

Research article

## The Effect of self-esteem, entrepreneurship education, and entrepreneurial tradition of the family on the entrepreneurial intention among students

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### Abstract

The main purpose of this study is to determine the impact of self-esteem and two contextual factors, namely family and entrepreneurship education on entrepreneurial intention of students. A conceptual model integrating the selected variables and the causal links is developed and validated on the basis of an empirical study involving 200 students both in the English business branch and the English fundamental branch. The collected data are processed using the method of multiple linear regressions. The results show that self-esteem, education and the family's entrepreneurial tradition have positive and significant effects on the entrepreneurial intention of the students.

**Key words:** Entrepreneurial intention, self-esteem, entrepreneurship education, family's entrepreneurial tradition, personality trait, exploratory analysis, linear regressions methods.

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### 1. Introduction

Entrepreneurship has again gained the attention of academics and policy makers. Supporting entrepreneurship in its various forms has become one of the main priorities of governments; due to its critical role in promoting innovation, creating new jobs, diversifying the industrial fabric and economic and social growth (Malchow-Møller et al., 2011).

Tunisia considers entrepreneurship as the ultimate solution to the unemployment problem of young graduates, which is constantly increasing. For the promotion and development of entrepreneurship among University students and entrepreneurial skills, the academic community is called upon to play an active role, notably by offering training and support to their students in order to make the entrepreneurial career more accessible. As business creation can be studied in many dimensions, the focus on the upstream phase of business creation, ie the entrepreneurial intention, is chosen. The Studies in the field of entrepreneurship have begun to focus on students to predict their entrepreneurial behavior. Indeed, one antecedent among others of entrepreneurial behavior is the intention to startup businesses.

Many researchers have shown and validated the role of entrepreneurial intention as a predictor for future entrepreneurial activities (Krueger et al., 1993; Lumpkin et al., 1996; Elenurm et al., 2007). The entrepreneurial intention of the students is interesting; considering that students are future entrepreneurs and constitute a population on which it is possible to act through entrepreneurship training programs. That is why it is crucial to identify entrepreneurial intention and identify its determinants.

Indeed, personality traits have been widely studied in research on entrepreneurship and seem to affect the intention of a young graduate to enter the field of business. However, these personality traits only partially predict entrepreneurial intention, and other contextual factors have been associated with this intention such as family (parental influence) and entrepreneurship education.

According to Learned, (1992), some individuals whose personality traits combined with contextual factors such as family and education are more likely to start up their own businesses than others are. Belonging to a family where parents are entrepreneurs promotes the acquisition of information and skills in the entrepreneurial field and strengthens the intention to

found businesses. The entrepreneurial intention of people is the result of their evolution in given environments.

Mueller and Thomas, (2001) in their study validate this hypothesis and show that contextual factors (family and entrepreneurship education) and personality traits such as self-esteem stimulate entrepreneurial behavior.

Our research aims to explore the impact of personal and contextual factors on the entrepreneurial intention of students. In particular, it is postulated that self-esteem, education of entrepreneurship and entrepreneurial tradition of the family influence the entrepreneurial orientation of students.

The results of this study are of dual interest. First, at the academic level, they add to research, studying the antecedents of entrepreneurial intention. In addition, it provides a better understanding of the determinants of students' entrepreneurial intentions, which can guide actions undertaken, particularly in academia.

### 1.1. Entrepreneurship

The definition of entrepreneurship has been the subject of much debate. Vesper (1980) defines entrepreneurship as the creation of a new enterprise. For Kauffman (2007), entrepreneurship is a process involving the transformation of an innovative idea into a project and consequently a project to create wealth.

Entrepreneurship refers to the individual trying to start a business. Thus, some researchers view the entrepreneur as the individual who creates a business as the engine of economic growth. The entrepreneur is someone who can perceive, identify, select and exploit an opportunity, create an organization and contribute to the creation of the new value (Baron and Shane, 2007; Ethugala, 2011). However, Schumpeter (1947), defines the entrepreneur as "the man of innovation"; the entrepreneur is a man whose economic horizons are vast and whose energy is sufficient to shake up the propensity to the routine and to realize innovations. The entrepreneur has an irreplaceable role in the economy and society.

### 1.2. Self-esteem

The results of several studies have shown that personality traits influence the propensity to start a business (Utsch and Rauch, 2000; Mueller and Thomas, 2001; Shamuganathan, 2010).

Timms et al., (1999) cited several personality traits that can affect entrepreneurial behavior. Thus, individuals with personality traits such as, a high degree of determination, self-confidence, tolerance for ambiguity and uncertainty, risk-taking, etc; are more involved in entrepreneurial activities and business creation (Altinay et al., 2012). Among these personality traits Özlem et al., (2014) and Veysi et al., (2015) focus on self-esteem as a determinant of entrepreneurial intention.

According to Rosenberg, "high self-esteem is an indicator of acceptance, tolerance and personal satisfaction with oneself, while excluding feelings of superiority and perfection. High self-esteem thus implies respect for oneself". Rosenberg differentiates two levels of respect, the unconditional and conditional level. "Unconditional respect presupposes that the individual respects himself as a human being, regardless of his qualities or his achievement, whereas conditional respect involves congruence between the personal standards of competence, morality, excellence and feelings of accomplishment with respect to these standards. The lack of conditional respect differentiates the person with high self-esteem from one with low self-esteem". The theory of social study (Bandura, 1971) describes self-esteem as an important feeling of what the individual deserves. It is considered an important human need, a source of identity and a standard of self-evaluation that allows the individual to determine his or her worth (Battle, 1981). Self-esteem is in psychology, a term referring to the judgment or evaluation made of an individual in relation to his or her own worth.

Self-esteem is a basic psychological trait related to the self-considered an evaluation that allows making a self-judgment (Rosenberg et al., 1995). Self-esteem determines human behavior and influences individual development and growth (Oğuz and Körükçü, 2010; Baumeister et al., 2003).

In addition, a high self-esteem is a guarantee of success. It allows risk-taking, the search for innovative solutions and it demonstrates tenacity and perseverance. These attitudes often lead to victory, in turn, fueling both confidence and self-esteem.

The higher the self-esteem, the more the individual feels the merit of succeeding in what he undertakes; that is why he does not hesitate to allocate the necessary efforts. This attitude is a source of success that allows him to be confident in his ability to succeed. Therefore, failures seen as simple mistakes from which he benefits (Larivey, 2002).

Regarding the effect of self-esteem on entrepreneurial intention, the study conducted by Özlem and Cansu (2014) involving 209 young graduates from three Turkish universities shows a positive influence of self-esteem on entrepreneurial intention; this result is consistent with that found by Göksel and Aydintan (2011). Following this work, the first hypothesis is formulated as below:

*H1 : Self-esteem positively influences entrepreneurial intention.*

### 1.3. Entrepreneurial intention

Intention is considered the best predictor of behavior, especially since the latter is a thoughtful and planned act (Tounes et al., 2014). According to the theory of planned behavior, any intentional behavior can be predicted by the intention of having a given behavior, that is to say, it supposes that the intentions

include the effects of motivations that influence the behavior (Ajzen, 1991). The stronger the intention, the greater is the chances of having the behavior in question. The intention comes from a will. Thus, it is the best preacher and catalyst of voluntary behavior. It is a state of mind that directs a person's attention to a specific goal in order to achieve something. A new organization is one way to achieve this goal (Tounes, et al., 2014). Several studies postulate that the most reliable variable for predicting entrepreneurial behavior is entrepreneurial intention.

Entrepreneurial intention can be defined as a state of mind that directs a person's attention to work for them rather than on behalf of others.

The creation of a company goes through several stages from the idea to the intention through the decision to arrive at the actual creation (Souitaris et al., 2007). For Tounes, et al., (2014) the intention to create a business is "a major phase of the creative process, it is an individual willingness to fit within a cognitive process conditioned by context, socio-cultural, political and economic".

#### **1.4. Entrepreneurial intention and family**

The family is the first social experience of the individual. It determines his behavior and transmits to him the values that one would like him to acquire. The family brings in addition to its moral support, the emotional comfort (Boudabbous, 2011). Having parents or relatives who manage their own business is the most significant part of so-called interactional resources. It is revealed that such proximity is considered favorable to imitation and to the progressive acquisition of the rules of this environment.

According to Basu and Goswami, (1999); Altinay and Altinay, (2006, 2008) the belonging of an individual to an entrepreneurial family allows him to acquire managerial skills, to have ideas, knowledge and vision for his own business or for managing his family's business.

Several studies have found that members of an entrepreneurial family are more advantageous than others for starting their own business (Basu and Virick, 2008).

Gurel et al., (2010) carried out a study whose objective is to examine the effect of personality traits and contextual factors on the entrepreneurial intention of students in the UK and Turkey. The results indicated that there is a positive and statistically significant relationship between entrepreneurial intention and certain personality traits and among the contextual factors having an entrepreneurial family appears as an important predictor of students' entrepreneurial intention. The research carried out by Arlotto et al., (2007) has also shown that the entrepreneurial environment (having a parent or close business creator) reinforces the student's confidence in his ability to manage a business creation process.

For Learned, (1992), Mueller and Thomas, (2001) a combination of personality traits interacting with

contextual factors (family, education) plays a role in motivating and stimulating the entrepreneurial behaviour of individuals and make them more advantageous candidates for starting their own businesses.

Parents are models for their children. The education that parents offer to their children will follow them all their lives. The orientation that a parent adopts during the educational process of their child influences the choice of the child's occupation. The results of the survey conducted by Salem et al., (2006) show that this orientation has an impact on the intention of young people to start-up businesses. For a sample of 55 students, 21.8% report having at least one entrepreneurial parent and think that this parent may have influenced their future career choice. However, 78.2% of the respondents do not have entrepreneurial parents, but believe that they have been able to play an important role in their career choice. Young people must take over the family business, which explains the positive correlation between parental influence and entrepreneurial intention.

The entrepreneurial intention of students whose parents are entrepreneurs is explained by the theory of social study, which states that the academic and professional curriculum of parents is a model for young people so as not to disappoint them. Several researches indicate that 50% of entrepreneurs come most often from families where parents are themselves entrepreneurs (Gasse and D'Amours, 2000). It seems that young people, who belong to this kind of family, consider their parents as models to imitate (Westhead, 2003). Similarly et al., (2001) on a sample of emerging Canadian entrepreneurs found that 46% of them had parents who were entrepreneurs or business owners. However the survey carried out by Brownhilder, (2014) with 600 students at Cameron reveals that the family has no influence on students' entrepreneurial intention and that there is no significant difference in intention entrepreneurship of students whose family is entrepreneurial and those who do not have business parents. The results suggest that most students in Cameroon would prefer to work for their own accounts rather than for a private company or public institution, whether or not they are raised in an entrepreneurial family because of the rising unemployment rate.

This result is consistent with that found by Opoku-Antwi et al., (2012). But it is contrary to the results found by Westhead, (2003) who established that growing up in an entrepreneurial family has a significant impact on the intention of the individual to start his or her own business.

Mueller and Thomas, (2001) support this idea and point out that the personality traits and contextual factors (family and education) of the individual act as stimulators of their entrepreneurial behaviours, thus belonging to an entrepreneurial family helps the individual to acquire knowledge, entrepreneurial skills, if they are associated with their personality traits can stimulate their entrepreneurial activity.

The study of Özlem and Cansu (2014) with 209 young graduates from three Turkish universities shows that the family has a positive moderating effect on the relationship between self-esteem and entrepreneurial intention. On the basis of this discussion, the main hypothesis is postulated:

*H2a: The entrepreneurial tradition of the family has a positive influence on entrepreneurial intention.*

*And as an alternative hypothesis:*

*H2b: The entrepreneurial tradition of the family has a moderating effect on the relationship between self-esteem and entrepreneurial intention.*

### 1.5. Entrepreneurial Intention and Education

Entrepreneurship is a dynamic of action and a state of mind that an individual can acquire through an education system that aims to raise awareness, preparation and training for entrepreneurship. For Boudabbous, (2011) teaching entrepreneurship in universities can help students to change their attitudes and behaviors towards entrepreneurship and facilitate the assimilation and accessibility of the entrepreneurial phenomenon. Interest in the development of entrepreneurship education has rapidly increased since entrepreneurship is seen as a source of growth and economic competitiveness (Martinez et al., 2010).

Several researches have examined the link between entrepreneurship education and entrepreneurial intention. The results of the Dickson et al., (2008) study reveal a positive relationship between entrepreneurship education, entrepreneurial choice and entrepreneurial success. Albert Fournier R., (1991) and Marion, S. (1991) found that 25% of students taking entrepreneurship courses eventually have ended up creating their own businesses.

Similarly, the comparative study carried out by Saini and Bhatia, (1996) showed that entrepreneurs who have pursued entrepreneurship training achieved performances in terms of turn over and job creation compared to those who do not have training. Education increases the entrepreneurial intention of the individual and makes it more advantageous in seizing opportunities (Wilson et al., 2007; Souitaris et al., 2007).

For Fatoki, (2010); Rae, (2010); Bakotic, (2010) entrepreneurship education enhances knowledge and skills. Thus, it is recommended to introduce entrepreneurship education in all universities regardless of their specialties.

These last decades are marked by a particular attention for the entrepreneurship and its education. The objective of the study of entrepreneurship is to provide students with creativity and skills in management and marketing. Therefore, it is necessary that the student is trained to develop his entrepreneurial traits.

The study of Mahdi et al., (2015) carried out with 250 young graduates in Iran aims to analyze the factors motivating students to start their own business. The results show that self-esteem (personality trait) influences the entrepreneurial intention of young graduates and that this relationship is moderated by entrepreneurship education. This result is confirmed by the study of Özlem and Cansu (2014) who showed that the effect of self-esteem on the entrepreneurial intention of students by highlighting the moderating role of education. Thus education has a positive moderating effect on the entrepreneurial intention of the students. To reinforce entrepreneurial intention, it is crucial to provide training and develop an entrepreneurial culture.

However, Nabi et al., (2010) believe that research on entrepreneurial intention does not provide enough clarification regarding:

- The process of changing attitudes towards entrepreneurship through education
- The transition from a student to an entrepreneur.

As for Garavan et al., (1994), they cited the main objectives of education and entrepreneurship training programs as follows:

- Have interesting information in the field of entrepreneurship.
- Acquisition of skills in the analysis of the business atmosphere and in the synthesis of the business plan.
- Identification and stimulation of entrepreneurial skills.
- Development of attitudes towards change and uncertainty.
- Encouragement of new business creations.

According to Salhi and Boujelbene (2013), entrepreneurship training and programs, combined with contextual and personal variables, intensify perceptions of entrepreneurial skills, which, in turn, act positively on entrepreneurial intention. Supporting this view Mueller and Thomas, (2001) emphasize that contextual factors play the role of stimulating or motivating entrepreneurial behaviour. Krueger et al., (1993) consider that the level of education equips own doter individuals with skills and a state of mind to remain flexible and open to market forces and opportunities. In linking education with entrepreneurial intention Sexton and Bowman-Upton, (1984) and Hornaday and Vesper, (1981) established that students who took management courses and particularly in entrepreneurship are more advantageous to work on their own account later than their counterparts who have not taken these courses.

Similarly, a meta-analysis of the literature on entrepreneurship education undertaken by Dickson et al., (2008) shows that there is a positive correlation between education of entrepreneurship and the intention of students to start a business. In the same

context, Salem et al., (2006) with a sample of Acadian students from the Faculty of Administration and the School of Engineering showed a positive correlation between education and entrepreneurial intention. This correlation confirms that education significantly influences the propensity of individuals to become entrepreneurs.

Education represents the productive capacity of graduates and is the driving force behind their launch in the field of entrepreneurship. Rigorous study programs based on practical methods promote entrepreneurship. However, the research results of Eda Gurel and Roberto (2010) show that entrepreneurship education has no statistically significant relationship with the entrepreneurial intention of the student. The same results were found by Henley (2005). Gurel and Roberto, (2010) suggest that traditional educational processes should be developed to create enterprising individuals; it is important to review the current higher education system in order to foster student entrepreneurship. As suggested by Kirby (2005), the challenge is to develop a learning system that can complement the traditional one.

For Kirby, (2005) many programs and courses in entrepreneurship instead of teaching students for entrepreneurship, they teach them about entrepreneurship (the entrepreneurial process, entry strategies, the marketing, etc.), although these practices are important for students to start their own businesses, they do not develop the personal skills, attributes and behaviors of good entrepreneurs.

According to Benredjem, (2009) the role of the education system is fundamental, especially in the development of entrepreneurial spirit and training in business management.

The majority of students surveyed by Benredjem agree that teaching promotes initiative and creativity. However, they think that education does not offer a good level of entrepreneurship training.

Heinonen and Poikkijoki, (2006) emphasized the importance of a new model of education based on experimentation.

This implies action-oriented teaching, and encouraging learning through experimentation. Thus, Cronin (2007) establishes that pedagogy by action to teach entrepreneurship is the most effective and this

pedagogy must be conceived in an environment that develops students' self-esteem.

As for Léger-Jarniou (2008), he insists on the necessity of a particular pedagogy in view of classical pedagogy provides only knowledge, whereas practice and confrontation with problems provide experience and subsequently change skills, attitudes and personality.

Some researchers believe that classical education can reduce curiosity, vision and increase risk aversion. Fallows (1985), Shaper (1980) claim that classical education leads to conformity, decreases tolerance to ambiguity and thus hinders students and skills to have creative ideas to start a new business. Kirby (2005), argues that the university and business institutes particularly need to revise their programs and teaching methods to stimulate innovation and critical thinking. On the basis of this discussion, the following hypothesis is postulated as the main one (Figure 1):

*H3a: Entrepreneurship education has a positive influence on entrepreneurial intention.*  
and as an alternative hypothesis:

*H3b: entrepreneurship education has a moderating effect on the relationship between self-esteem and entrepreneurial intention.*

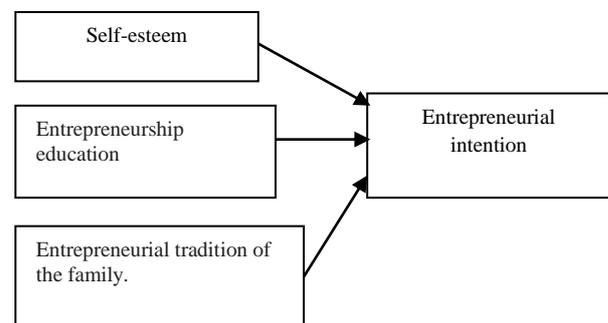


Fig. 1: Conceptual model

Table1: The measurement scales selected

Variables	Scale	Items
Self esteem	Rosenberg's (1965)	I feel that I'm a person of worth, at least on an equal plane with others. I feel that I have a number of good qualities. Overall, I am inclined to feel that I am a failure. I am able to do things as well as most other people. I feel I do not have much to be proud of. I take a positive attitude toward myself. On the whole, I am satisfied with myself. I wish I could have more respect for myself. I certainly feel useless at times At times I think I am no good at all.
Entrepreneurial intention	A.S., Kumi, E., and Awuah, B.J (2013)	My professional goal is to become an entrepreneur I prefer to be an entrepreneur rather than being employed in a company I am ready to do anything to become an entrepreneur I will make every effort to start and manage my own business I want to be my own boss, I have a strong intention to start a business someday

Table 2: Sample descriptions

	Frequency	Percent%
Gender		
Male	70	35
Female	130	65
Total	200	100
Age		
19-24	155	77,5
25-34	45	22,5
Entrepreneurship Education		
Yes	100	50
No	100	50
Usefulness of entrepreneurship courses		
Yes	114	57
No	86	43
Entrepreneurial family		
Yes	80	40
No	120	60

## 2. Operationalization of the variables and research methodology

This section discusses the method of data collection, sample selection, and operationalization of variables.

### 2.1. Operationalization of variables

The questionnaire that was developed for this study is composed of three parts. The first part consists of demographic questions measured by nominal and categorical scales including issues related to family business and entrepreneurship education. The second part measures self-esteem using the Rosenberg's (1965) scale of ten items (Rosenberg et al., 1995). To measure this variable, a six-position likers scale ranging from "strongly disagree" to "strongly agree" was used. The last part concerns the entrepreneurial intention (dependent variable) which is measured by a scale developed by Yeboah et al., (2013) using a 6-point Likert-type scale ranging from (1) strongly disagree to (6) strongly agree (Table 1).

### 2.2. Sample and data collection

A questionnaire was administered directly to students pursuing English language studies at the end of the 2017/2018 academic year. Our sample includes 200 students from the terminal classes. Among those interviewed, there are those who belong to the Business English branch who have received training in the field of entrepreneurship and others belonging to the Basic English branch. A more detailed description is presented in the descriptive statistics section.

## 3. Empirical validation of the model and discussion of the results

This part is the subject of the research hypothesis test based on the data collected during the survey using SPSS software (version 22.0 for Windows). Thus, this software is helpful to do simple sorting in order to identify some statistics of frequencies and numbers useful for the characterization of the sample. We also performed a factor analysis (principal components) and a reliability test by calculating Cronbach's alpha for each scale of measurement. Finally, to test the causal links between the different variables, the multiple linear regression method is used.

### 3.1. Descriptive statistics

According to the descriptive statistics presented in the table 2 above our sample is composed of 65% female and 35% male students. 77.5% are between 20 and 24 years old and 22.5% are over 25 years old. Only 50% of the sample has been trained in entrepreneurship (these are business English students). Regarding the entrepreneurial tradition of the family, 40% of the sample has parents or family members who are entrepreneurs and 60% do not have any. 57% of the

sample agrees that entrepreneurship courses encourage initiative and creativity.

### 3.2. Exploratory Analysis: Test of Reliability of Measurement Scales and Principal Component Analysis

The quality of the measurement scales of the different constructs is analyzed using the reliability test. The results of the test presented in table 3 show that most of the found values of Cronbach's alpha statistic exceed the threshold of 0.7 recommended by the researchers (Peterson, R.A, 1995). Hence, the scales studied are statistically reliable.

Due to the principal component analysis, the following results is achieved.

- The relative scale of Entrepreneurial intention is one-dimensional, whereas for the scale that measures self-esteem two factorial axes have been extracted, a first axis which gives 79.849% of explained variance whereas, the second axis explains 13.940%.
- The values of the KMO index are satisfactory and exceed the threshold of 0.5 (Akrouf, 2000). Thus, the selected items are the best representatives of each concept.
- Analysis of the variance shows that more than half of the total explained variance is generated by the items for each concept, an average percentage of 87.14%.

### 3.3. Validation of research hypotheses

In order to analyze the impact of self-esteem, education and family influence on the student's entrepreneurial intention, the multiple linear regression method was used.

Linear regression is a simple statistical technique that is well known and widely used in marketing research. It makes it possible to examine relationships between one (or more) continuous explanatory variable (s) and an equally continuous explained variable. Before performing such analyzes, we begin by checking whether the used data respect certain underlying assumptions, simple and multiple regressions. As a result, the quality of the results is reinforced by the respect of these hypotheses (Evrard et al., 1997).

#### *Normality test*

The normality of the variables is evaluated on the basis of the statistical values of Skewness (coefficient of symmetry) and Kurtosis (flattening coefficient). The values obtained from these tests are presented in the table 4.

Table 3: Reliability Test and Principal Component Analysis

Scale	Reliability	PCA				
	Alpha de Cronbach	KMO	Test of Bartellette	p-value	Percentage variance explained	Number of factors retained
Self-esteem	0.972	0.884	4316.351	0.000	93.790%	2
Entrepreneurial intention	0.951	0.831	1529.145	0.000	80.491%	1
	Average				87.14%	

Table 4: Normality test of variables

	Education	Family	Self esteem	Entrepreneurial intention
Asymmetry	0.000	-0.411	-0.011	-0.659
Std error. asymmetry	0.172	0.172	0.172	0.172
flattening	-2.020	-1.849	-1.696	-0.388
Std error. flattening	0.342	0.342	0.342	0.342
N. Observation	200	200	200	200

Table 5: Auto-correlation test for residues

Regression	R <sup>2</sup>	R <sup>2</sup> ajusté	Durbin-Watson
1	0,901	0,9	1,906
2	0,278	0,266	1,836

Table 6: Correlation Matrix

	Education	Family	Self esteem	Entrepreneurial intention
Education	1			
Family	0.516	1		
Self esteem	-0.247	-0.143	1	
Entrepreneurial intention	-0.937	-0.828	0.27	1

Table 7: Effect of self-esteem, education and family on entrepreneurial intention

	Direct effects		Moderating effects	
	coefficient	T-stat	coefficient	T-stat
Cste	-2.997	-38.387 (0.000)	-0.150	-2.089 (0.038)
Self esteem	0.103	4.542 (0.000)	2.842	4.981 (0.000)
Education	1.607	20.548 (0.000)		
Family	0.367	4.626 (0.000)		
modr1 (education)			1.053	2.705 (0.007)
modr2 (family)			0.289	0.641 (0.522)
R <sup>2</sup>		90.10%		17.8%
F-stat		595.305		14.188
P-value		0.000		0.000

Roussel et al., (2002) recommend values of the symmetry and flattening coefficients between (-3) and (3). The values obtained from these coefficients in (table4) are between (-3) and (3), so they confirm the normality of our variables. Therefore, the use of parametric tests is statistically legitimate.

#### *Test of auto-correlation*

To evaluate the independence of the residues, the Durbin-Watson test can be used. Generally, values close to 2 indicate the absence of autocorrelation. However, this problem does not arise in the study since it is cross-sectional data and the hypothesis of the independence of the residues mainly concerns the temporal series. We have like even execute this test whose results are presented in the following table 5:

The values of the Durbin-Watson statistic are around 2, which confirm the independence of the variables of the error term.

#### *Multicollinearity test of the explanatory variables*

The values of the correlation coefficients between the explanatory variables in the (table 6) do not show any correlation between these variables, which makes it possible to highlight the absence of serious problems of multicollinearity. As a result, each explanatory variable contributes independently in explaining the variability of entrepreneurial intention of the students.

After checking the underlying hypotheses about the regression method, the following step is to test the hypotheses of the research.

This study has two categories of hypotheses. The first corresponds to the main hypotheses and assumes that the self-esteem, education and entrepreneurial tradition of the family have direct and positive effects on the entrepreneurial intention of the students. These direct effects will be tested from the regression estimate whose general form is as follows:

$$EI_i = cste + \alpha_1 * \text{self - esteem}_i + \alpha_2 * \text{Education}_i + \alpha_3 * \text{family}_i + \varepsilon_i$$

The second category of hypothesis assumes that self-esteem has a direct effect, whereas education and the family's entrepreneurial tradition have moderating effects. The relationship between self-esteem and entrepreneurial intention moderated by education and the entrepreneurial tradition of the family can be formulated as follows:

$$EI_i = cste + \alpha_1 * \text{self - esteem} + \alpha_2 * \text{modr1}_i + \alpha_3 * \text{modr2}_i + \varepsilon_i$$

With,

El: dependent variable (entrepreneurial intention)

The estimation of the parameters of these two equations is carried out using the least ordinary square

method. The results of this estimate are presented in the following table 7:

According to (Table 7), the value of the P-value associated with the Fischer statistic (0.000) indicates that the relationship between entrepreneurial intention and the independent variables (self-esteem, education and family) is globally significant. This result makes it possible to empirically highlight the respective impact of self-esteem, entrepreneurship Education and the family's entrepreneurial tradition on the intention to start a business. We also point out that the R<sup>2</sup> value is 90.10% thus reflecting a better quality of linear adjustment. This coefficient (R<sup>2</sup>) also shows that self-esteem, education and the entrepreneurial tradition of the family explain 90% of the variation in entrepreneurial intention. It is also found that the "self-esteem" variable has a positive and significant impact on the level of entrepreneurial intention. Concerning the education and the entrepreneurial tradition of the family, they exert positive and significant impacts on the entrepreneurial intention of the students. The values of the probabilities associated with these variables are zero.

### **3.4. Results of the moderating effects**

It is noted that the value of the Fischer statistic is 14.188 with a null p-value, which confirms the overall significance of the estimated model.

Individually, we find that the value of the Student's statistic of the self-esteem variable is 4.98 with a zero probability and a positive coefficient. As a result, self-esteem is an important dimension in determining the entrepreneurial intention of students.

The Student's statistic value of the *modr1* variable is 2.705 and a p-value of 0.007 highlight a moderating effect of entrepreneurship education on the relationship between self-esteem and entrepreneurial intention. Consequently, the hypotheses *H1*, *H2a*, *H3a* and *H3b* are validated and corroborate the literature developed on this subject.

### **3.5. Discussion**

The purpose of this study is to determine the impact of self-esteem and two contextual factors, namely the entrepreneurial tradition of the family and the education of entrepreneurship on a major phase of the entrepreneurial process: the entrepreneurial intention of the students.

The results of the regressions show that self-esteem has a positive and significant effect on entrepreneurial intention. This result is consistent with that found by Göksel and Aydıntan (2011). Self-esteem allows for risk-taking, the pursuit of innovative solutions and demonstrates tenacity and perseverance, these components of self-esteem have a positive impact on entrepreneurial intention. This result reinforces other research that considers personality traits as determinants of students' entrepreneurial intention. Similarly, results of this study have shown that entrepreneurship education has a direct and positive

effect on the entrepreneurial intention of students. This result matches that found by Salhi and Boujelbene (2013). Findings show that education can also have a moderating effect on the relationship between self-esteem and entrepreneurial intention; this means that the effect of self-esteem on entrepreneurship is enhanced when the student takes entrepreneurship course; this result is confirmed by the study of Veysi et al., (2015) and in contradiction with the results obtained by Eda Gurel and Roberto (2010) and Henley (2005). The authors believe that previously, the ultimate goal of education systems is to produce employees working in a large company or public administration rather the development of entrepreneurship and self-employment. Even some researchers agree that the so-called traditional education of entrepreneurship must undergo reform and reorganization (Eda Gurel and Roberto, 2010). It is also found that a positive direct effect of the family's entrepreneurial tradition on the entrepreneurial intention of the students is so significant. However, the moderating effect of the family on the relationship between self-esteem and entrepreneurial intention is not significant.

Thus, belonging to an entrepreneurial family helps the individual to acquire entrepreneurial knowledge and skills; if they are associated with their personality traits, they can boost their entrepreneurial activity. Thus, parents are role models that their children seek to imitate and for some people it is necessary to ensure the perpetuation of the family business. Thus, this study has highlighted the importance of entrepreneurship training and programs by showing that training combined with personality traits and contextual factors such as family reinforce the entrepreneurial intention of students.

In fact, the evolution of entrepreneurship is a function of the dynamic interaction of personality traits and contextual factors. Therefore, it is useful to create an enabling environment for the development of personality traits by introducing and reinforcing entrepreneurship education and making it accessible to all students regardless of their field of study. In addition to offering studies of which educational content is focused on discovery, innovation, risk, all of which will be used to promote entrepreneurship.

Future research should attempt to replicate these results with larger samples in other faculties and departments to expand the areas of empirical validation of the model. New research can also be undertaken to enrich the model by introducing, for example, other personality traits, innovation and propensity to take risks as well as other determinants related to the economic and sociocultural context. It is therefore interesting to think of a holistic approach to fully understand the entrepreneurial intention of students.

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