THE EFFECT OF ENTREPRENEURSHIP EDUCATION ON THE ENTREPRENEURIAL INTENTION OF TUNISIAN STUDENTS: COMPARATIVE STUDY

Adel Kraiem, University of Souss

ABSTRACT

Organizational emergence, the result of an individual's intention to create an organization and the actions they undertake to this end, covers diverse realities. For a better understanding, we use the model of the theory of planned behavior by Ajzen including entrepreneurship education. Thus, a quantitative study based on a questionnaire carried out among undergraduate students, shows that attitude towards behavior and subjective norm have a significant positive effect on students' entrepreneurial intention. However, perceived behavioral control is not significant. Furthermore, entrepreneurship education positively and significantly affects the entrepreneurial intention of students but with a significant difference between students in economics and management and those in science and technology.

Key words: Entrepreneurial Intention, Entrepreneurship Education, Theory of Planned Behavior

INTRODUCTION

Entrepreneurship is often associated with stimulating economic growth, innovation and the creation of jobs and businesses. Various researches have also shown the importance of entrepreneurial activity for economic growth and social development. Thus, entrepreneurship has become a priority subject in public policy and the most often chosen alternative to unemployment problems. This is explained by the imbalance in the relationship between labor demand and the total number of unemployed especially young graduates (Iwu et al., 2016).

Given all these findings, entrepreneurship education is at the forefront of political agendas and represents a priority in most countries around the world. Indeed, it is considered as a strategy mobilized in order to increase the level of entrepreneurship among young graduates and resolve the unemployment problem. New entrepreneurial education programs are launched and multiplied because the conviction of the beneficial impacts of entrepreneurial education is universal. As a result, several developed and developing countries have invested heavily in entrepreneurial education. Tunisia was one of the first countries in the region to adopt a strategy of raising awareness of entrepreneurship in universities. It puts in place a range of measures and tools to stimulate business creation and develop entrepreneurship. These consist of incorporating modules relating to entrepreneurship into the different levels and specialties of higher education. Alongside the entrepreneurship teaching, a large number of organizations and structures supporting entrepreneurship has been set up (Idris, 2017; Isma et al., 2020).

In the study of entrepreneurship education, the question raised is how to evaluate entrepreneurship education? The entrepreneurial intention of individuals is the most appropriate tool for evaluating an entrepreneurship program. Furthermore, Veljkovic et al. note that ‘entrepreneurial intention is not just a single trait, but a combination of several traits impacted by different factors’. Although the study of factors affecting entrepreneurial intention has become essential in the current research, there is little research that examines both the impact of entrepreneurial education and the academic field of study on the entrepreneurial intention of students incorporated into Ajzen's model of planned behaviour,

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

except the studies carried out by (Maresch et al., 2016; JorgeMoreno et al., 2012). Thus, the present research fits into this framework since answering the following question: Do entrepreneurship education and the field of study followed in the Tunisian university impact entrepreneurial intention among students?

This contribution seeks to deepen our central question. To do this, two subquestions will be examined in a structured manner, namely:

1. Determine the extent of entrepreneurial education influence on the entrepreneurial intention of students,
2. Check based on entrepreneurship education, if there is a difference in entrepreneurial intention between students from different fields of study.

Our approach leads us to organize this research work in two parts. The first will be devoted to an overview of the academic literature relating to the concept of entrepreneurial intention in general and among students in particular. While the second part will be reserved for the presentation of both the methodological framework adopted, the underlying hypotheses, the conceptual model and the main empirical results of the study carried out (Jarraya, 2024).

LITERATURE AND HYPOTHESIS DEVELOPMENT

Entrepreneurship: A brief literature review

Entrepreneurship has been defined by Laine & Kibler as "a social practice which consists of creating something new, which may be a product, a service or an organization, by identifying and exploiting the opportunities in a particular socioeconomic context". Similarly, Shepherd et al., view entrepreneurship as "the creation, realization and harvesting of new ventures or the renewal of existing ones in response to perceived opportunities". Thus, despite the multiplicity of definitions of entrepreneurship, there is a common meaning which refers to an approach to detecting opportunities, searching for and allocating resources to exploit these opportunities for potential personal gain (Jemli, 2018).

Currently, entrepreneurship is of crucial importance to boost economic growth and reduce chronic problems of unemployment and poverty. According to, Athia et al business creation and increasing the number of entrepreneurs is considered a remedy to the unemployment problem. Thus, in the same vein, it is assimilated to an engine of economic growth and is considered a basis in the creation of jobs and the generation of rents and consequently the creation of wealth.

However, for the last two decades, the Tunisian economy has faced structural concerns which were also aggravated with the revolution in 2011 and the Covid19 pandemic. In fact, the unemployment rate has reached its highest level, especially for graduate unemployment. Thus, the advent of entrepreneurship becomes an economic and social obligation to address these concerns.

Entrepreneurial Intention

Entrepreneurial intention is rapidly expanding, with a considerable number of studies mobilizing entrepreneurial intentions as an important theoretical framework. Thus, it has become a consolidated field of research in entrepreneurship. The growing interest in entrepreneurial intention is explained by the role played by entrepreneurs and business creation in terms of economic and social development. Furthermore, empirical research proves the existence of positive relationships between entrepreneurship and economic results, namely wealth creation and innovation (JorgeMoreno et al., 2012).

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

The literature does not present a universal or idealtypical definition of the concept ‘entrepreneurial intention’. Indeed, according to Kadir et al., in entrepreneurship the intention can be exposed by the real estate needs to conceive a new entity as an index of the new reliable entity. For Lee is ‘an individual’s intention to pursue an entrepreneurial career, which may be encouraged by the environment or by certain personal factors’. Furthermore, entrepreneurial intention is the psychological state that directs, arranges and controls the basic term (action) of the development, promotion and appreciation of a new business (Bird, 1988). For Thompson, it is the selfrecognized persuasion of individual inspiration to create a new business with a real plan for realizing it at a given time. It is also presented as the desire of an individual to undertake and pursue an entrepreneurial career in order to become professionally independent.

According to, Bakar et al., entrepreneurial intention is appreciated as the best omen of human attitudes and entrepreneurial behavior. Indeed, it is considered the first and essential step of the entrepreneurial process and without it no entrepreneurial action will take place. In the same vein, a clear entrepreneurial intention strongly leads to entrepreneurial behavior. Shapero & Sokol believe that *“*people with an intention to start a business are the pioneers in seizing contemporary and attractive business opportunities within their reach”. In fact, the business will be created if the person has positive attitudes and intention towards entrepreneurship. Furthermore, an individual's entrepreneurial intention comes from detected business opportunities, available resources and formal and informal support to launch a business.

Entrepreneurial Intention Among Students

The study of students’ entrepreneurial intention is important for educational institutions and policy makers, because it is the best predictor of entrepreneurial behavior. Likewise, the fact that the world is currently characterized by the aging of the population, implies that students represent the potential of a country and contribute enormously to economic growth. The entrepreneurial intention of students was the subject of several studies. Some of them focus on personality traits such as (attitude towards risks, internal locus of control and the ability to innovate) or on motivational factors such as the search for financial gain, the search for status (Elnadi et al., 2020).

Thus, the study carried out by Krueger et al., with a sample of approximately 100 students from a business school in the United States shows that the impact of perceived feasibility is significant with regard to attitudes behavioral on entrepreneurial intention. Likewise, the study conducted by Kennedy et al., in which Azjen's model was applied to a sample of Australian students shows that the three antecedents have a significant effect on entrepreneurial intention. In the same empirical contribution, Audet carried out a research based on a sample of 150 Canadian students pursuing business studies proved the significant effect of perceived desirability and feasibility on entrepreneurial intention. Therefore, the multiplicity and quality of empirical studies do not eliminate the validity question of such results in a particular context, in this case the African environment. This justifies the need to undertake evaluations in Africa in general and, in Tunisia in particular, which is the subject of this article (Ehongo & Bitha, 2019).

TPB and Entrepreneurial Intention of Students

The theory of planned behavior was developed from Ajzen & Fishbein's theory of reasonable action, with the postulate that behavior can be explained based on behavioral

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18**.**

tendencies to perpetrate such behavior. In this sense, it was appropriate to explain certain essential factors which impact the probability of business creation. Thus, Kautonen et al., note that the relevance of this theory in the field of entrepreneurship has been confirmed.

Furthermore, according to Ajzen there are three determinants of the intention to act:

1. Entrepreneurial attitude as a being (the degree to which a person has a favorable or unfavorable evaluation of the behavior in question);
2. subjective norm (perceived social pressure to perform or not perform the behavior);
3. perceived behavioral control (the perceived ease or difficulty of performing the behavior).

Entrepreneurial attitude is assessed as an orientation of individuals to react favorably or unfavorably to entrepreneurship. Thus, people who develop negative behavioral attitudes will suffer negative consequences (Lingappa et al., 2020). Indeed, students with a high internal locus of control develop positive attitudes towards entrepreneurship. As a result, students who have favorable Entrepreneurial attitude and the ambition to own their own projects are willing to engage in an entrepreneurial process. A study carried out by Ayalew & Zeleke among students in Ethiopia shows that attitude towards entrepreneurship has a significant positive impact on students' choice of entrepreneurial career (Fragosoa et al., 2019).

***H1**: Entrepreneurial attitude has a positive impact on students' entrepreneurial intention.*

Ajzen presents subjective norm as the perception of social coercion practiced by family, friends and other important people on the individual to perform a particular behavior. In this sense, Hussain noted that any person does not wish to deviate from the cultural norm and values of their family and friends with whom they interact. In fact, subjective norm is the most divergent antecedent of plan behavior theory because it has been theorized that individuals who possess higher subjective norms will, in turn, have higher levels of entrepreneurial intentions. As a result, students suffer from subjective norms to the extent that family, friends and teachers expect a certain level of attitude based on suggestions that can impact their decisions, such as engagement in an entrepreneurial activity. Furthermore, Kautonen et al., note that the perceived lack of assistance and support from important social contacts has a negative effect on entrepreneurial intention (Galvão et al., 2018). Thus, social pressure from those around them pushes students to potentially undertake entrepreneurship. However, according to Shook & Bratianu, the results of studies of the impact of subjective norms on entrepreneurial intention are equivocal because subjective norms vary from one culture to another (Mamman et al., 2018).

The culture of individualism versus collectivism is challenged. Indeed, subjective norms have a significant impact on entrepreneurial intention in a collectivist culture compared to an individualist culture. From an empirical point of view, Begley & Tan in their study of East Asian and AngloSaxon countries, showed that individualistic cultures are less able to be impacted by subjective norms than collectivist cultures (Gerba, 2012; Yousif Alia & Aboub, 2020).

***H2**: Subjective norm has a positive impact on students' entrepreneurial intention.*

Perceived behavioral control is defined by Ajzen "as the perceived acceptance of the difficulties associated with starting a business or performing a particular behavior". Likewise, according to Luc, this notion is defined as 'the personal belief of the individual regarding his capacity and aptitude to accomplish or carry out a particular work/action'. In studies on entrepreneurial intention, Luc notes that perceived behavioral control are considered as the

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

strongest determinant of the intention to adopt entrepreneurial behavior (Maresch et al., 2016). Therefore, some past studies have shown that students with a high level of locus of control have a high entrepreneurial intention. In the same vein, a study carried out by Chaudhary among students at an Indian university shows that students who have succeeded in their entrepreneurial projects have a high level of perceived behavioral control. Thus, several studies have reported the significant positive impact of perceived behavioral control on students' entrepreneurial intention (Xanthopoulou & Sahinidis, 2024).

***H3**: Perceived behavioral control has a positive effect on students' entrepreneurial intention.*

Entrepreneurship Education and Entrepreneurial Intention

Nowadays, entrepreneurship is the main concern of different institutions and organizations, especially universities around the world. One of the arguments for the progressive interest in entrepreneurship and entrepreneurship education is their positive effect on economic growth. Thus, entrepreneurship education can be presented as a tool for job creation, poverty reduction and, therefore, economic growth. This encourages several countries to establish a beneficial institutional infrastructure for entrepreneurship education .

Historically, entrepreneurship education was started in 1938 at Kobe University in Japan by Shigreru Fijii' lectures. Likewise, a few years later and notably in 1940, small business management courses emerged in 1947, Myles Mace gave the first entrepreneurship course in the United States at the Harvard Business School (Ammam, 2021). Thus, compared to traditional education which aims to transform knowledge, entrepreneurship education is considered regarded as a model for changing attitudes and motivations. Therefore, the supreme goal of entrepreneurship education is to anchor the student's mentality change in terms of innovation and risktaking in firms Consequently, the ultimate aim of entrepreneurship education is to bring about a change in students' mindsets in terms of innovation and risktaking in firms. Furthermore, Nowiński et al. indicates that entrepreneurship education focuses on how to enable students to detect business opportunities and develop a startup rather than how to teach students how to start a business (Mensah et al., 2021).

Entrepreneurship education has been defined by Maina as 'a system that involves the acquisition of skills, management abilities and ideas that require the intention of people'. Also, it was defined by Ekpe & Mart as "the training that an individual has received in entrepreneurship; it may be knowledge or skills that an individual has had for a certain period of time and in a given area". Likewise, for Ediagbonya, entrepreneurship education is a type of training that supports participants to enrich their entrepreneurial qualities by stimulating them with a service that can lead them to successfully launch a new entity. In the same vein, Pulka, Rikwentishe & Ibrahim described this notion as 'a scientific field that helps to understand how opportunities for the creation of future goods and services are discovered, created and exploited, by whom and with what consequences'.

The debate in the literature on entrepreneurship education is based on whether entrepreneurial behavior is a fruit of entrepreneurship education. Indeed, according to Galvão et al. entrepreneurship is not a genetic inheritance but can be taught. As a result, people can become entrepreneurs through entrepreneurial learning. Furthermore, entrepreneurship is not something innate. However, it is developed through education. Therefore, entrepreneurship education can strengthen entrepreneurial intention among students as well as their ability to launch businesses. Along the same lines, such entrepreneurship training helps students improve their entrepreneurial skills, detect new business opportunities and acquire knowledge

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

to transform it into a better and faster business. It can also influence their career choice and improve their visions of creating their own businesses. For Oosterbeek et al., this type of training helps students to know their real entrepreneurial abilities as well as the key success factors of an entrepreneurial career (Vuong et al., 2020). This implies that entrepreneurship training increases the probability of business creation among students. Indeed, several studies have shown the existence of a significant positive correlation between entrepreneurship education and entrepreneurial intention of students, in their study, showed that there is a positive relationship between entrepreneurship education and entrepreneurial intention. Also, Zhang et al., in their study, not only showed the effect of entrepreneurship education on entrepreneurial intention empirically, but also that entrepreneurship education has a direct effect on entrepreneurial intentions (Vracheva et al., 2019). Therefore, we formulate the following hypothesis:

***H4**: Entrepreneurship education has a positive effect on students' entrepreneurial intention.*

The entrepreneurial intention of students has been studied in different ways in several research studies over the last two decades. Some of them carried out a comparative study between different regions of the same country or different countries (Tchagang, 2017). Others have attempted to understand the factors intervening in the formulation of the entrepreneurial intention of students, and a small number of studies which have been carried out to compare the level of entrepreneurial intention of students according to a comparison based on their academic field of study. Maresch et al.(2016), sought to balance the effect of entrepreneurship education on entrepreneurial intention among engineering and business students. Thus, this study revealed that the positive and significant effect of entrepreneurial education on entrepreneurial intention is proven but rather with low coefficients. Likewise, she also indicates that business students could more benefit from entrepreneurship education. Indeed, students who have already received business training are, therefore, more capable of collecting and analyzing knowledge related to entrepreneurship. Furthermore, even though the level of entrepreneurial education of science and engineering students is significantly higher compared to those in business, it remains quite low (Maresch et al., 2016; Muhammad et al., 2015).

Likewise, the study carried out by JorgeMoreno et al., (2012), with students in administration and economics, showed the existence of a significant difference in the entrepreneurial intention of students. Therefore, although there is a variety of research already conducted on the topic in general, there are still details that need to be explored in order to better understand all the dimensions of this broad area of study. To do this, in this work, we will try to test the effect of entrepreneurship education on entrepreneurial intention in a comparative manner between students in science and technology and those in economics and management (Sun et al., 2017). Thus, taking into account these findings, we formulate the following hypothesis:

***H5**: There is a significant difference in the entrepreneurial intention of students in economics and management and those in science and technology (Figure 1).*

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

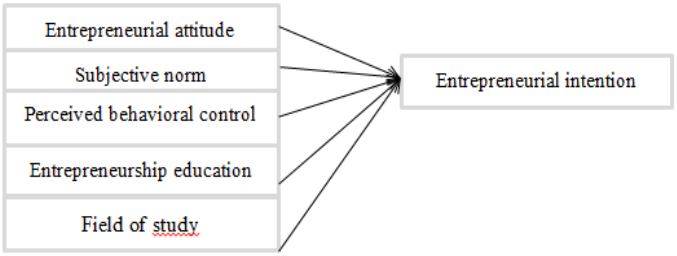

FIGURE 1
CONCEPTUAL MODEL OF RESEARCH

METHODOLOGY

Data and Variables

The controversy between the defenders of the quantitative method and the qualitative method fertilizes the methodological choices of research in this area. Given that the purpose of this research work is to test the effect of entrepreneurship education on the entrepreneurial intention of students, we opted for the quantitative method (Norashidah, 2015; Sultan et al., 2016).

Furthermore, Thiétard states that 'data collection is a crucial element of the management research process. It allows the researcher to gather the empirical material on which he will base his research'. Thus, to collect the data we opt for a questionnaire as a data collection tool from undergraduate students in economics and management and science and technology registered at the University of Sousse in Tunisia. Furthermore, we targeted second and third year students because, in the Tunisian higher education system, all students at this level have entrepreneurship teaching modules.

The questionnaire is based on a fivepoint Likert scale to measure items related to all the variables of the study (entrepreneurial intention, entrepreneurial attitude, subjective norm, perceived behavioral control and entrepreneurial education). This scale is harmonious and based on two symmetrical poles, namely, 1 "Strongly disagree" and 5 "Strongly agree". The number of rungs of this scale is highly favored in management research because it is based on ability conducive to differentiation between responses. At this level, it is appropriate to present the study variables in the following table1.

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

Table 1 STUDY VARIABLE		
Variables	**Authors**	**Question**
Entrepreneurial intention	Arranz et al. (2019); Pihie and Akmaliah, (2009); Urban and Kujinga, (2017)	The idea is appealing of one day starting your own business
		I will choose a career as an entrepreneur
		I prefer to be an entrepreneur rather than to be an employee in a company or an organization
		I will want to have the freedom to develop my own business
		I will want to make a great impact on society through my entrepreneurial skills
Entrepreneurial attitude	Nabi et al. (2008); Pihie and Akmaliah, (2009)	I have always worked hard to be among the best in my field
		I often sacrifice personal comfort to take advantage of business opportunities
		I would rather be my own boss than have a secure job
		I can make big money only if I can create my own business
		I feel energetic working with innovative colleagues in a dynamic business climate
Subjective norm	Arranz et al.(2019),	I believe that my closest family thinks that I should pursue a career as an entrepreneur.
		I believe that my close friends think that I should pursue a career as an entrepreneur
		I believe that people, who are important to me, think that I should pursue a career as an entrepreneur.
Perceived behavioral control	Arranz et al.(2019)	If I start my own business the chances of success would be very high
		I have enough knowledge and skills to start a business
		I am capable to develop or handle an entrepreneurial project
		Entrepreneurs have a positive image within society
		I am aware of the startup support
Entrepreneurial éducation	Byabashaija and Katono, (2011); Fayolle et Gailly, (2015); Rasmussen and Sorheim, (2006)	The entrepreneurship course increase my understanding of the attitudes of entrepreneurs
		The entrepreneurship course increase my understanding of entrepreneurship to both society and individuals
		The entrepreneurship course increase my understanding of generating ideas
		The entrepreneurship course increase my understanding of financial preparation for entrepreneurship ventures
		The entrepreneurship course enhances my skills to deal with risks and uncertainties

In order to choose a sample of students maximizing the statistical quality of our data, we chose to administer the questionnaires to respondents facetoface, to ensure the quality of the responses and remove ambiguity if any.

Method of Analysis

To test the validity of the hypotheses of this research and examine the validity of the links proposed by the theoretical model, we use the techniques used for the development of exploratory analyses, namely, Principal Component Analysis (PCA). In addition, we use the

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18**.**

multiple regression method for estimates of the links between the variables of the model studied (Denanyoh et al., 2015).

Furthermore, to examine the validity of the measurement scales, we used principal components factor analysis. Validity is based on checking the factorial weight of variable items by examining standard regression coefficients. of KaiserMeyerOlkin (KMO), which must be greater than or equal to 0.5 to be judged acceptable (Rizqi et al, 2022). Additionally, Bartlett's test of sphericity should be statistically significant in order to show the strength of the correlations. In addition, we used Cronbach's Alpha which is a reliability coefficient allowing measuring the internal consistency between the items of a measurement scale (Shah et al., 2020). The principle of reliability makes it possible to minimize the number of initial items and eliminate items according to the value of Cronbach's alpha coefficient. Thus, for Vuong & Giao (2020), a Cronbach's alpha coefficient greater than 0.6 is acceptable since it has reflected the reliability of a measurement scale. To do this, a principal components analysis will be carried out in order to eliminate items that are poorly represented, and then obtain a purified version of the scale (Chang et al., 2021; Passoni & Glavam, 2018).

RESULTS

Descriptive Statistics

Descriptive statistics in the form of frequencies, percentages, means, and minimum and maximum values were used in analyzing the demographic variables of the study sample summarized in Table 2.

Table 2
CHARACTERISTICS OF THE SAMPLE

Characteristics	Interval	Numbers	Percentage
Gender	Male	119	42.5
	Female	161	57.5
Age	20 to 22 years	91	32.5
	22 to 24 years	115	41.1
	24 to 26 years	51	18.2
	26 to 28 years	16	5.7
	Over 28 years	7	2.5
Education level	Second year	102	36.4
	Third year	178	63.6
Domaine d'étude	Economics and Management	140	50
	Science and technology	140	50

Regarding the gender distribution of respondents, the results show that the majority of respondents are female students representing 57.5% while the remaining 42.5% are male. This result confirms the female domination in Tunisian universities which may be due, among other things, to socioeconomic factors as well as the increase in young unemployed male graduates number. It is for this reason that the latter leave the university environment and seek other professional opportunities in order to guarantee ~~a~~ the desired standard of living.

Descriptive results of age distribution of respondents indicate that the majority are aged between 22 and 24 years old with a rate of 41.1%, while only 2.5% are aged over 28 years old. The result confirms that the majority of respondents are still young people who can show a lot of energy to pursue an entrepreneurial career (Betáková et al., 2020).

The descriptive result of respondents distribution based on the level of study revealed that 36.4% of respondents are in the second year (level 102), while 63.6% are in the third year

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

(level 178). This implies that the majority of students surveyed has had extensive training in entrepreneurship and business creation and would most likely have a reasonable number of interactions with professors taking entrepreneurship courses.

For the study field of the students surveyed, we chose an equal number of respondents (140 students in economics and management and 140 in science and technology in undergraduate studies) in order to avoid result bias generated by the difference in size between the two samples and be able to statistically compare the effect of entrepreneurship education on entrepreneurial intention between the two samples.

Descriptive Statistics of Variables

Table 3
DESCRIPTIVE STATISTICS OF ENTREPRENEURIAL INTENTION

Variable	Mean	Standard deviation	Cronbach's alpha	KMO
1- The idea is appealing of one day starting your own business (*EI1*)	3.24	1.34	.871	.877
2- I will choose a career as an entrepreneur (*EI2*)	3.15	1.38		
3- I prefer to be an entrepreneur rather than to be an employee in a company or an organization (*EI3*)	3.14	1.36		
4- I will want to have the freedom to develop my own business (*EI4*)	3.11	1.36		
5- I will want to make a great impact on society through my entrepreneurial skills (*EI5*)	3.23	1.37		
Scale mean	3.18	1.36		

Table 3 presents the results of descriptive statistics of entrepreneurial intention of undergraduate students in economics and management as well as science and technology. The results indicate that university students who have taken entrepreneurship courses have a strong intention towards entrepreneurship. The Cronbach alpha coefficient for measuring entrepreneurial intention is greater than 0.6, which indicates good measurement reliability. Thus, the KMO index is greater than 0.5, indicating good measurement validity (Amofah et al., 2020).

Table 4
DESCRIPTIVE STATISTICS OF ENTREPRENEURIAL ATTITUDE

Variable	Mean	Standard deviation	Cronbach's alpha	KMO
1- I have always worked hard to be among the best in my field (*EA1*)	3.63	1.34	.858	.867
1- I often sacrifice personal comfort to take advantage of business opportunities (*EA2*)	3.62	1.31		
2- I would rather be my own boss than have a secure job (*EA3*)	3.66	1.35		
3- I can make big money only if I can create my own business (*EA4*)	3.72	1.23		
4- I feel energetic working with innovative colleagues in a dynamic business climate (*EA5*)	3.75	1.30		
Scale mean	3.67	1.30		

Table 4 above shows the mean and standard deviation of entrepreneurial attitude. As shown, the scale variance is 3.67. This result indicates a good level of attitude towards entrepreneurship among students. This has a positive impact on the entrepreneurial intention

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

of students. Cronbach's alpha coefficient indicates high reliability of the measurements. Thus, the KMO index indicates good measurement validity.

Table 5
DESCRIPTIVE STATISTICS OF SUBJECTIVE NORM

Variable	Mean	Standard deviation	Cronbach's alpha	KMO
1- I believe that my closest family thinks that I should pursue a career as an entrepreneur (*SN1*)	3.98	1.26	.790	.697
5- I believe that my close friends think that I should pursue a career as an entrepreneur (*SN2*)	3.84	1.35		
6- I believe that people, who are important to me, think that I should pursue a career as an entrepreneur (*SN3*)	3.98	1.26		
Scale mean	3.93	1.29		

Table 5 indicates that the students surveyed note that there is a social and family support system (3.93) that encourages entrepreneurship. There is also high reliability and validity of measurement.

Table 6
DESCRIPTIVE STATISTICS OF PERCEIVED BEHAVIORAL CONTROL

Variable	Mean	Standard deviation	Cronbach's alpha	KMO
1- If I start my own business the chances of success would be very high (*PBC1*)	3.98	1.12	.849	.868
1- I have enough knowledge and skills to start a business (*PBC2*)	3.85	1.12		
2- I am capable to develop or handle an entrepreneurial project (*PBC3*)	3.77	1.17		
3- Entrepreneurs have a positive image within society (*PBC4*)	3.88	1.12		
4- I am aware of the startup support (*PBC5*)	3.82	1.15		
Scale mean	3.74	1.13		

Source: authors' computation using SPSS

Table 6 presents a descriptive statistical analysis on behavioral control. The scale mean of 3.74 is favorable. The variance shows that economics and management and science and technology students have behavioral control. Reliability measured by Cronbach's alpha also shows high reliability as well as high validity (Ammam, 2021).

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18**.**

Table 7 DESCRIPTIVE STATISTICS OF ENTREPRENEURSHIP EDUCATION				
Variable	**Mean**	**Standard deviation**	**Cronbach's alpha**	**KMO**
1- The entrepreneurship course increase my understanding of the attitudes of entrepreneurs (EE1)	4.03	1.24	.887	.871
2- The entrepreneurship course increase my understanding of entrepreneurship to both society and individuals (EE2)	4.01	1.22		
3- The entrepreneurship course increase my understanding of generating ideas (EE3)	4.13	1.17		
4- The entrepreneurship course increase my understanding of financial preparation for entrepreneurship ventures (EE4)	4.03	1.12		
5- The entrepreneurship course enhances my skills to deal with risks and uncertainties (EE5)	4.10	1.25		
Scale mean	4.06	1.20		

Source: authors' computation using SPSS

Table 7 indicates that the students surveyed note that they have followed training in entrepreneurship and business creation (4.06), which encourages their intention to pursue entrepreneurial activity. There is also good measurement reliability and validity (Alnemer, 2021).

In order to achieve our objective, multiple regression analysis is used considering two models. In model 1, entrepreneurial attitude, subjective norms, behavioral control and entrepreneurship education are regressed on the entrepreneurial intention of economics and management students. In model 2, entrepreneurial attitude, subjective norms, behavioral control and entrepreneurship education are regressed on entrepreneurial intention of science and technology students. The explanatory power and ANOVA results of two regression models are presented in Tables 8 and 9.

Table 8 MODEL SUMMARIES[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	DurbinWatson
1	.619	.383	.292	4,39344	1,949
2	.747	.559	.493	3,06116	2,189

Source: authors' computation using SPSS

Table 9 ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1451,702	18	80.650	4.178	.000[b]
	Residual	2335,583	121	19.302		
	Total	3787,286	139			
2	Regression	1434,720	18	79.707	8.506	.000[b]
	Residual	1133,852	121	9.371		
	Total	2568,571	139			

Source: authors' computation using SPSS

The statistical results show a strong correlation between behavioral attitudes, subjective norms, behavioral control, entrepreneurial education and entrepreneurial intention in the two estimated models. In model 1, (R=.705%) and (R=.457%) in model 2. The adjusted R2 is positive in both models, indicating that the variables are moving in the same direction.

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18**.**

Therefore, both models are overall significant ($p < 0.05$). The calculated F is 33.441 for model 1 and 8.896 for model 2. They are highly significant ($p < 0.05$), which implies that there is an effect relationship between entrepreneurial intention and the independent variables. Similarly, the DurbinWatson statistic shows the serial correlation of the residuals which is 2.181 in the first model and 1.850 in the second model, the value is within the acceptance range (1.5 and 2.5).

Thus, to determine the extent of the influence of entrepreneurial attitude, subjective norms, perceived behavioral control as well as entrepreneurship education on the entrepreneurial intention of students, the regression results presented in Table 10. The results indicate that students' entrepreneurial intention is positively associated with attitude towards entrepreneurship, subjective norms and entrepreneurial education in both models, this is reflected through the regression coefficients which are significant ($p<0.05$). While perceived behavioral control is not positively associated with perceived behavioral control among students in both fields of study to the extent that the regression coefficients are not significant at the 5% level (Table 10).

Table 10
MULTIPLE REGRESSION RESULTS: MODEL 1 AND 2

Modèle	**1 (Economy and management)**					**2 (Science and technology)**				
	Unstandardized coefficients		Standardized coefficients	t	Sig.	Standardized coefficients		Coeffi standar disés	t	Sig.
	B	Standar dis Errors	Béta			B	Standar dis Errors	Béta		
(**Constant**)	5.913	1.423		4.154	.000	6.318	2.535	.260	2.492	.014
t)	.198	.077	.269	2.578	.011	.238	.087	.166	2.731	.007
EA	.166	.073	.145	2.274	.025	.209	.097	.088	2.162	.032
SN	.056	.079	.062	.713	.477	.077	.068	.208	1.127	.262
PBC	.286	.081	.382	3.550	.001	.164	.074		2.207	.029
EE										

Hypothesis Testing

To test the research hypotheses, the regression results in Table 10 were used. The ttest and its significance were used to test the importance of entrepreneurial attitude, subjective norms, perceived behavioral control and entrepreneurship education on entrepreneurial intention. The decision rule is to reject the hypothesis if the probability value (P value) is greater than 5% of the significance level (0.05).

Testing the First Hypothesis

The regression result in Table 10 is used to test the first hypothesis (H1) below:

H1. Entrepreneurial attitude has a positive impact on students' entrepreneurial intention.

The tvalues for attitude towards entrepreneurship in Table 10 are significant ($p<0.05$) in both models. Therefore, this study confirms that attitude towards entrepreneurship has a positive and significant effect on the entrepreneurial intention of students from two fields of study. Therefore, we accept hypothesis H1.

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

Testing the Second Hypothesis

Table 10 is also used to test the second hypothesis (H2). To do this, the hypothesis is repeated below:

H2: Subjective norm has a positive impact on students' entrepreneurial intention.

Furthermore, the tvalue of subjective norms shows a positive sign of significance in both models ($p<0.005$). Since the significance sign of P is less than 5%, this study accepts hypothesis H2. In other words, subjective norms have a significant positive effect on the entrepreneurial intention of economics and management students as well as science and technology students (Muhammad et al., 2015; Norashidah, 2015; Alnemer, 2021).

Testing the Third Hypothesis

The regression result in Table 10 is appropriate for testing the third hypothesis (H3) below:

H3. Perceived behavioral control has a positive effect on students' entrepreneurial intention.

The tvalues for perceived behavioral control in Table 10 are not significant at the 5 percent level in either model. Therefore, this study confirms that Perceived behavioral control does not have a positive effect on students' entrepreneurial intention in both fields of study. Therefore, we reject hypothesis H3. The result of this study contradicts the results of previous studies (Vracheva et al., 2019; Lingappa et al., 2020; Sultan et al., 2016) which reported that the perceived behavioral control of students has a positive effect on entrepreneurial intention

Testing the Fourth Hypothesis

Table 10 is also used to test the fourth hypothesis (H4). To do this, the hypothesis is repeated below:

H4. Entrepreneurship education has a positive effect on students' entrepreneurial intention.

Likewise, the t values of entrepreneurship education show a positive sign of significance in both models ($p<0.005$). Since the significance sign of P is less than 5%, this study accepts hypothesis H4. In other words, entrepreneurship education positively affects entrepreneurial intention among students, whether in the field of economics and management or in the field of science and technology. The result of this study is confirmed by several previous studies which indicate that entrepreneurship education has a positive and significant impact on students' entrepreneurial intention.

Testing the Fifth Hypothesis

Table 10 is also used to test the fifth hypothesis (H5). To do this, the hypothesis is repeated below:

H5: There is a significant difference in the entrepreneurial intention of students in economics and management and those in science and technology (Abdullahi et al., 2021).

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

The t values of entrepreneurship education are significant at the 5% level, and positively affect the entrepreneurial intention of students in both groups of students. However, there is a significant difference in entrepreneurial intention between the two groups of students ($p<0.001$) for students in economics and management and ($p<0.029$) for those in science and technology, which leads us to accept hypothesis H5. Indeed, economics and management students demonstrate a higher entrepreneurial intention compared to science and technology students. Indeed, this can be explained by the fact that economics and management students benefit more from entrepreneurship training since they follow other teaching modules directly related to the business world such as finance, accounting, economics, human resources management, taxation and business law etc., which allow them to better understand the field of entrepreneurship and business creation and demonstrate good level of entrepreneurial intention compared to science and technology students. The result of this study is confirmed by other previous ones (Maresch et al., 2016; Passoni & Glavam, 2018) which confirmed the existence of a significant difference in the level of entrepreneurial intention of students in different university courses.

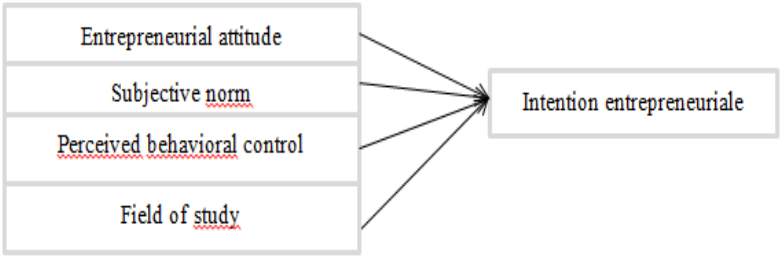

FIGURE 2
RESEARCH MODEL

CONCLUSION

No person can deny the crucial role of entrepreneurship in economic growth and social development in developed and developing countries. As a result, educational strategies and programs aimed at stimulating the creation of new businesses have been developed in the transition economies of Central and Eastern Europe. The current strategy is to encourage young university students and even graduates to create new businesses for dealing with the unemployment problem. This is why the objective of this research is to study entrepreneurial intention among students while verifying the impact of education on their entrepreneurial intentions.

To do this, we used Ajzen's theory of planned behavior model in order to achieve our objective. The results of the multiple regression analysis show that the Ajzen model is verified. Attitude towards behavior, subjective norm and entrepreneurship education significantly explain students' entrepreneurial intention, but behavioral control is not significant. Furthermore, entrepreneurship education positively predicts entrepreneurial intention to the extent that students in economics and management and those in science and technology positively express a good level of intention, but with a slightly different level. Indeed, students in economics and management show a higher level of intention compared to students in science and technology. This is explained by the influence of the university course because the latter have other modules linked to the business world and in permanent interaction with teachers specializing in business management.

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18.

Theoretical and Practical Implication

The theoretical contribution of our study puts into perspective the linearity on entrepreneurship in Tunisia which generally explains the entrepreneurial intention of students only by the three antecedents of the model of the theory of planned behavior of Ajzen and some socioeconomic factors, our research highlights the importance of entrepreneurship education as a central determinant of students' entrepreneurial intention.

On a practical level, our study showed that reducing unemployment among university students through selfemployment requires strong attention from public authorities to develop entrepreneurial potential among students and strengthen their skills through training and practical seminars as well as the establishment of a network of university partnerships/support structures and support for entrepreneurship. Likewise, a financial structure dedicated to financing projects created by students and young graduates seems important for students with ambition for business creation.

Future Avenues of Research

The present research represents a passage to study the entrepreneurial intention of students based on entrepreneurship education and field of study. This field of research deserves to be further developed by other works shedding light on the entrepreneurial intention of students based on a comparison between several fields of study, several regions, various cycles of study and a comparison between graduate and nongraduate students.

REFERENCES

Abdullahi, S.M., Khalid, N., Ahmed, U., Ahmed, M.E., & Gumawa, M.A. (2021). Effect of Entrepreneurship Education on Entrepreneurial Intention among University Students . *Journal of Technical Education And Training*, *13*(3), 40-53.

Alnemer, A. H. (2021). Determinants of entrepreneurial intention among students of management stream in the Kingdom of Saudi Arabia. *Entrepreneurship Education*, *4*, 425–445.

Ammam, R. (2021). The impact of entrepreneurship education on the entrepreneurial intention of students Business administration State of the students of the University of Laghouat. *Industrial Economics Review*, *11*(1), 829-848.

Amofah, K., Saladrigues, R., & Akwaa-Sekyi, K.E. (2020). Entrepreneurial intentions among MBA students. *Cogent Business & Management*, *7*(1), 1-23.

Betáková, J., Havierniková, K., Okręglicka, M., Mynarzova, M., & Magda, R. (2020). The role of universities in supporting entrepreneurial intentions of students toward sustainable entrepreneurship. *Journal of Entrepreneurship and Sustainability Issues*, *8*(1), 573-589.

Chang,Y.Y., Wannamakok, W., & Kao, P.C. (2021). Entrepreneurship education, academic major, and university students' social entrepreneurial intention: the perspective of Planned Behavior Theory. Studies in Higher Education.

Denanyoh,R., Kwabena Adjei, K., & Nyemekye, E. G. (2015). Factors That Impact on Entrepreneurial Intention of Tertiary Students in Ghana. *International Journal of Business and Social Research*, *5*(3), 19-29.

Ehongo, A.N.E., & Bitha, A.M.M. (2019). The determinants of the entrepreneurial intention of the students of the professional sectors in Cameroun. *Moroccan Journal of Entrepreneurship, Innovation and Management*, *4*(2), 77-91

Elnadi, M., Gheith, H.M., & Farag, T. (2020). How does the perception of entrepreneurial ecosystem affect entrepreneurial intention among university students in Saudi Arabia?, *International Journal of Entrepreneurship*, *24*(3), 1-15.

Fragosoa,R., Rocha-Juniorb, W., & Xavierc, A. (2019). Determinant factors of entrepreneurial intention among university students in Brazil and Portugal. Journal of Small Business & Entrepreneurship. 10.1080/08276331.2018.1551459.

Galvão,A., Marques,S.C., & Marques, P. C. (2018). Antecedents of entrepreneurial intentions among students in vocational training programmes, *Education + Training*,

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18**.**

Gerba, T.D. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. *African Journal of Economic and Management Studies*, *3*(2), 258 – 277.

Idris, A. A. (2017). Entrepreneurial Intention among Postgraduate Students in Nigerian Universities: Conceptual Review. *American Finance & Banking Review*, *1*(1), 12-23.

Isma, A., Sudarmiatin., & Hermawan, A. (2020). The effect of entrepreneurial self-efficacy, subjective norm, and locus of control on entrepreneurial intention through entrepreneurial attitude in economic faculty students of universitas negeri Makassar. *International Journal of Business, Economics and Law*, *23*(1), 262-272.

Iwu, G.G., Ezeuduji, O.I., Eresia-Eke, C., & Tengeh, R. (2016). The Entrepreneurial Intention of University Students: The Case of a University of Technology in South Africa. *Acta Universitatis Danubius, 12*(1), 164-181.

Jarraya, H (2024). Le développement de l'intention entrepreneuriale des étudiants de l'université tunisienne : Impact des antécédents à l'intention et de l'Education Entrepreneuriale. *Revue Internationale des Sciences de Gestion*, *7*(1), 533 – 560.

Jemli, H. (2018). Effet de l'enseignement de l'entrepreneuriat sur l'intention entrepreneuriale des étudiants inscrits dans les écoles tunisiennes d'ingénieurs. *Marché et organisations*, *3*(33), 145-171

Jorge-Moreno,D.J., Castillo,L.L., & Triguero, S.M. (2012). Emerald Article: The effect of business and economics education programs on students' entrepreneurial intention. *European Journal of Training and Development; 36*(4), 409-425.

Lingappa, K.A., Shah, A., & Mathew, O.A. (2020). Academic, Family, and Peer Influence on Entrepreneurial Intention of Engineering Students. SAGE Open.

Mamman, A., Olaoye, K. I., Abdulrahaman, M. A., ShagarI, N.J., & Lekan, K.O. (2018). The Influence of Entrepreneurship Education on the Entrepreneurial Intentions of University Students in Katsina State, Nigeria. *Acta Univ. Sapientiae, Economicsand Business, 6*, 21-42.

Maresch, D., Harms, R., Kailer, N., & Wimmer-Wurm, B. (2016). The impact of entrepreneurship education on the entrepreneurial intention of students in science and engineering versus business studies university programs. *Technological Forecasting and Social Change*, *104*, 172-179.

Mensah, K.I., Zeng,G., Luo, C., Xiao, Z., & Lu, M. (2021). Exploring the Predictors of Chinese College Students' Entrepreneurial Intention. Sage Open.

Muhammad, D.A., Aliyu, S., & Ahmed, S. (2015). Entrepreneurial Intention Among Nigerian University Students. *American Journal Of Business Education*, *8*(4), 239-248.

Norashidah. (2015). Impact of Entrepreneurial Education on Entrepreneurial Intentions of Pakistani Students. *Journal of Entrepreneurship and Business Innovation*, *2*(1), 43-53.

Passoni, D., & Glavam, R.B. (2018). Entrepreneurial intention and the effects of entrepreneurial education: Differences among management, engineering, and accounting students. *International Journal of Innovation Science*, *10*(1), 92-107.

Rizqi,A.U., Pratikto,H., & Kusdiyanti, H. (2022). Entrepreneurship Education and Economic Literacy Mediated by Entrepreneurial Self-Efficacy Affect Entrepreneurial Intention. *International Journal Of Humanities Education And Social Sciences, 2*(1), 190 – 204.

Shah, A.I., Amjed, S., & Jaboob, S. (2020). The moderating role of entrepreneurship education in shaping entrepreneurial intentions. *Journal of Economic Structures.*

Sultan, F.M., Maqsood, A., & Shrif, M.H. (2016). Impact of Entrepreneurial Education on Students Entrepreneurial Intentions. *KASBIT Business Journal*, *9*, 131-153.

Sun, H., Lo, T.C., Bo Liang, B., & Wong, B.L.Y. (2017). The Impact of Entrepreneurial Education on Entrepreneurial Intention of Engineering Students in Hong Kong. *Management Decision, 55*(7), 1371-1393.

Tchagang, E. (2017). Les déterminants de l'intention entrepreneuriale des étudiants camerounais. *Management & Sciences Sociales*, *1*(22), 172 à 190.

Vracheva, P.V., Abu-Rahma, A., & Jacques, P. (2019). Effects of context on the entrepreneurial intent of female students from the United Arab Emirates. *Education + Training, 61*(6), 700-717.

Vuong,N.B., Phuong, D.N.N., Huan, D.D., & Quan, N.T. (2020). A Model of Factors Affecting Entrepreneurial Intention among Information Technology Students in Vietnam. *Journal of Asian Finance, Economics and Business*, *7*(8), 461-472.

Xanthopoulou, P., & Sahinidis, A. (2024). Students' Entrepreneurial Intention and Its Influencing Factors: A Systematic Literature Review. *Administrative Sciences, 14*(98), 1-28.

Yousif Alia, S.M., & Aboub, E.A.E.(2020). Determinants of entrepreneurial intention among Sudanese university students. *Management Science Letters*, *10*, 2850-2860.

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18**.**

Received: 1-Aug-2024, Manuscript No. AJEE-24-15168; **Editor assigned:** 3-Aug-2024, PreQC No. AJEE-24-15168(PQ); **Reviewed:** 19-Aug-2024, QC No. AJEE-24-15168; **Revised:** 24-Aug-2024, Manuscript No. AJEE-24-15168(R); **Published:**29-Aug-2024

Citation Information: Kraiem, A.(2024). The effect of entrepreneurship education on the entrepreneurial intention of tunisian students: Comparative study. *Journal of Entrepreneurship Education, 27*(S6),18**.**