, we have the composition of two additional dummy variables, CL and AL, indicating the context level and the aptitude level, respectively.

An exception was made for gender. It would be superficial to frame the gender only in one of the two levels because, although it is a purely innate element in every individual (attitudinal level), it is possible to see in real cases that the two sexes are not always granted the same opportunities for professional growth (level of context).

An analysis similar to the previous one was conducted.

Summary Statistics and Correlations

The average score relative to the aptitude level is 4.05, so greater than the average score pertaining to the relationship level, equal to 3.34 (Table 6).

Table 6
SUMMARY STATISTICS AND CORRELATIONS OF ALL VARIABLES

	Mean	SD	Pearson correlation			
			(1)	(2)	(3)	(4)
(1) Y	2.96	1.29	1.00	0.57	0.21	0.21
(2) AL	4.05	1.51		1.00	0.12	0.09
(3) CL	3.34	0.87			1.00	0.09
(4) X_5: Gender	0.44	0.5				1.00

The study of correlations (Table 6), using the Pearson coefficient, shows that the variables AL and CL are positively correlated with the variable Y. The AL variable is moderately linked to the dependent variable, while the CL variable is weakly linked to it. Gender is also weakly and positively linked to the variable that represents entrepreneurial interest. The increase in the entrepreneurial interest corresponds to an increase in the scores relative to the two levels, or vice versa.

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Multiple Linear Regression Analysis

The regression analysis allows the identification of the cause-effect relationship between the entrepreneurial interest and the two levels AL and CL (Table 7).

Table 7
ANOVA[a] Test

Model		Sum of Squares	Df	Mean Square	F	Sig.
2	Regression	2734.564	3	911.521	860.466	0.000[b]
	Residual	4694.969	4432	1.059		
	Total	7429.533	4435			
a: Dependent Variable: Entrepreneurial interest						
b: Predictor: (Constant), Gender, AL, CL						

The value of the statistical test F (860.466) for the regression relation is less than 0.001, so lower than the significance level (equal to 0.05). The null hypothesis is rejected. The set of three variables affects the student's entrepreneurial interest significantly. Even at this stage, the coefficients were analyzed (Table 8), in order to identify the form of the relationship between the individual independent variables and the dependent variable.

Table 8
RESULT OF MULTIPLE REGRESSION ON ENTREPRENEURIAL INTEREST

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tollerance	VIF
(Cost.)	0.265	0.070		3.757	0.000	0.127	0.403		
AL	0.466	0.010	0.544	45.05	0.000	0.446	0.486	0.979	1.022
CL	0.193	0.018	0.130	10.79	0.000	0.158	0.228	0.979	1.022
Gender	0.373	0.031	0.143	11.89	0.000	0.311	0.434	0.985	1.016
a: Dependent variable: Entrepreneurial interest									

Performing the student's t test and looking at significance, the null hypothesis for all variables is rejected. So, there is a statistically significant relationship between the two levels of influence and the interest of students.

The confidence intervals suggest a good accuracy of the predicted scores. The collinearity statistics, in particular the tolerance indexes, have very high values that attest to a greater explanation of the dependent variable and a lesser sharing of the variance with the other independent variables.

The study of the coefficients attests a direct relationship between the independent variables AL and CL and the dependent variable Y, since the coefficient B turns out to be positive. The variable CL is ordinal and it is necessary to examine its meaning before interpreting the relation. The variable was coded so that the high values correspond to a greater influence. Consequently, the academics interviewed with a lower context level demonstrate a lower entrepreneurial interest. Similar reasoning can be applied to the AL variable: students who do not have entrepreneurial attitudes will have less entrepreneurial interest.

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Comparing the values of the standardized coefficients it is possible to answer the question: *"Is the entrepreneurial interest predicted more from the aptitude level or from the context level?"* The Beta value referring to AL is greater than the Beta value referred to CL, so it is possible to state that the aptitude level has a greater influence on the student than the context level.

DISCUSSION

The results suggest the existence of a strong connection between what causes students to pursue an entrepreneurial career and personal attitude of the student. The aptitude level has a greater influence on the decision-making process that brings a university student closer to the world of entrepreneurship, compared to the context level. The decision of academics to become entrepreneurs of a ventures has primarily been attributed to individual attributes (Clarysse et al., 2011). This result is also reflected in the studies conducted by Nicolaou et al. (2008) and Shane and Venkataraman (2000), who state that the ability to identify market opportunities and exploit their benefits is a necessary feature to become an entrepreneur. Hisrich et al. (2005) define entrepreneurship as *"the process of creating new value by developing the necessary time and effort, assuming the accompanying financial, psychological and social skills, and receiving the results rewards of monetary and personal satisfaction, and independence".* Looking at this definition, it is clear that the entrepreneur has several important peculiarities, such as high creativity and risk tolerance, already present in the genetic code. This view is supported by research by Nicolaou et al. (2008) who find that the decision to become an entrepreneur is, first and foremost, influenced by genetic differences and professional experience, followed by social and environmental factors. So, although institutions do not promote entrepreneurial growth, a student who has the necessary aptitude skills will be prepared to pursue an entrepreneurial career.

This important result does not want to discourage universities that are committed to educating their academics to entrepreneurship. It is trivial to point out that institutions play a key role when the student has the right skills. Where families and universities educate for entrepreneurship, students feel more confident in starting their own business. Entrepreneurship can certainly be encouraged by training programs and socialization in managerial networking (Wang & Verzat, 2011). In fact, the results show a positive correlation between the remaining factors of influence and the dependent variable.

In order to analyze this type of positive influence in detail, the factors that most solicit the student's business stimulus were compared.

The results suggest that among the variables that identify the level of context, the family context is the most important variable for predicting whether an academic will be involved in entrepreneurial activities or not. Parent entrepreneurs allow their children to acquire more entrepreneurial interest; children can learn skills and collect experiences thanks to the family activity. This result is reflected in the literature, where it is largely proved that students whose parents own a small business demonstrate the highest preference for self-employment (Scott & Twomey, 1998). The experience that entrepreneur parents give to their children is an important determinant in the entrepreneurial interest (Shane & Khurana, 2003). Furthermore, although the family represents an external factor of influence on the student's choices in this study, it is necessary to highlight a possible genetic influence. Nicolaou et al. (2008) pubblished on the *"Journal of Business Economic Behavior and Organization"* a curious research on the choice of

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employment for a sample of American twins, and have identified heritability in the tendency to become entrepreneurs. This leads back to the main result of this article and constitutes further confirmation.

It is possible to state that the student's entrepreneurial interest grows where favourable university conditions exist; students who attend universities where courses or projects dedicated to entrepreneurial education are established, have a greater entrepreneurial interest. There is a connection between entrepreneurship education and the student's willingness to become an entrepreneur (Solomon et al., 2008). After all, one of the crucial problems, as reported by Nabi & Holden (2008), is that entrepreneurial education in universities is a complicated process that remains under-investigated; there is no universal approach to entrepreneurship that applies for all graduates and in different contexts, since customized approaches are required to meet individual needs. Entrepreneurship can be fuelled by specialized courses (Hattab, 2014) or business plan achievements (Premand et al., 2016), but the absence of a theory capable of standardizing teaching remains.

The student's entrepreneurial interest does not necessarily grow where there are environmental conditions dedicated to industry; students who live in environmental contexts in which there are socio-cultural conditions favorable to entrepreneurship, do not have a greater chance of becoming entrepreneurs. From what emerges from the study conducted by Wang & Wong (2004). Students who have career prospects in the area of origin, demonstrated greater risk aversion in starting their own business. Conversely, young people living in a less industrialized area need to create new businesses. From the need to find a job that does not include a new place to live, the courage to create it is born. This results are fully reflected in data ISTAT (ISTAT press release, 2018), from which it emerges that the regions of southern Italy, which have a low rate of industrialization, are the ones that have given the greatest contribution to the growth of the entrepreneurship of the whole country, with an high numbers on new businesses led by entrepreneurs under 35 (Unioncamere press release, 2018).

However, political and economic environment plays a vital role in the subsequent development of businesses, so government leaders must take new action in order to entrepreneurship takes on a strategic economic role (Sousa et al., 2019). If not, students with high entrepreneurial interest may not recognize any benefit from their efforts.

Gender also plays an important role in research. As widely found in the literature, there is empirical evidence that entrepreneurship is a typically male career choice. Probably, the different family responsibilities between men and women hinder female entrepreneurship (Pérez-Pérez & Avilés-Hernández, 2016). The data provided by the project GEM (Kelley et. al, 2010) indicate that women who have family responsibilities have a 33.1% less chance of pursue an entrepreneurial activity, while in the case of men; this decrease is only 2.4%.

CONCLUSION, IMPLICATIONS AND FURTHER RESEARCH

The institutions' interest in youth entrepreneurship has led academic research to investigate the components that most affect the career choices of university students, in order to identify a correct way to proceed in entrepreneurial education.

The findings of this research provide several implications for university educators and administrators. First of all, they shed light on concepts that academic research has debated for a long time, stating that individual behaviour has a decisive influence on the cognitive process that leads the student to have an entrepreneurial interest. Entrepreneurship is not a simple

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programmatic act, but a behaviour that reflects an individual's motivation and ability to identify an opportunity and pursue it, in order to produce a new value or economic success. In the theoretical background, personal history, planned behavior, low risk aversion and personality traits are indicated as factors that have an impact on entrepreneurial propensity (Yıldırım et al., 2016).

Moreover, from the research we obtain useful suggestions for the institutions in terms of policy. The results suggest that external factors can motivate students' entrepreneurial interest by exclusively shaping their intrinsic characteristics. Entrepreneurship education courses should train students in an experiential way, equipping them with preparatory behaviours and the guidelines to follow if students are already interested in entrepreneurship, as a logical consequence of their attitudes. In this regard, social learning experiences could be promoted, so as to offer students the opportunity to learn from their own and other people's experiences (Pérez-López et al., 2019). In the same way, institutions can help the student who expresses the desire to become an entrepreneur, facilitating entry into the world of work with cultural and financial incentives.

This research has some limitations that we suggest to be addressed in future studies. This research does not rely on actual genetic propensity, but is focused exclusively on students' self-assessments, about behavioural characteristics and their own interests. The analysis was carried out using a sample of Italian students; it would be desirable to extend research worldwide. It would be interesting to reformulate the same research on the data of Report GUESSS 2019, and make a significant comparison. Furthermore, it would be useful to verify if the students who have shown a high level of entrepreneurial interest have subsequently pursued an entrepreneurial career.

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