


**AWARENESS ON ENTREPRENEURIAL ORIENTATION AMONG MANAGEMENT STUDENTS IN VELLORE**

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ARTICLE INFO	ABSTRACT
<p><b>Article history:</b></p> <p><b>Received</b> 31 January 2023</p> <p><b>Accepted</b> 26 April 2023</p>	<p><b>Purpose:</b> Thus, the objective of this study was to analyze, by means of multivariate techniques, an instrument whose function is to measure the learning of teaching Entrepreneurship, verifying the change in the entrepreneurial profile between participants and non-participants of the entrepreneurial formation process. The research was carried out among university students of the Business Administration course, Vellore.</p>
<p><b>Keywords:</b></p> <p>Entrepreneurship; Entrepreneurial Self-Efficacy; Academic Self-Efficacy; Business Administration Course.</p> <div data-bbox="172 974 480 1220" style="text-align: center;">  </div>	<p><b>Theoretical Framework:</b> Entrepreneurship is a socio-economic phenomenon that has been valued for its influence on the growth and development of regional and national economies. The main agent promoting this phenomenon is the entrepreneur; a subject endowed with multiple characteristics who act in a dynamic way and is focused on reaping results, the fruits of their personal efforts. The insertion and search for enterprising subjects in different societies have been noticeable in public, economic and educational programs and policies. Entrepreneurial education is highlighted as one of the most efficient ways to disseminate culture and train new entrepreneurs. From this perspective, the teaching of Entrepreneurship stands out as a resource used for the formation of new entrepreneurs.</p> <p><b>Design/Methodology/Approach:</b> The present study aims to analyze the entrepreneurial intention of students from four Institutions in Vellore, relating it to entrepreneurial self-efficacy and academic self-efficacy, and to try to understand which factors influence it. The sample of this study consists of 290 students from four Institutions in Vellore, of which 114 (39.3%) are male and 176 (60.7%) are female.</p> <p><b>Findings:</b> Regarding the degree of importance that students attribute to the Institution support structures for the creation of a company, there is a statistically significant difference, in which the GTEC students stand out, who are the ones who attach the most importance to "Spaces and equipment for starting the business". With regard to the remaining questions, there are no statistically significant differences between the mean values of the answers given depending on the Institution.</p> <p><b>Research, Practical/ &amp; Social Implications:</b> In the analysis of the differences between Institutions, it was verified the existence of statistically significant differences in the questions related to the desire to create their own company and to have a concrete business idea to create, in which SPIM showed a higher average in relation to the other three Institutions. Regarding the other two research questions, "I consider myself capable of creating a company", and "I am able to work on my own", there were no statistically significant differences between the four Institutions.</p> <p><b>Originality/Value:</b> The present study adds value among the management students with regard to the awareness on entrepreneurship which leads to the country' economic development.</p> <p>Doi: <a href="https://doi.org/10.26668/businessreview/2023.v8i5.1422">https://doi.org/10.26668/businessreview/2023.v8i5.1422</a></p>

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## CONSCIENTIZAÇÃO SOBRE ORIENTAÇÃO EMPREENDEDORA ENTRE ESTUDANTES DE ADMINISTRAÇÃO EM VELLORE

### RESUMO

**Objetivo:** Assim, o objetivo deste estudo foi analisar, por meio de técnicas multivariadas, um instrumento cuja função é mensurar o aprendizado do ensino de Empreendedorismo, verificando a mudança no perfil empreendedor entre participantes e não participantes do processo de formação empreendedora. A pesquisa foi realizada entre universitários do curso de Administração de Empresas, Vellore.

**Enquadramento Teórico:** O empreendedorismo é um fenômeno socioeconômico que tem vindo a ser valorizado pela sua influência no crescimento e desenvolvimento das economias regionais e nacionais. O principal agente promotor desse fenômeno é o empresário; um sujeito dotado de múltiplas características que atua de forma dinâmica e focado em colher resultados, frutos de seus esforços pessoais. A inserção e a busca por sujeitos empreendedores em diferentes sociedades têm sido perceptíveis em programas e políticas públicas, econômicas e educacionais. A educação empreendedora é destacada como uma das formas mais eficientes de disseminar a cultura e formar novos empreendedores. Nessa perspectiva, destaca-se o ensino do Empreendedorismo como recurso utilizado para a formação de novos empreendedores.

**Desenho/Methodologia/Abordagem:** O presente estudo tem como objetivo analisar a intenção empreendedora de alunos de quatro Instituições de Vellore, relacionando-a com a autoeficácia empreendedora e a autoeficácia acadêmica, e tentar entender quais fatores a influenciam. A amostra deste estudo é composta por 290 alunos de quatro Instituições de Vellore, dos quais 114 (39,3%) são do sexo masculino e 176 (60,7%) do sexo feminino.

**Resultados:** Relativamente ao grau de importância que os alunos atribuem às estruturas de apoio da Instituição à criação de uma empresa, existe uma diferença estatisticamente significativa, em que se destacam os alunos do GTEC, que são os que mais atribuem importância aos “Espaços e equipamentos para iniciar o negócio”. Relativamente às restantes questões, não existem diferenças estatisticamente significativas entre os valores médios das respostas dadas consoante a Instituição.

**Implicações de Investigação, Práticas e Sociais:** Na análise das diferenças entre as Instituições, verificou-se a existência de diferenças estatisticamente significativas nas questões relacionadas com o desejo de criar a sua própria empresa e de ter uma ideia de negócio concreta para criar, em que a SPIM apresentou média superior em relação às outras três Instituições. Em relação às outras duas questões de pesquisa, “me considero capaz de criar uma empresa” e “sou capaz de trabalhar por conta própria”, não houve diferenças estatisticamente significativas entre as quatro Instituições.

**Originalidade/Valor:** O presente estudo agrega valor entre os alunos de administração no que diz respeito à conscientização sobre o empreendedorismo que leva ao desenvolvimento econômico do país.

**Palavras-chave:** Empreendedorismo, Autoeficácia Empreendedora, Autoeficácia Acadêmica, Curso de Administração.

## SENSIBILIZACIÓN SOBRE LA ORIENTACIÓN EMPREENDEDORA ENTRE LOS ESTUDIANTES DE GESTIÓN DE VELLORE

### RESUMEN

**Propósito:** Así, el objetivo de este estudio fue analizar, mediante técnicas multivariadas, un instrumento cuya función es medir el aprendizaje de la enseñanza del Emprendimiento, verificando el cambio en el perfil emprendedor entre participantes y no participantes del proceso de formación empreendedora. La investigación fue realizada entre estudiantes universitarios de la carrera de Administración de Empresas, Vellore.

**Marco Teórico:** El emprendimiento es un fenómeno socioeconómico que ha sido valorado por su influencia en el crecimiento y desarrollo de las economías regionales y nacionales. El principal agente promotor de este fenómeno es el emprendedor; un sujeto dotado de múltiples características que actúa de forma dinámica y está enfocado a cosechar resultados, los frutos de su esfuerzo personal. La inserción y búsqueda de sujetos emprendedores en diferentes sociedades se ha hecho notar en programas y políticas públicas, económicas y educativas. La educación empreendedora se destaca como una de las vías más eficientes para difundir la cultura y formar nuevos emprendedores. Desde esta perspectiva, la enseñanza del Emprendimiento se destaca como un recurso utilizado para la formación de nuevos emprendedores.

**Diseño/Methodología/Enfoque:** El presente estudio tiene como objetivo analizar la intención empreendedora de estudiantes de cuatro Instituciones de Vellore, relacionándola con la autoeficacia emprendedora y la autoeficacia académica, y tratar de comprender qué factores influyen en ella. La muestra de este estudio está compuesta por 290 estudiantes de cuatro Instituciones de Vellore, de los cuales 114 (39,3%) son hombres y 176 (60,7%) son mujeres.

**Hallazgos:** En cuanto al grado de importancia que los estudiantes atribuyen a las estructuras de apoyo de la Institución para la creación de una empresa, existe una diferencia estadísticamente significativa, en la que se destacan los estudiantes del GTEC, quienes son quienes le otorgan mayor importancia a los “Espacios y equipamiento para la puesta en marcha de la empresa”. Con respecto al resto de preguntas, no existen diferencias estadísticamente significativas entre los valores medios de las respuestas dadas según la Institución.

**Implicaciones de Investigación, Prácticas y Sociales:** En el análisis de las diferencias entre Instituciones, se verificó la existencia de diferencias estadísticamente significativas en las preguntas relacionadas con el deseo de crear su propia empresa y tener una idea de negocio concreta para crear, en la cual SPIM mostró un promedio superior en relación a las otras tres Instituciones. En cuanto a las otras dos preguntas de investigación, “Me considero capaz de crear una empresa”, y “Soy capaz de trabajar por mi cuenta”, no hubo diferencias estadísticamente significativas entre las cuatro Instituciones.

**Originalidad/Valor:** El presente estudio agrega valor entre los estudiantes de administración en cuanto a la conciencia sobre el emprendimiento que conduce al desarrollo económico del país.

**Palabras clave:** Emprendimiento, Autoeficacia Empresarial, Autoeficacia Académica, Curso de Administración de Empresas.

## INTRODUCTION

Entrepreneurship assumes nowadays an unquestionable importance in the economic dynamism of societies, bringing together politicians, academics and entrepreneurs around the theme. The Indian Government itself promotes entrepreneurship as a key factor of competitiveness, and highlights the importance of fostering a Indian entrepreneurial culture, according to Esfandiar *et al.* (2019); Ewijk *et al.* (2019); Fretschner & Lampe (2019); Galvão (2018). Ismail (2015) and Anuar *et al.* (2015) identified entrepreneurship as a dynamic process of change, identification/creation of new opportunities, entrepreneurship is currently assumed as a fundamental element in the economic development of countries, being seen as a determining agent of innovation, competitiveness and growth.

For this reason, it is convenient to understand what makes an individual to be an entrepreneur, what is the importance of entrepreneurship as a dynamizer of the economy, especially in times of crisis, what factors are associated with an entrepreneurial attitude and, among others, what is the role of institutions of higher education in promoting entrepreneurship, according to Bhunia & Shome (2023). The importance of all these issues and the study of this theme by Penpokai *et al.* (2023), is that several authors have given importance to entrepreneurship, especially in terms of its impact on socioeconomic growth over time. Although entrepreneurship does not have a single definition, there are aspects and roles that have been attributed to it in economic and social dynamism, which are consensual. It is therefore important to review the historical evolution of entrepreneurship, as suggested by Krueger *et al.* (2000); Rauch & Hulsink (2014). It was through the French economist, Cantillon (1755) that the concept of entrepreneurship appears associated with the individual who buys,

transforms and sells raw materials, thus identifying a business opportunity and taking risks. For this author, the entrepreneur is one who “takes risks because he invests his own money in ventures, and is responsible for economic exchange and circulation.”

The aim of present study is to analyze the entrepreneurial intention of students from four Institutions in Vellore, relating it to entrepreneurial self-efficacy and academic self-efficacy, and to try to understand which factors influence it. Taking into account the literature review presented, as well as the results obtained in the studies carried out by the various researchers on the subject, the established objectives are presented below:

- (i) Adapt an instrument for assessing entrepreneurial self-efficacy to our sample, in the version used by Moriano *et al.* (2006), and through this analysis the intention of students from four Institutions to create their own company;
- (ii) Characterize the entrepreneurial intention of students from four Institutions, and assess the possible existence of differences according to sex, age, Institution, cycle and area of studies they attend, carrying out an internship during the course, having family members who are entrepreneurs, and having participated in competitions to promote entrepreneurship;
- (iii) Assess the possible relationship between entrepreneurial self-efficacy and academic self-efficacy.
- (iv) Evaluate the possible relationship between these variables and the will/intention to create one's own company, and the knowledge of the entrepreneurship support structures of the Institutes.

## LITERATURE REVIEW

Entrepreneur orientation is a key management concept that reflects an organization's decision-making attitudes towards key activities, strategic practices, and management philosophy at the business level, looking for new opportunities for dynamic development and renewal, according to Wurthmann (2014) and Ngah *et al.* (2016). Scientists often use entrepreneurship as a tool to measure the entrepreneurial spirit of companies, detailed by Wales, Parida & Patel (2013). Entrepreneurial organizational design manifests itself in the way entrepreneurial spirit and behavior permeate the organization at all levels and are implemented within the company, affecting its ability to drive economic performance. Research in this area has contributed significantly to portraying entrepreneurial ubiquity as an organizational phenomenon, stated as per Lages *et al.* (2017). Entrepreneurship is a multidimensional

framework, in which several independent but related dimensions are treated as a coherent theoretical concept. The number of dimensions of entrepreneurship varies throughout the literature, but the most common approach is its five-dimensional entrepreneurship framework, which consists of pro-activeness, autonomy, competitiveness, innovation, and risk-taking is to adopt, according to Wales, Monsen & McKelvie (2011). Entrepreneurship drives the goal of starting a business and producing planned actions. Becoming an entrepreneur requires engaging in a well-thought-out process that aims to bring ideas to life in all activities, from idea creation to execution. Entrepreneurship refers to the efforts that an individual is willing to make to carry out such entrepreneurial actions. Studies by Lumpkin (2009) show that, compared to many personal and situational variables, business intentions are the most effective predictors of planned behavior as they guide future behavior and influence individual choices. Knowledge and skills are the foundations that enable people to perform certain activities. Thus, people who have acquired entrepreneurial knowledge and skills try to start their businesses in an easier way, as suggested by Kautonen *et al.* (2013). In general, to engage in or be interested in particular business activity, you must demonstrate the ability to act as intended and conduct business. All these activities take place before the actual start of the project.

The decision to become an entrepreneur is influenced by many factors, including family background, experience, and education. The acquisition of knowledge is considered a fundamental value for anyone who wants to succeed. There is a general opinion in the literature that entrepreneurship can be taught, according to Kuratko, (2005) and that entrepreneurial quality can be acquired through educational programs. There is a direct link between business education and entrepreneurship. Effective entrepreneurship education promotes a stronger entrepreneurship-related intention to start another company or face entrepreneurial challenges within an organization (internal entrepreneurship). Show a more positive attitude towards carrying out commercial activities of various kinds. Fundamentally, having knowledge about how to start and run a business has a positive impact on a student's business intentions, suggested by Gieure *et al.* (2020). Entrepreneurship education focuses on the integral aspects of starting or running a new business. This can take the form of steps an entrepreneur takes to start a business, innovation (start-up), new business development, small business management, opportunity awareness techniques, and starting a new business. However, according to Lumpkin *et al.* (2009); Kautonen *et al.* (2013), the role of business education aims to instill business behaviors and attitudes as a general skill, and the integrated role of business aspects is

part of other interdisciplinary course functions. The role of business education should be emphasized, according to Pittaway & Edwards (2012).

## **METHODOLOGY**

This study has an exploratory character based on the survey method in the form of a questionnaire. The aim of this investigation is to analyze the entrepreneurial intention of students from four Institutions, relating it to entrepreneurial self-efficacy and academic self-efficacy, and to try to understand which factors influence it. In this section, the procedures used in carrying out the study are presented, where the objectives of the study, the procedure for collecting data, and the measurement instruments used are described. Subsequently, the sample is presented and characterized and reference is made to the statistical procedures of data analysis. Finally, the conclusions are presented, with a discussion of the results, and also the limitations and practical implications of the study carried out.

The present study aims to analyze the entrepreneurial intention of students from four Institutions in Vellore, relating it to entrepreneurial self-efficacy and academic self-efficacy, and to try to understand which factors influence it. The sample of this study consists of 290 students from four Institutions in Vellore, of which 114 (39.3%) are male and 176 (60.7%) are female.

### **Procedures**

On April 24, 2022, authorization was requested from the presidents of the organic units involved in this study, via email, to apply the questionnaire to students from the Institutions they direct. After their favorable opinion, the questionnaires were distributed and collected between April and June 2022.

Participation in this study was voluntary and the questionnaires were given to students in the classroom and in the presence of a teacher. The participants answered individually, and anonymously, and the confidentiality of the data obtained was ensured.

Data processing was performed using the statistical analysis software IBM SPSS (Statistic Program for Social Sciences) version 21 for Windows. The SPSS tests performed were the F ANOVA, the T Test, and correlation tests to obtain Pearson's correlation coefficients between the academic self-efficacy scale, the five dimensions of entrepreneurial self-efficacy, and the research questions.



## Variable Assessment Instruments

Data collection was based on a structured questionnaire as follows:

In Part I, the following analysis are performed.

**Demographic data:** This part of the questionnaire collects information about the personal characteristics of the participants: age, sex, and marital status;

**Academic training:** In this section, participants will inform about the Institution they attend, the course, the year, the cycle of studies, whether or not the course they attend has an integrated internship, and whether or not they are student workers;

**Family Data:** In this section, participants are asked about the existence of family entrepreneurs, and the type, size, and sector of the company.

**Entrepreneurship Promotion:** In this part, students provide information about their knowledge of entrepreneurship promotion events, and if they have participated in any of these events/contests.

In Part II, the following analysis is performed.

**Research questions (1):** In this section of the questionnaire, four items are presented containing statements designed to assess students' entrepreneurial attitudes. The answers were coded using a seven-point Likert-type response scale, where “1” means “little” and “7” means “a lot”. The four items used to assess the entrepreneurial attitudes of the students were: “I consider myself capable of creating a company”, “I want to create my own company”, “I am able to work on my own”, and “I have a concrete idea of the business to create.”

**Entrepreneurial self-efficacy (ESS):** To assess this variable, the entrepreneur self-efficacy scale (ESS) was used, developed at San Diego State University by De Noble *et al.* (1999) and later adapted by Moriano *et al.* (2006). The scale consists of 23 items referring to the respondent's ability to perform each of the tasks described. The dimensions evaluated in this study were: “Develop new products or market opportunities”, through items such as 6 “discover new ways to improve existing products”; the second dimension evaluated was “Developing an innovative environment” and one of the items used to evaluate it was item 5 “Establishing the organization's vision and values”; the assessment of the third dimension “Initiating contacts with investors” was carried out from item 23 “Forming partnerships or alliances with others”, among others; the fourth dimension “Managing human resources” was evaluated from four items, one of which is item 14 “Create a work environment that allows people to be their own boss” and, finally, the fifth dimension “Work under stress” was evaluated using two items, one of which was used as item 1 “Work effectively in situations of conflict,

pressure, and stress”. Responses are coded on a seven-point Likert scale, where (1) corresponds to “Totally unable” and (7) to “Totally capable”.

**Academic self-efficacy (ASS):** To assess this variable, the specific perceived self-efficacy scale was used. This scale consists of 10 items, the responses being coded by a Likert-type scale, in which “Strongly disagree” (1) and “Strongly agree” (7), which assess beliefs about the ability of each person to perform certain behaviors in specifically academic situations, answering questions such as “I believe that I am a very capable and competent person in my Institution life” or another example, “I believe that I am prepared and quite capable to achieve many academic successes.”

**Research questions (2):** In the last part of the questionnaire, students provide information regarding their knowledge of support structures for the creation of companies in the Institution on a Likert-type response scale from 1 "Very bad" to 7 "Very well", they inform if they have ever thought about creating a business/own company, through a question on a Likert-type response scale from 1 "Never" to 7 "Always".

Finally, through a scale consisting of 7 Likert-type items from “Not at all important” (1) to “very important” (7), they refer to the degree of importance they attribute to student support structures for the creation of a business.

### Sample Characterization

The sample of this study consists of 290 students from four Institutes, of which 114 (39.3%) are male and 176 (60.7%) are female. As for marital status, 96.9% are single (Table 1). The mean age is 22.82 years (SD = 4.62) and varies between 18 and 53 years.

Table 1: Sample characterization (N = 290)

Characteristics	n	%
Sex		
Male	114	39.2
Female	176	60.8
Marital status		
Single	281	96.8
Married	8	2.9
Divorced	1	.4
Institution		
Sri Nandhanam College of Engineering and Technology, Vellore (SNCET)	58	20.1
Ranipettai Engineering College, Vellore (REC)	104	35.8
Ganadipathy Tulsi's Jain Engineering College, Vellore (GTEC)	60	20.8
St.Peters Institute of Management, Vellore (SPIM)	68	23.3
Study Cycle		
Graduation	254	87.6
Master's degree	36	12.5
Curricular stage		



No	121	41.6
Yea	169	58.2
working student		
No	261	90.1
Yes	29	10.1
Year of course attendance		
Graduation		
1st year	22	10.6
2nd year	11	.5
3rd year	175	60.4
4th year	46	15.8
Master's degree		
1st year	34	11.6
2nd year	2	.6

Source: Prepared by the authors (2023)

Regarding the Institutions that students attend, it was found that 20.0% of the students in this sample are studying at SNCET, 35.9% study at REC, 20.7% at GTEC and 23.4% at SPIM, 87.5% undergraduate, and 12.4% master's degrees, and 58.3% of the participants in this study have an integrated internship in the course they attend, against 41.7% who do not have an integrated internship (Table 1).

With regard to the course that respondents attend, grouped by study areas, it appears that 44.8% attend the area of Technologies, 35.9% in the area of health, and 19.3% in the areas of Economics, Management, and Accounting.

In the academic year 2014/15, the majority of students in the sample attended the 3rd year of the degree (60.3%), 15.9% attended the 4th year of the degree (exclusive to REC), and the 1st master's degree consisted of 11.7% of students.

It should also be noted that only 10.0% of the surveyed sample is a working student, 37.9% of the participants stated that they had family members who were entrepreneurs, with most companies being owned by a male parent (16.6%) against 3.1% which are managed only by the female parent.

### Data Analysis

Data processing was performed using the statistical analysis software IBM SPSS (Statistic Program for Social Sciences) version 21.0 for Windows. The SPSS tests performed were the F ANOVA, the t-test, and correlation tests to obtain Pearson's correlation coefficients between the academic self-efficacy scale, the five dimensions of entrepreneurial self-efficacy, and the research questions.

### Entrepreneurial self-efficacy

The final version of the Entrepreneurial Self-Efficacy Scale (ESS) adapted by Moriano *et al.* (2006) is composed of 23 items, organized into five dimensions or factors: developing new products and market opportunities (F1), developing an innovative environment (F2), initiating investor contacts (F3), managing human resources (F4) and working under stress (F5). Participants respond in a 7-point Likert format ranging from “Totally unable” (1) to “Totally able” (7). Descriptive statistics of the items and factors evaluated by the scale were calculated (cf. Table 2).

Table 2: Values of the means and standard deviations of the responses to the items of the Entrepreneurial Self-Efficacy Scale (N= 290)

	Mean	SD
ESS01_Work effectively in conflict, pressure and stress situations.	4.74	1.26
ESS02_Develop and maintain favorable relationships with potential investors.	5.18	1.06
ESS03_Recognize new opportunities in the market for new products and services.	4.88	1.09
ESS04_Recruit and train key employees.	4.8	1.12
ESS05_Establish the organization's vision and values.	4.85	1.07
ESS06_Discover new ways to improve existing products.	4.91	1.07
ESS07_Develop relationships with key people to raise capital.	4.75	1.08
ESS08_Identify new areas of potential growth.	4.65	0.98
ESS09_Develop adequate personnel planning to fill positions- company key.	4.65	0.98
ESS10_Inspiring others to accept the company's vision and values.	4.96	1.06
ESS11_Tolerate unexpected changes in business conditions.	4.69	0.97
ESS12_Design products that solve common problems.	4.67	0.98
ESS13_Identify potential funding resources.	4.63	1.03
ESS14_Create a work environment that allows people to be their own boss.	4.77	1.18
ESS15_Persist in the face of adversity.	5.01	1.07
ESS16_Creating products that meet customer needs.	4.93	1.04
ESS17_Develop quick action in search of opportunities.	4.75	0.99
ESS18_Develop a work environment that encourages people to try new things.	5.03	0.98
ESS19_Using old business concepts and ideas in a new way.	4.73	1.01
ESS20_Determine if the business is going well.	5.14	1.07
ESS21_Motivate people to take initiative and take responsibility for their ideas and their decisions, regardless of their results.	5.08	1.03
ESS22_Identify and build management teams.	4.8	1.06
ESS23_Form partnerships or alliances with other partners.	4.91	1.05

Source: Prepared by the authors (2023)

The highest average was obtained in the item “ESS02\_Developing and maintaining favorable relationships with potential investors” with an average of 5.19 (SD=1.07), and the lowest, although above the average value, in the item “ESS13\_Identifying potential financing resources” with an average of 4.64 (SD=1.04). The present research study followed the adaptation of the original scale and in this sense, as Moriano *et al.* (2006) did, the following four items were eliminated: 10 “Inspiring others to accept the company’s vision and values”,

17 “ Develop quick action in search of opportunities”, 19 “Using old business concepts and ideas in a new way”, and 20 “Determining if the business is doing well”.

To study the validity of the construct, a factor analysis by principal components was carried out following the work of Moriano. Contrary to Moriano, in this study, the factor analysis only allowed the extraction of three factors. Therefore, considering that in the original scale Noble extracted six factors, that Moriano extracted five factors (consistent with the original factors found by De Noble *et al.* (1999), and that in this study only three were able to be extracted, we chose to consider a factorial model of five factors, since it is an exploratory study. Given the complexity of entrepreneurial behavior, not only a global score of entrepreneurial self-efficacy is needed, but also the different dimensions, thus allowing an assessment in which areas a person is considered effective to create and manage their own business, and on which they should focus their training. to develop your belief in self-efficacy. De Noble *et al.* (1999) carried out several investigations to study the validity of the ESE scale. In an initial study of 272 students, they found a positive and significant correlation between the total score on the scale and participants' intention to start their own businesses. In addition, the results showed a positive and significant correlation between the intention to undertake and the following specific dimensions of the scale: developing new products or market opportunities, building an innovative environment, and facing unexpected changes. In a later study, De Noble *et al.* (1999) compared scores on the ESE scale between a group of 66 students who were doing a master's in business administration (MBA) and a group of 21 students who were doing their own business projects. Entrepreneurial students scored highest on all dimensions of the ESS scale. However, these scores were only statistically significant on the following two dimensions: developing new products or opportunities and facing unexpected changes.

Table 3: Factor saturations by the principal components method (with varimax rotation), commonalities, eigenvalues and percentage of explained variance of responses to items on the Entrepreneurial Self-Efficacy Scale (N=290)

	Factor saturations			h <sup>2</sup>
	1	2	3	
ESS14_ Create a work environment that allows people to be the your own boss.	.71			.57
ESS21_ Motivate people to take initiatives and take responsibility for their ideas and decisions, regardless of their results.	.71	.34		.60
ESS15_ Persist in the face of adversity.	.68			.56
ESS22_ Identify and build management teams.	.66			.58
ESS18_ Develop a work environment that encourages people to try new things.	.65	.34		.56
ESS17_ Develop quick action in search of opportunities.	.65		.37	.62
ESS23_ Form partnerships or alliances with other partners.	.63	.38		.57
ESS13_ Identify potential funding resources.	.61		.41	.58
ESS10_ Inspiring others to accept the company's vision and values.	.59	.35	.35	.58
ESS16_ Creating products that meet the needs of customers customers.	.56		.37	.50

ESS20_Determine if the business is going well.	.55	.39		.49
ESS11_Tolerate unexpected changes in business conditions.	.51		.41	.48
ESS02_Develop and maintain favorable relationships with potential investors.	.37	.74		.71
ESS05_Establish the organization's vision and values.	.32	.74		.73
ESS03_Recognize new opportunities in the market for new products and services.		.73		.63
ESS06_Discover new ways to improve existing products.		.72		.64
ESS04_Recruit and train key employees.		.68	.31	.61
ESS01_Work effectively in conflict, pressure and stress situations.		.61		.48
ESS07_Develop relationships with key people to raise capital.	.41	.52		.51
ESS19_Using old business concepts and ideas in a new way.			.62	.38
ESS12_Design products that solve common problems.	.48		.61	.66
ESS09_Develop adequate personnel planning to fill key positions in the company.	.40	.40	.59	.68
ESS08_Identify new areas of potential growth.		.50	.54	.60
Eigenvalues (after rotation)	5.98	4.78	2.56	
% of explained variance (after rotation)	26.2	20.9	11.3	
Bartlett's sphericity test $\chi^2(253, N=290) = 3715.79 (p < .000)$ ; K.M.O. Index = .95				

Source: Prepared by the authors (2023)

Following the work of Moriano *et al.* (2006), factor analysis was carried out on the responses given to the 23 items of the De Noble *et al.* (1999) entrepreneurial self-efficacy scale, using the principal components method, with varimax rotation, with the objective of building a more efficient model, suggested by Pestana & Gageiro (2005).

For this purpose, the Kaiser-Meyer-Olkin (KMO) values were calculated and Bartlett's sphericity test was estimated (Table 3). The KMO test presents a result of .95, which suggests that the correlation values between pairs of items may eventually be explained by other factors to be extracted from the factor analysis. Bartlett's sphericity test based on the chi-square distribution suggests that the correlation matrix is different from an identity matrix, which allows us to move towards a factor analysis of the correlation matrix.

As can be seen in Table 3, the three factors found are consistent with the factors discovered in the Moriano *et al.* (2006) scale, and consequently with the original factors in the De Noble *et al.* (1999) scale. In this study, the first factor corresponds to the dimension “Develop new products or market opportunities” and explained 26.0% of the variance found, a value slightly higher than the 25.0% of variance found in the original De Noble scale, but much higher than the 12.3% of the variance found by Moriano. This difference in the variance found is due to the fact that the number of items that constitutes the first factor is different in all the scales, that is, if for De Noble the first factor consisted of seven items, in the adapted scale of Moriano, three were eliminated items, and in the present study, as only three factors were found in opposition to Moriano's five and De Noble's six, the first factor added seventeen items.

Factor two related to the dimension “Developing an innovative environment”, explained 20.8% of the variance found, as opposed to 10.7% of the original scale, and 12.1% of the

adapted scale. The difference in the values of variance found is again due to the number of items that constitute the second factor, and if the De Noble and Moriano scale consists of four items, in the present study the number of items increases to fourteen.

The third factor referring to the dimension “Initiating contacts with investors” explained 11.2% of the variance found, which is closer to the values found in the adapted scale (11.9% of explained variance) and in the original scale (8.3% of explained variance), although in the original De Noble scale, this factor consists of three items, in the adapted scale of Moriano by five items, and in this study by ten items.

As in this study, the factor structure of the sample identified only three factors, as opposed to the five factors in the study by Moriano *et al.* (2006), and the six factors in the original study by De Noble *et al.* (1999), we chose to follow that model. Thus, following Moriano's investigation, the following four items were excluded: ESS10 “Inspiring others to accept the company's vision and values”, ESS17 “Developing rapid action in search of opportunities”, ESS19 “Using old concepts and business ideas in a new way”, ESS20 “Determining if the business is doing well”, and the calculation of subtotals for each of the 5 factors identified by the study with the batch of items also identified by the study. In terms of factor content, the first factor of the original scale called "development of new products or market opportunities" remains on the adapted scale (factor 1). Likewise, the second factor that refers to "building an innovative environment" is kept in an adapted scale (factor 2). Likewise, the third factor on the ESS scale, "Starting investor relations" also remains on the adapted scale (factor 3), even if the items are not exactly the same. Regarding the fourth factor of the ESS scale, it was excluded in the adapted scale as previously mentioned. Regarding the fifth factor of the original scale, which was called "facing unexpected changes", the adapted scale maintains two of its three items (factor 5), but it is considered more accurate to label it as "work under stress". Finally, the sixth ESS scale factor that refers to "developing key human resources" keeps two of its items in factor 4 of the adapted scale and is now called "human resources management".

After analyzing the correlations between the factors found, Moriano *et al.* (2006) grouped the items according to the original scale to compare the fidelity between the two scales, having obtained very satisfactory values, except for the factor “work under stress.”

Thus, and since the author proposes that the assessment of entrepreneurial self-efficacy is due to five dimensions, the data used in this investigation are based on the same assumption as the theoretical model, that is, the five dimensions of the Spanish scale will be used. The first

factor consists of items 6 “discover new ways to improve existing products”, 8 “identify new areas of potential growth”, 12 “Design products that solve common problems”, and 16 “create products that meet the needs of customers”, relating to the dimension “Developing new products or market opportunities”. The second factor is composed of items 3 “recognize new opportunities in the market for new products and services”, 4 “Recruit and train key employees”, 5 “Establish the organization’s vision and values”, and 9 “Develop adequate planning for personnel to fill key positions in the company”, which belong to the dimension “Developing an innovative environment”. The third factor brings together items 2 “Develop and maintain favorable relationships with potential investors”, 7 “Develop relationships with key people to obtain capital”, 13 “Identify potential funding resources”, 22 “Identify and build management teams”, and 23 “Forming partnerships or alliances with others” that constitute the dimension “Initiating contacts with investors”. The fourth factor referring to the dimension “Managing human resources” is formed by items 11 “Tolerating unexpected changes in business conditions”, 14 “Creating a work environment that allows people to be their own boss”, 18 “Developing an environment that encourages people to try new things”, and 21 “Motivate people to take initiative and take responsibility for their ideas and decisions, regardless of their results”. Finally, the factor related to the dimension “Working under stress” is represented by items 1 “Working effectively in situations of conflict, pressure, and stress” and 15 “Persisting in the face of adversity”.

Table 4: Mean and standard deviation values of the five dimensions of the Entrepreneurial Self-Efficacy Scale and the total in the Our sample (N=290) and in the Spanish sample (N=1376)

	Our sample (N=290)				Spanish sample (N=1376)
	X	DP	alpha		alpha
F1_Develop new products and market opportunities	19.2	3.26	.80		.74
F2_Develop an innovative environment	19.21	3.52	.83		.64
F3_Start investor contacts	24.3	4.17	.84		.71
F4_Manage human resources	19.59	3.21	.76		.69
F5_Work under stress	9.76	1.94	.54		.41
Full Scale	19.2	3.26	.93		.85

Source: Prepared by the authors (2023)

In table 4, the items were grouped according to the factors proposed by the scale adapted from Moriano *et al.* (2006) to compare their coefficients of fidelity with the scale factors of the sample used in this study. As can be seen, the factors obtained in the present investigation offer higher fidelity coefficients than the factors proposed by the Moriano *et al.* (2006), and consequently, higher than those obtained in the original scale by De Noble *et al.* (1999). With



regard to the fidelity of the scale as a whole, the scale used in our sample obtained a fidelity coefficient eight tenths higher than the adapted scale, and six tenths higher than the original scale. Taking into account these results, we can say that the entrepreneurial self-efficacy scale of our sample has high fidelity, although it has a smaller factorial structure than the original scale and is composed of less than four items. In addition, the factors of this scale obtain a satisfactory and even superior fidelity to the factors of the original scale.

### Academic self-efficacy

In this research work, the self-efficacy scale was used. This scale consists of 10 items, with responses coded on a 7-point Likert-type scale ranging from “strongly disagree” (1) to “strongly agree” (7), which assesses beliefs about one's ability to perform certain behaviors in specific academic situations.

After calculating the mean and standard deviation values of the ten scale items (Table 5), it was found that the highest mean value corresponds to the item “I consider myself sufficiently capable to successfully face any Institution task”. ”, with a score of 5.22 (SD= 1.05), and the lowest in the item “I am one of those people who do not need to study to take a subject or pass the year” with a score of 3.55 (SD= 1.68).

Table 5: Values of means and standard deviations of responses to items on the Academic Self-Efficacy Scale (N= 290)

	Mean	SD
ASS01_I consider myself sufficiently capable to successfully face any Institution task.	5.21	1.04
ASS02_I think I have great abilities to understand a subject well and quickly.	5.11	0.99
ASS03_I feel confident to approach situations that test my academic ability.	4.94	1.02
ASS04_I am convinced that I can do excellent exams.	4.73	1.06
ASS05_I don't care that the teachers are demanding and tough, as I have a lot of confidence in my own academic abilities.	4.312	1.32
ASS06_I believe that I am a very capable and competent person in my Institution life.	4.92	1.05
ASS07_If I want to, I believe I have enough skills to perform well in Institution.	5.46	1.04
ASS08_I think I can pass the year quite easily and even get good grades.	5.08	1.11
ASS09_I'm one of those people who doesn't need to study to take a course or pass the year.	3.54	1.67
ASS10_I believe that I am prepared and quite capable of achieving many academic successes.	4.89	1.04

Source: Prepared by the authors (2023)

After calculating the descriptive statistics, an exploratory factor analysis of the 10 items of the scale was carried out in order to assess its factor structure. For this purpose, the Kaiser-Meyer-Olkin (KMO) values were calculated and Bartlett's sphericity test was estimated. The KMO test presents a result of .915, which suggests that the correlation values between pairs of items may eventually be explained by other factors to be extracted from the factor analysis.

Bartlett's sphericity test based on the chi-square distribution suggests that the correlation matrix is different from an identity matrix, which allows us to move towards a factor analysis of the correlation matrix.

After weighing these elements, exploratory factor analysis was carried out, using the method of principal components analysis and varimax rotation. Contrary to the assumption, instead of one factor, as has been the usual practice (Cerdeira & Palenzuela, 1998), two factors were obtained with eigenvalues greater than unity. The first factor explains 51.78% of the variance, and the second adds another 15.98% of the total explained variance. Together, the two factors explain 67.77% of the variance in the results.

Internal consistency was estimated using Cronbach's alpha coefficient, and a value of .91 was found. Considering that the alpha value of the specific perceived self-efficacy scale was .93, the values obtained in this study can be considered very good.

The correlation values of each item with the total of the scale are high, and vary between .54 and .77, with the exception of item 9 "I am one of those people who does not need to study to take a course or pass a year" in which a relatively low correlation value of .23 was obtained. On the other hand, taking into account the alpha values with the removal of an item, it appears that the internal consistency of the scale increases with the exclusion of item 9. Thus, following the suggestion of Cerdeira & Palenzuela (1998), we are also of the opinion that this item can be removed from the scale.

## **RESULTS AND DISCUSSION**

In this section, the results corresponding to the responses of the students in the sample are presented about the degree of knowledge they had in relation to the support structures for the creation of companies in the Institution. Their answers were coded using a seven-point Likert scale, where (1) corresponds to the label "Very bad" and (7) "Very well". Subsequently, the students were also asked if they had ever thought about creating a business/own company and about the degree of importance they attributed to the Institution structures to support students for the creation of a company. In both cases, a Likert-type scale was used to code the responses into seven points.

Table 6: Mean and standard deviation values of the answers given to the research questions

	Mean	SD
Q01_I consider myself capable of creating a company.	3.94	1.45
Q02_I want to create my own company.	3.97	1.69
Q03_I have the ability to work on my own.	4.57	1.45
Q04_I have a concrete idea of the business to create.	3.41	1.69
Q05_Do you know the Institution structures to support business creation?	2.21	1.38
Q06_Have you thought about starting a business/creating a company?	3.71	1.9
Q07_Counseling and support for the validation of the business idea.	5.51	1.18
Q08_Support for the formulation/completion of the business plan.	5.72	1.11
Q09_Advice on incentives/competitions to support business creation.	5.67	1.15
Q10_Support in the search for financing and contact with investors.	5.85	1.1
Q11_Spaces and equipment for starting a business (incubation).	5.6	1.17
Q12_Counseling and Mentoring in the development of the company.	5.76	1.1
Q13_Access to network of contacts and markets.	3.94	1.45

Source: Prepared by the authors (2023)

As can be seen (Table 6), the students' answers present values higher than the midpoint of the Likert scale, only with regard to the affirmation of their beliefs in their abilities to work on their own, Q\_03 (M=4.58; SD= 1.46). Regarding question Q\_01 “I consider myself capable of starting a company” (M=3.95; SD=1.46), question Q\_02 “I want to create my own company” (M=3.98; SD=1.70), and question Q\_04 “ I have a concrete idea of the business to be created” (M=3.42; SD=1.70) the response values were below the midpoint Regarding question 5 “Do you know the Institution structures to support the creation of companies?”, the students' answers exhibit values much lower than the midpoint (M=2.22; SD=1.39).

Regarding the degree of importance that students attribute to the Institution support structures for the creation of a company, all the answers obtained scores above the average point, the most relevant being question 13 ”Access to a network of contacts and markets” (M=6.04, DP=1.08), question 10 “Support in finding financing and contacting investors” (M=5.86, DP=1.11), question 12 “Counseling and “Mentoring” in the development of the company ” (M=5.77, SD=1.11), question 8 ”Support for the formulation/realization of the business plan.” (M=5.73, SD=1.12), question 9 “Advice on incentives/competitions to support business creation” (M=5.68, SD=1.16), and question 11 “Spaces and equipment for starting a business (incubation)” (M=5.61, SD=1.18).

To analyze how the answers to the research questions are associated or not with the theoretical variables considered, namely: the five dimensions of entrepreneurial self-efficacy and academic self-efficacy, we used the statistical analysis of Pearson's correlations (Table 7 and Table 8).

Table 7: Pearson's correlations between the values of the Academic Self-Efficacy Scale, the five dimensions of Entrepreneurial Self-Efficacy Scale (ESS) and the research questions 1

	ASS	ESS_F1	ESS_F2	ESS_F3	ESS_F4	ESS_F5
Q01_I consider myself capable of creating a company.	.313*	.473*	.481*	.441*	.379*	.434*
Q02_I want to create my own company.	.249*	.365*	.355*	.327*	.264*	.302*
Q03_I have the ability to work on my own.	.330*	.465*	.465*	.448*	.408*	.402*
Q04_I have a concrete idea of the business to create.	.168*	.344*	.302*	.271*	.246*	.224*

\*  $p < .05$ , , n.s., not significant

Source: Prepared by the authors (2023)

Table 8: Pearson's correlations between the values of the Academic Self-Efficacy Scale, the five dimensions of Entrepreneurial Self-Efficacy and the questions of investigation 2

	ASS	ESS_F1	ESS_F2	ESS_F3	ESS_F4	ESS_F5
Q05_Do you know the Institution structures to support business creation?	.050	.075	.036	.041	.094	.004
Q06_Have you thought about starting a business/creating a company?	.204*	.346*	.302*	.270*	.256*	.264*
Q07_Counseling and support for the validation of the business idea.	.238*	.212*	.165*	.198*	.250*	.291*
Q08_Support for the formulation/completion of the business plan.	.293*	.303*	.257*	.241*	.295*	.374*
Q09_Advice on incentives/competitions to support business creation.	.245*	.294*	.302*	.299*	.311*	.349*
Q10_Support in the search for financing and contact with investors.	.313*	.316*	.314*	.325*	.340*	.432*
Q11_Spaces and equipment for starting a business (incubation).	.219*	.228*	.201*	.280*	.321*	.310*
Q12_Counseling and mentoring in the development of the company.	.226*	.231*	.258*	.238*	.284*	.336*
Q13_Access to network of contacts and markets.	.241*	.274*	.292*	.283*	.321*	.397*

\*  $p < .05$ , , n.s., not significant

Source: Prepared by the authors (2023)

As can be seen by reading the results of Table 7, the answers to the four questions “I consider myself capable of creating a company”, “I want to create my own company”, and “I am able to work on my own”, and “I am able to work on my own”. I have a concrete idea of the business to create” show a positive and statistically significant correlation value (for a  $p$ -value  $< .05$ ) with the answers given to the items of the academic self-efficacy scale and with the answers given to the five dimensions of the scale of entrepreneurial self-efficacy. On the other hand, considering now the reading of the results of Table 8, with the exception of question 05 “Do you know the Institution structures to support the creation of companies”, it is verified the existence of positive and statistically significant correlations between the answers given to the questions and the values of the answers given to the items of the five dimensions of the entrepreneurial self-efficacy scale and to the items of the academic self-efficacy scale.

In view of these results, we can conclude that students with higher academic self-efficacy expectations and higher entrepreneurial self-efficacy expectations are those who “Consider themselves more capable of creating a company” (Research Question 01), and who manifest a stronger intention of “Creating their own company” (Research Question 02), who consider they have “the ability to work on their own” (Research Question 03) and who declare that they have “a concrete business idea to create” (Research Question 04). From this point of view, the development of high expectations of academic self-efficacy and entrepreneurial self-efficacy is strongly associated with the desire to develop an entrepreneurial project and the feeling that one is capable of taking the necessary steps to achieve it.

In view of the second collection of results, related to research questions associated with the evaluation of the importance that students attribute to the Institution support structures for the creation of companies, we also verified the existence of positive and statistically significant correlation values between the two measures of self-efficacy (academic and entrepreneurial) and recognition of the importance of the Institution to provide “Counseling on the validation of a business idea” (Research Question 07), to “formulation of a business plan” (Research Question 08), to advice on incentives for support for business creation (Research Question 09), support in finding funding (Research Question 10), provision of incubation spaces (Research Question 11), mentoring (Research Question 12) and access to contact networks (Research Question 13), which means that the students who most believe in their academic abilities and in their Entrepreneurs are also those who most value the importance of an Institution support structure for business creation. If we consider that students with high expectations of academic and entrepreneurial self-efficacy are also those who declare a stronger intention to create an entrepreneurial project, the combination of these two sets of results suggests that the Institution structures aimed at fostering entrepreneurial attitudes should focus on their attention to this type of students and, indirectly, to promote the entrepreneurial spirit, they can promote actions capable of increasing the expectations of academic and entrepreneurial self-efficacy of their students.

Following these results and still, in relation to the research questions, it was intended to assess the extent to which the answers given to the research questions varied according to various criteria, for example, sex. Studies carried out by several authors show that entrepreneurial intention is higher in men than in women. To analyze these differences, the t-student test was used. The results show that there is a significant difference, with men showing higher values than women in the four questions “I consider myself capable of creating a

company” (Men = 4.12; Women = 3.70), “I want to create my own company” ” (Men = 4.16; Women = 3.51), “I am able to work on my own” (Men = 4.77; Women = 4.25), and “I have a concrete idea of the business to create” (Men = 3.65; Women = 2.98), as can be seen in Table 9.

Table 9: t-student values related to the difference of the averages of the answers given to research questions 1 according to sex

	Sex	n	Mean	SD	t-student	p
Q01_I consider myself capable of creating a company.	Male	114	4.12	1.51	2.479	.013*
	Fem	176	3.70	1.37		
Q02_I want to create my own company.	Male	114	4.16	1.79	3.114	.003*
	Fem	175	3.51	1.71		
Q03_I have the ability to work on my own.	Male	114	4.77	1.51	3.095	.003*
	Fem	175	4.25	1.36		
Q04_I have a concrete idea of the business to create.	Male	114	3.65	1.53	3.372	.002*
	Fem	174	2.98	1.71		

\*  $p < .05$

Source: Prepared by the authors (2023)

The same analysis was carried out in relation to the remaining research questions (research questions 2), with the exception of question 6 “Have you ever thought about creating a business/creating a company”, whose result reveals a significant difference ( $t = 4,338$ ;  $p < .05$ ) between men ( $M=4.05$ ) and women ( $M=3.11$ ), there are no statistically significant differences between the mean and standard deviation values (Table 10).

Table 10: t-student values related to the difference in the averages of the answers given to research questions 2 according to sex

	Sex	n	Mean	SD	t-student	p
Q05_Do you know the Institution structures to support business creation?	Male	114	2.23	1.47	-1.597	n.s.
	Fem	174	2.50	1.38		
Q06_Have you thought about starting a business/creating a company?	Male	113	4.04	1.84	4.337	.000*
	Fem	174	3.10	1.74		
Q07_Counseling and support for the validation of the business idea.	Male	112	5.32	1.24	-.042	n.s.
	Fem	175	5.33	1.35		
Q08_Support for the formulation/completion of the business plan.	Male	113	5.52	1.15	.035	n.s.
	Fem	175	5.52	1.26		
	Male	113	5.51	1.13	.188	n.s.



Q09_Advice on incentives/competitions to support business creation.	Fem	174	5.49	1.24		
Q10_Support in the search for financing and contact with investors.	Male	113	5.71	1.06	1.255	n.s.
	Fem	174	5.53	1.23		
Q11_Spaces and equipment for starting a business (incubation).	Male	113	5.42	1.22	.227	n.s.
	Fem	174	5.40	1.26		
Q12_Counseling and mentoring in the development of the company.	Male	113	5.48	1.15	-.346	n.s.
	Fem	175	5.53	1.25		
Q13_Access to network of contacts and markets.	Male	113	5.80	1.12	.367	n.s.
	Fem	174	5.74	1.20		
Q14_If you thought about the support you need to create your company, which one would you indicate.	Male	67	7.77	8.35	.894	n.s.
	Fem	72	6.62	6.55		
* $p < .05$ , n.s., not significant						

Source: Prepared by the authors (2023)

With the objective of exploring possible differences in the values of the averages and standard deviations of the answers given to the investigation questions according to the Institutions, a comparison of the averages according to the four Institutions was carried out, using the test F Anova. As can be seen in Table 11, statistically significant differences were identified in the answers given to question 2 “I want to create my own company” where SPIM has a higher average than the other Institutions ( $M_{SPIM}= 4.31$ ;  $M_{GTEC}= 3.92$ ;  $M_{SNCT}=3.89$ ;  $M_{REC}= 3.25$ ), and in question 4 “I have a concrete idea of the business to be created”, where SPIM again shows a higher average compared to the other three Institutions ( $M_{SPIM}= 3.78$ ;  $M_{GTEC}= 3.43$ ;  $M_{SNCT}=3.35$ ;  $M_{REC}= 2.74$ ). With regard to the other two research questions “I consider myself capable of creating a company”, and “I am able to work on my own”, no significant differences were found between the four Institutions.

To assess possible differences in the mean values of the answers given to research question 2 depending on the Institution, the analysis was carried out again using the F ANOVA test. From the reading of Table 12, there are significant differences in the answers given to the question “Do you know the structures of the Institution to support the creation of companies?”, in which the results show that the SPIM students are the ones who best know the aforementioned structures of support, although with values far below the average, unlike  $M_{GTEC}$  students who reveal to be the least knowledgeable about these structures ( $M_{SPIM}= 2.83$ ;  $M_{GTEC}= 1.80$ ;  $M_{SNCT}=2.43$ ;  $M_{REC}= 2.46$ ), and in the question “Have you ever thought about creating a

business/create a company?”, where again the results obtained in SPIM reveal this intention more clearly, contrary to the intention demonstrated by REC students ( $M_{SPIM}= 4.08$ ;  $M_{GTEC}= 3.98$ ;  $M_{SNCET}=3.25$ ;  $M_{REC}= 2.495$ ).

Regarding the degree of importance that students attribute to the Institution support structures for the creation of a company, there is a statistically significant difference, in which the GTEC students stand out, who are the ones who attach the most importance to “Spaces and equipment for the start-up of the business (incubation)” ( $M_{GTEC}= 5.63$ ;  $M_{SNCET}= 5.61$ ;  $M_{REC}=5.44$ ;  $M_{SPIM}= 5.04$ ), contrary to SPIM students. With regard to the remaining questions, there are no significant differences between the mean values of the answers given depending on the Institution.

Table 11: F ANOVA values relative to the difference of the averages of the answers given to research questions 1 according to the Institution

		N	Mean	SD	F	p
Q01_I consider myself capable of creating a company.	SNCET	58	3.89	1.36	.564	n.s.
	REC	104	3.73	1.43		
	GTEC	60	3.86	1.4		
	SPIM	68	4.02	1.51		
Q02_I want to create my own company.	SNCET	57	3.88	1.9	5.658	.001*
	REC	104	3.24	1.5		
	GTEC	60	3.91	1.78		
	SPIM	68	4.3	1.78		
Q03_I have the ability to work on my own.	SNCET	57	4.45	1.48	.150	n.s.
	REC	104	4.37	1.36		
	GTEC	60	4.47	1.35		
	SPIM	68	4.52	1.56		
Q04_I have a concrete idea of the business to create.	SNCET	57	3.34	1.66	6.645	.001*
	REC	104	2.73	1.65		
	GTEC	60	3.42	1.5		
	SPIM	67	3.77	1.63		

\*  $p < .05$

Source: Prepared by the authors (2023)

Table 12: F ANOVA values related to the difference of the averages of the answers given to the research questions 2 according to the Institution

		N	Mean	SD	F	p
Q05_Do you know the Institution structures to support business creation?	SNCET	58	2.42	1.25	5.897	.001*
	REC	104	2.45	1.48		
	GTEC	60	1.79	1.09		
	SPIM	66	2.82	1.57		
Q06_Have you thought about starting a business/creating a company?	SNCET	57	3.24	1.83	7.391	.000*
	REC	104	2.94	1.7		
	GTEC	60	3.97	1.82		

	SPIM	66	4.07	1.82		
Q07_Counseling and support for the validation of the business idea.	SNCET	58	5.11	1.45	2.071	n.s.
	REC	103	5.45	1.27		
	GTEC	59	5.43	1.25		
	SPIM	67	5.23	1.21		
Q08_Support for the formulation/completion of the business plan.	SNCET	58	5.42	1.33	2.344	n.s.
	REC	104	5.65	1.17		
	GTEC	59	5.7	1.03		
	SPIM	67	5.23	1.21		
Q09_Advice on incentives/competitions to support business creation.	SNCET	58	5.52	1.24	1.271	n.s.
	REC	104	5.56	1.23		
	GTEC	58	5.58	1.07		
	SPIM	67	5.23	1.19		
	N	Mean	SD	F	p	
Q10_Support in the search for financing and contact with investors.	SNCET	58	5.66	1.38	.680	n.s.
	REC	104	5.62	1.17		
	GTEC	59	5.7	0.97		
	SPIM	66	5.43	1.07		
Q11_Spaces and equipment for starting a business (incubation).	SNCET	57	5.6	1.32	3.107	.027*
	REC	104	5.43	1.24		
	GTEC	59	5.62	1.07		
	SPIM	67	5.03	1.23		
Q12_Counseling and mentoring in the development of the company.	SNCET	58	5.63	1.28	2.423	n.s.
	REC	104	5.64	1.24		
	GTEC	59	5.52	0.97		
	SPIM	67	5.16	1.2		
Q13_Access to network of contacts and markets.	SNCET	58	5.79	1.3	2.470	n.s.
	REC	104	5.81	1.15		
	GTEC	59	5.98	0.98		
	SPIM	66	5.43	1.15		
* $p < .05$ , n.s., not significant						

Source: Prepared by the authors (2023)

## CONCLUSION

The present study aims to analyze the entrepreneurial intention of students from four Institutions, relating it to entrepreneurial self-efficacy and academic self-efficacy, and to try to understand which factors influence it. The sample of this study consists of 290 students from four Institutions, of which 114 (39.3%) are male and 176 (60.7%) are female.

For this purpose, and taking into account the literature review presented, as well as the objectives established for this investigation, the conclusions relating to each of them are presented.

From a conceptual point of view, the data obtained in this exploratory study suggest that the development of expectations of academic self-efficacy in students is strongly associated with the development of expectations of entrepreneurial self-efficacy, that is, that the perception that one is able to obtain good academic results can be associated with the perception that one is also capable of carrying out a successful entrepreneurial project.

The data obtained from this exploratory study suggest that it is students with academic self-efficacy expectations and higher entrepreneurial self-efficacy expectations a) who manifest a stronger intention to create their own company, b) who consider themselves capable of creating a company, c) who consider themselves capable of working on their own and d) who declare that they have a more concrete idea of the business to be created. Thus, and according to the literature, it is suggested that the development of high expectations of academic self-efficacy together with the development of expectations of entrepreneurial self-efficacy is strongly associated with the desire to create an entrepreneurial project and the feeling that one is capable of giving the steps necessary to achieve this.

This study also aimed to assess possible differences in the entrepreneurial intentions of students as a function of several socio-demographic variables (sex, cycle of studies, year, whether or not to undertake internships, Institutions, status of working student), since some studies and according to with the studies carried out by several investigators suggested it. In the specific case of the results obtained, no statistically significant differences were identified in the theoretical variables (academic and entrepreneurial self-efficacy), although statistically significant differences were identified in the answers given to the research questions (1st group of questions) according to these same socio-demographic variables.

Specifically, in this sample, it was found that in relation to the ability to create their own company, to work on their own, to the desire to create their own company, and to have a concrete idea of the business to be created, the entrepreneurial intention of male and female students male is higher than the entrepreneurial intention of female students. With regard to the second group of research questions, the results show that with the exception of the question “Have you ever thought about creating a business/creating a company”, there are no statistically significant differences between men and women.

In the analysis of the differences between Institutions, it was verified the existence of statistically significant differences in the questions related to the desire to create their own company and to have a concrete business idea to create, in which SPIM showed a higher average in relation to the other three Institutions. Regarding the other two research questions “I consider myself capable of creating a company”, and “I am able to work on my own”, there were no statistically significant differences between the four Institutions.

There were also statistically significant differences in the answers given to the question “Do you know the Institution structures to support the creation of companies?”, in which the

results reveal that SPIM students are the ones who best know these support structures, although with values far below the average value.

Regarding the degree of importance that students attribute to the Institution support structures for the creation of a company, there is a statistically significant difference, in which the GTEC students stand out, who are the ones who attach the most importance to "Spaces and equipment for starting the business". With regard to the remaining questions, there are no statistically significant differences between the mean values of the answers given depending on the Institution.

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