

Determinants of social entrepreneurship in Central American university students

Determinantes del emprendimiento social en estudiantes universitarios de Centroamérica

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- Article received:

27 July, 2024

- Article accepted:

29 June, 2025

- Published online in articles in advance:

4 August, 2025

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DOI:

<https://doi.org/10.18845/te.v19i3.8139>

Abstract: This study evaluates the influence of factors related to university-industry collaborations (i.e., ties to social organizations, access to internships, support by social mentors) and socially oriented business and financial education on the creation of social ventures among university students in Central America. The study applies a quantitative-qualitative design on a sample of 421 university students in five Central American countries. The quantitative analysis uses an ordered logistic regression model, whereas the qualitative study applies in-depth interviews for a sequential methodological triangulation analysis. Despite the growing importance of social entrepreneurship in Central America, there is a lack of empirical research examining the factors that influence the creation of social enterprises by university students in the Central American region with a propensity to start social enterprises. The results show that having ties to social organizations, participating in internships, receiving support from social mentors, and receiving socially oriented business and financial education positively affects the creation of social enterprises among university students in Central America.

Keywords: University students, social entrepreneurship, Central America, entrepreneurial education.

Resumen: Este estudio tiene como objetivo evaluar la influencia determinantes, tales como tener vínculos con organizaciones sociales, participar en prácticas profesionales, recibir apoyo de mentores sociales y recibir educación empresarial y financiera con orientación social, en la creación de emprendimientos sociales en estudiantes

universitarios de América Central. El estudio aplica un diseño cuantitativo-cualitativo. La sección cuantitativa utiliza un modelo de regresión logística ordenada, con análisis basados en datos recogidos de una muestra de 421 estudiantes de universidades en cinco países de América Central. La sección cualitativa aplica entrevistas en profundidad para un análisis de triangulación metodológica secuencial. A pesar de la creciente importancia del emprendimiento social en América Central, existe una falta de investigación empírica que examine los factores que influyen la creación de empresas sociales por parte de estudiantes universitarios en la región centroamericana con propensión a iniciar empresas sociales. Los resultados muestran que tener vínculos con organizaciones sociales, participar en prácticas profesionales, recibir apoyo de mentores sociales y recibir educación empresarial y financiera con orientación social poseen efectos positivos para la creación de empresas sociales en estudiantes universitarios de América Central.

Palabras clave: Estudiantes universitarios, emprendimiento social, Centroamérica.

1. Introduction

Social entrepreneurship (SE), defined as ‘entrepreneurial activity with an embedded social purpose’ (Austin et al., 2006; Saebi et al., 2019), has become an important economic phenomenon globally in the last two decades (see, e.g., Peredo & McLean, 2006; Santos, 2012; Saebi et al., 2019). Recent literature on SE has emphasized the influence of learning contexts in its strengthening and promotion (Kacperczyk, 2013). SE is usually linked to the individuals’ concern for the social problems affecting their different immediate environments, and for their interest in providing social development (Xiang et al., 2022) and creating businesses useful for society (Herdina et al., 2022).

As conventional business developments have developed new approaches aimed at effectively solving social and economic problems through innovative solutions (Gu & Wang, 2022), recent literature has encouraged the promotion of socially-oriented business education among university students as part of these innovative measures (Bayon et al., 2016; Zhu et al., 2022). Previous studies show how the promotion of SE in universities is related to addressing social challenges and to the promotion of social change, although the process of legitimizing SE within universities has not been fully established, yet (Cinar, 2019).

The different drivers of social entrepreneurship have been theorized and conceptualized in various ways. Santos (2012) argues that social entrepreneurship emerges as a response to neglected problems that generate positive externalities, and that entrepreneurs can be primarily motivated by the creation of sustainable value rather than the capture of economic value. Rawhouser et al. (2019), focused on the measurement of social impact, implicitly highlight that the aspiration to generate beneficial outcomes—stemming from prosocial behaviors—constitutes a fundamental driver for social entrepreneurs, also recognizing the importance of their intentions, goals, identity, and values. Complementarily, Gupta et al. (2020) identify motivations, values, skills, and capabilities of social entrepreneurs as key features to better understand this phenomenon. Moreover, comprehensive studies such as that of Vedula et al. (2022) suggest that the converging evolution of SE and environmental entrepreneurship (EE) and their potential integration offer a conceptual framework for identifying specific areas of collaboration and learning.

Empirical studies reinforce and elaborate on these theoretical constructs. For example, Austin et al. (2006) emphasize that market failures that prevent the satisfaction of social needs create distinctive opportunities for social entrepreneurs whose core mission is the creation of social value rather than private profit. Similarly, Peredo and McLean (2006) identify key characteristics of social entrepreneurs, such as a focus on creating social value, the ability to recognize and exploit opportunities to generate such value, the use of innovation, risk tolerance, and the capacity to act without being constrained

by available resources, as driving factors. [Saebi et al. \(2019\)](#) also identify individual-level drivers such as prosocial personality, empathy, self-efficacy, and prior experience, while also acknowledging the role of contextual factors in shaping the intentions and actions of social entrepreneurs.

SE can positively be encouraged within university environments. [García-Gonzalez and Ramirez-Montoya \(2021\)](#) mention how the incorporation of transversal SE projects in various university courses has made students feel more comfortable regarding their SE potential. Meanwhile, [Duong \(2023\)](#) points out that, the greater the perceived university support, the stronger the relationship between SE intention and social start-ups behavior. In addition, [Cinar \(2019\)](#) has explored the relationship between the legitimization process of SE within universities and factors such as stakeholder expectations, organizational identity, and regulations. Likewise, [Roslan et al. \(2022\)](#) propose a learning model of SE in higher education to help create and sustain a growing generation of social entrepreneurs and reduce unemployment rates among recent graduates.

Several factors influence SE among university students. [Caldera-González \(2022\)](#) points out that creativity, innovation, self-confidence, adaptability and tolerance of failure are important factors in the profile of SE among university students. Furthermore, [Chengalvala and Rentala \(2017\)](#) identify five factors that influence SE intentions among university students: interest in SE, entrepreneurial attitude, a proactive personality, entrepreneurial education, and perceived behavioural control. [Öksüzoğlu and Çoban \(2021\)](#) have also identified an indirect influence of the information in entrepreneurship courses on students' knowledge of SE.

For Latin America, SE constitutes an alternative approach to development models based on multinationals or philanthropic organizations, and a source for the creation of social and economic value, mainly in rural areas ([Prado, 2021](#)). Specifically, in Latin America, 40% of social enterprises generate more than five job positions, 63% have volunteers, and 67% have growth expectations ([CEPAL, 2019](#)). [Faminow \(2009\)](#) has stressed the importance of SE in Central America as a catalyst for social transformation.

However, despite the growing recognition of SE's potential in the region, there is a significant gap in the empirical research focusing specifically on the factors determining social enterprise development by university students in Central America. This lack of targeted research may be hindering the development of effective support programs and educational initiatives tailored to this crucial demographic. More general research and further formalization of academic programs are needed to fully foster the Latin American social entrepreneurial potential ([Galego et al., 2018](#); [Guerrero et al., 2014](#); [Isaza & Rush, 2011](#); [Leiva et al., 2021](#); [Unceta et al., 2021](#)), and to understand the specific drivers of SE among university students in Central America ([Lafuente-González & Leiva, 2022](#)).

This study explores the influence on the intention of creating social business initiatives of universities' connection with social organizations, students' participation in professional practices, the support of social mentors, and socially-oriented education among Central American university students. This research aims to contribute to the entrepreneurship literature by providing empirical evidence on the specific factors driving social entrepreneurial intentions among university students in a context (Central America) a topic that has been under-researched.

The paper is structured as follows. Section 2 presents the arguments that support the study hypotheses. Section 3 contains a description of the empirical method. Section 4 presents the results, and the final section synthesizes the main findings, practical implications and future lines of research.

2. Theoretical background and hypotheses

The growing complexity of global and local social and environmental challenges highlights the need for innovative and sustainable approaches (Hazenber *et al.*, 2022; Scartozzi *et al.*, 2025). Social entrepreneurship (SE) emerges as a key mechanism for identifying and developing solutions to neglected problems with positive externalities (Santos, 2012). Universities, as centers of knowledge and innovation, play a fundamental role in promoting SE among their students, acting as catalysts through education, research, knowledge transfer, and engagement with the environment (Hazenber *et al.*, 2022).

The generation of new social enterprises by university students is a complex phenomenon influenced by a variety of interrelated factors both within and outside the academic environment. To better understand this process, it is crucial to examine how specific elements of the university ecosystem contribute to the development of socially-oriented entrepreneurial intentions and capabilities.

2.1 Education

2.1.1 Socially oriented entrepreneurship education

Education plays a pivotal role in shaping future entrepreneurs, particularly those committed to addressing social challenges (Sánchez *et al.*, 2017; Saebi *et al.*, 2019). When entrepreneurship education is embedded within academic curricula through active learning methodologies—such as project-based learning and problem-solving—it can effectively nurture students' entrepreneurial capacities (García-González & Ramírez-Montoya, 2021). However, fostering social entrepreneurship requires moving beyond conventional business instruction. It demands an educational approach that emphasizes a profound understanding of societal issues and cultivates the intrinsic motivation to develop solutions that generate social value (Cinar, 2019; Rakićević *et al.*, 2023).

Socially oriented entrepreneurship education seeks to equip students with the skills and mindset necessary to identify opportunities for social value creation (Austin *et al.*, 2006; Peredo & McLean, 2006). This involves not only teaching about business models and management but also fostering a prosocial personality, empathy, and strong moral agency (Saebi *et al.*, 2019). Rakićević *et al.* (2023) argue that this educational orientation enhances students' awareness of the role of social entrepreneurship (SE) in addressing societal challenges, while also increasing their motivation to initiate their own ventures. Although foundational business knowledge remains important, it is not sufficient on its own to inspire the commitment necessary for developing social enterprises that serve the public interest (Chandra *et al.*, 2021). As such, educational programs must deliberately integrate business principles with social objectives, fostering a holistic understanding that is essential for the effective cultivation of social entrepreneurship (Austin *et al.*, 2006).

Based on this, the following hypothesis is proposed:

H1: Socially oriented entrepreneurship education has a positive effect on the generation of SE in higher education students in Central America.

2.1.2 Financial education

Financial education is an essential component for the sustainability of any entrepreneurial initiative, including social enterprises (Barba-Sánchez & Atienza-Sahuquillo, 2018; Herdina *et al.*, 2022). Literature highlights that adequate financial education enables entrepreneurs to effectively manage resources, evaluate the economic viability of their projects, and make informed decisions (Abad-Segura & González-Zamar, 2019; Chen & Volpe, 1998).

In the context of SE, financial education takes on a particular dimension, as social entrepreneurs must navigate the complexity of generating social value while simultaneously ensuring the economic viability of their operations (Santos, 2012; Saebi *et al.*, 2019). This often involves multidisciplinary approaches to designing socially oriented business models and the ability to secure funding that may come from diverse sources, not just traditional capital markets (Parekh & Attuel-Mendes, 2022; Austin *et al.*, 2006). The ability to evaluate the financial impact of social projects and understand the role of finance in achieving social objectives is crucial for the survival and growth of social enterprises (Valdés-Medina & Saavedra-García, 2019; Herdina *et al.*, 2022).

Based on this, the following hypothesis is proposed:

H2: Financial education has a positive effect on the generation of SE in higher education students in Central America.

The integration of entrepreneurship education with a strong emphasis on social impact, alongside robust financial training, equips students with the cognitive frameworks and practical skills needed to identify, develop, and sustain social entrepreneurship (SE) initiatives that meaningfully address social and environmental challenges.

2.2 University-Industry interaction: links with social organizations and professional internships in socially responsible companies

University students' interaction with external stakeholders, particularly with organizations from the social sector and socially responsible companies, constitutes a crucial factor in promoting SE. This linkage exposes students to the reality of social problems, allows them to understand the dynamics of the sector, and facilitates the identification of opportunities for creating impact-driven enterprises (Austin *et al.*, 2006; Saebi *et al.*, 2019).

Links with social organizations, defined by their deliberate intention to achieve social development objectives (Stinchcombe, 2000), are vital for fostering SE intentions in students (Rakicevic *et al.*, 2023). Exposure to community problems through collaboration with these organizations emphasizes the importance of SE as a means to generate sustainable solutions (Santos, 2012). The integration of transversal SE projects into courses, often in collaboration with social organizations, allows students to apply their knowledge in real-world contexts and develop their social entrepreneurial potential (García-Gonzalez & Ramirez-Montoya, 2021). Furthermore, connecting with alumni and other social entrepreneurs already operating in the field can stimulate the creation of new ventures and provide valuable support networks (Barbini *et al.*, 2021; Austin *et al.*, 2006). This university-social context interaction is fundamental for driving entrepreneurial intention and behavior in students (Pinheiro *et al.*, 2022).

Based on this, the following hypothesis is proposed:

H3: Links with social organizations have a positive effect on the generation of SE in higher education students in Central America.

Furthermore, professional internships in socially responsible companies offer strategic and participatory learning experiences that contribute to civic formation and the promotion of SE (Bohórquez-Caldera, 2020). Immersion in business environments that prioritize social responsibility allows students to observe firsthand how principles of sustainability and ethics are integrated into business operations. This practical experience is fundamental for developing a socially oriented

entrepreneurial mindset, as the absence of such practices can limit the understanding of how to apply business approaches to address social problems (Karimi & Ataei, 2022).

Collaboration between companies and higher education institutions through internship programs facilitates the diffusion and implementation of corporate social entrepreneurship practices in small and medium-sized enterprises and exposes students to business models that generate economic and social value simultaneously (Davidavičienė & Raudeliūnienė, 2021; Saebi et al., 2019). Applying knowledge acquired at the university in a practical, socially focused setting stimulates the generation of SE from early stages of higher education (Backes, 2022).

Based on this, the following hypothesis is proposed:

H4: The development of professional internships in socially responsible companies has a positive effect on the generation of SE in higher education students in Central America.

Interaction with social organizations and undertaking internships in socially responsible companies not only provide practical experience and networks but also validate the relevance of SE as a viable and impactful professional path, and a connection of academic theory with real-world practice.

2.3 Entrepreneurial examples (role models): social mentors and social entrepreneurship

The influence of role models and the support of mentors are well-recognized factors in the development of any type of entrepreneurship. In the context of SE, social mentors and exposure to successful examples of social entrepreneurship play a crucial role in inspiring, guiding, and strengthening students' confidence to start their own social enterprises.

Mentoring, defined as an interaction between an expert and a less experienced individual to develop skills (Single & Muller, 2005), is a common educational strategy in universities to promote entrepreneurship (Camacho, 2018; Hien & Cho, 2018). Social mentors, with their experience in creating and managing businesses with social impact, provide invaluable support to students in formulating business ideas that are both viable and socially sustainable (Rakicevic et al., 2023). These mentors not only offer technical and management knowledge but also serve as role models, demonstrating how to combine a social mission with effective business operations (Peredo & McLean, 2006).

Support from social mentors can help students explore ideas, develop support systems, and build alliances, while reducing the insecurities associated with launching a social enterprise (Camacho, 2018; Fernández Juncosa, 2017; St-Jean & Jacquemin, 2022). Guidance from someone who has already navigated the unique challenges of SE, such as balancing social value creation and economic value capture (Austin et al., 2006; Santos, 2012), is fundamental for aspiring social entrepreneurs.

Based on this, the following hypothesis is proposed:

H5: Support from social mentors has a positive effect on the generation of SE in higher education students in Central America.

Exposure to concrete examples of successful social entrepreneurship, whether through case studies, guest lectures by entrepreneurs, or direct interaction with social enterprises, validates the concept of SE as an achievable and purposeful

career path. These role models illustrate the diversity of approaches and business models in SE (Saebi *et al.*, 2019) and demonstrate how obstacles can be overcome to generate real impact in society (Scartozzi *et al.*, 2025).

3. Sample, definition of variables and method

The results presented in this study are based on data collected through an online survey to students via email; 421 students from 5 countries of Central America: 75 (18%) from Costa Rica, 114 (27%) from Guatemala, 35 (8%) from Nicaragua, 87 (21%) from Honduras, 110 (26%) from Salvador. The participating universities were Universidad Tecnológica La Salle (Nicaragua), Bluefields Indian & Caribbean University (Nicaragua), Universidad Nacional de Ingeniería (Nicaragua), GAIA Business School (Guatemala), Universidad Latina de Costa Rica, Tecnológico de Costa Rica, Universidad Internacional de las Américas (Costa Rica), Universidad Dr. Andrés Bello (El Salvador) and Universidad Tecnológica Centroamericana (Honduras). All participants were students from Business Schools in Central America.

3.1 Sample

Among the surveyed students, the gender distribution was 54% women and 46% men. Notably, 70% reported being employed either full- or part-time. Additionally, 68% indicated having considered launching a social enterprise. When asked about their preferred type of social entrepreneurship, 39% expressed interest in Specialist Social Entrepreneurship (e.g., initiatives supporting education), followed by 25% favoring Promotional Social Entrepreneurship (e.g., awareness campaigns on environmental care), 21% opting for Local Action Social Entrepreneurship (e.g., reforestation at the municipal or community level), and 15% choosing Long-Range Social Entrepreneurship (e.g., water conservation projects). Regarding the roles they envision within a social enterprise, 50% would prefer to assume leadership positions, 41% would participate as collaborators, 8% as active participants, and 1% indicated other roles.

3.2 Variables

The theoretical model defines the *initiative of university students to create social enterprises*, as the dependent variable; Additionally, the model identifies five independent variables: x_1 : *links with social organizations*, x_2 : *professional practices*, x_3 : *support of social mentors*, x_4 : *socially oriented entrepreneurial education*; x_5 : *financial education*.

3.2.1 Dependent variable

The dependent variable--*the initiative of university students to create social enterprises*-- was measured using a five-point Likert scale related to the level of importance of items related to the statement: *for you to make a social enterprise...*; where 1 is equal to *totally disagree* and 5 to *totally agree*; The items were: a) *you consider that it is very important to have social enterprises*, b) *you think it is necessary to have more social enterprises*, c) *for university students it is attractive to have social enterprises*, d) *the university encourages the creation of social enterprises*, e) *the university prepares you to create social enterprises* and f) *you find it difficult to create social enterprises when you finish your studies*. It is important to mention that the dependent variable is not limited to measuring the explicit intention to undertake entrepreneurship, but rather captures a broader construct that includes attitudes, beliefs, perception of university support, and perception of feasibility. This conceptualization allows for a more comprehensive understanding of university students' initiative to create social enterprises.

3.2.2 Independent variables

Five independent variables were established, measured through items associated with each variable and through the application of a five-point Likert scale, where 1 is equal to *totally disagree* and 5 to *totally agree*.

The variable *links with social organizations* was measured through the following items: a) *I recognize that I live in a society where poverty and social inequalities are noted*, b) *I would like to have professional practices in underdeveloped communities*, c) *I feel committed to doing something with the marginalized community that improves their conditions*, d) *I would like the university to invite social organizations to a fair to meet them*, e) *I would like my university to have more links with social organizations to carry out social service* and f) *I am interested in giving my time to support social projects*.

The variable *professional practices* was measured through the following items: a) *I would like my university to contact me with organizations that have a social function*, b) *I have the necessary time to carry out professional internships in socially responsible companies*, c) *I would like to work in an entrepreneurial project in the social field during my professional internship*, d) *I prefer to do my professional internship in a social organization, even if they do not pay me much*, e) *I am convinced that socially responsible companies are not interested in profit economic* and f) *I would like the university to have specialized offices for social ties*.

The variable *support of social mentors* was measured through the following items: a) *I have had mentors who teach me to be able to generate employment and means of work for others*, b) *my mentors teach me to help and to realize an idea of social entrepreneurial project*, c) *there are mentors who promote contact networks between university social entrepreneurs and investors*, d) *I want to take on the responsibility of being able to do something for the most vulnerable society with the support of mentors*, e) *I would like that it is encouraged to have mentors who teach me to be a social entrepreneur*, f) *there is support of senior management and authorities to have mentors start social enterprises*, g) *I have had mentors who teach me to be able to generate employment and means of work for others* and h) *my mentors teach me to help and carry out an entrepreneurial project idea in the social sphere*.

The variable *socially oriented entrepreneurial education* was measured through the following items: a) *the university encourages teamwork to improve the society in which I live*, b) *the university teaches me to create a company that allows me to offer a social benefit*, c) *I am happy with what I have learned in my university about social entrepreneurship*, d) *business, financial and/or technical advice is provided to university students*, e) *I consider that in my university there are subjects or courses related to the social entrepreneurship* and f) *at the university there is practical training in social entrepreneurship (carrying out projects, business plans, etc.)*.

The variable *financial education* was measured through the following items: a) *I can be an entrepreneur who obtains economic resources to create a social enterprise*, b) *I can financially evaluate what it means to carry out a project with social impact*, c) *I understand that money is essential to live, but there is something more important than benefiting others*, d) *my university prepares me to face the financial challenges of creating a social enterprise* and e) *if I had the opportunity and the resources, I would definitely do a entrepreneurship*.

As control variables, the dichotomous variables sex and employment status were used. [Xiang et al. \(2022\)](#) point out that there are differences related to SE in higher education students associated with their gender and their employment status.

This research has a correlational scope from a self-administered instrument aimed at the selected sample; The instrument consists of two parts, the literature has supported these designs and their appropriate application ([Cohen et al., 2017](#); [Bryman, 2016](#)). The correlational scope allows for the analysis of how independent variables relate and co-vary with the dependent variable. This approach is ideal for exploring the strength and direction of associations between variables of interest, which is fundamental to evaluating the influence of the proposed determinants on the creation of social enterprises.

The first part of the instrument determines the student's profile (a total of 15 questions). The second part of the questionnaire consisted of the items associated with each variable under study. The constructs covered, by the objective of the present study, are supported by a previous study conducted in the university context, an initiative carried out by representatives and academics from the Latin American Council of Administration Schools – CLADEA, thereby ensuring their relevance and validity, and has been used in previous studies (Blanco *et al.*, 2024).

Data for this study were collected through online questionnaires administered between February and May 2023 to students from the participating universities. The distribution of the surveys was facilitated by entrepreneurship professors who collaborated with the research team. The process was conducted in accordance with ethical research standards, including the implementation of an informed consent protocol that ensured participants' voluntary involvement and guaranteed the confidentiality of their responses.

3.2.3 Quantitative methodological design

To construct the model variables—comprising one dependent variable and five independent variables—a multi-step process was employed, involving both factor analysis and reliability testing. Specifically, principal component factor analysis was conducted on each set of items developed to measure the respective constructs, with the aim of verifying that the items loaded onto a single underlying factor. Based on the results, a composite variable (factor score) was generated for each construct, aggregating the information from the original items in alignment with the identified factor structure.

To assess the internal consistency of the item sets corresponding to each construct, Cronbach's alpha coefficient was calculated. The results confirmed that the composite measures demonstrated high reliability, thereby validating their use as representations of the underlying conceptual dimensions within the model.

The Kaiser-Meyer-Olkin Sample Adequacy Test (KMO) was applied to verify the suitability of the data for factor analysis in the different dimensions of the instrument. The overall KMO results for each group of variables were as follows: Initiative of university students to create social enterprises, (dependent variable): 0.7853, in terms of independent variables, Socially Oriented Entrepreneurial Education: 0.8990, Financial Education: 0.864, Links with social organizations: 0.8992, Professional Practices in Socially Responsible Enterprises: 0.8485 and Social Mentors and Social Entrepreneurship: 0.8730. According to Kaiser's (1974) criteria, these values indicate levels of sample adequacy ranging from medium-high (0.70–0.79) to excellent (>0.90). At the individual construct level, all variables exhibited Kaiser-Meyer-Olkin (KMO) values above 0.73, indicating a substantial proportion of common variance among the items and sufficiently low partial correlations. These results confirmed the suitability of the data for exploratory factor analysis, which was subsequently conducted to validate the dimensional structure of the constructs. Following this, an ordered logistic regression model was applied to analyze the relationships between the dependent and independent variables, as recommended by Long and Freese (2014). The analysis was performed using the SPSS statistical package, version 18.0, Basic Edition.

3.2.4 Qualitative methodological design

This study enhances its analysis with methodological triangulation (Greene *et al.*, 1989). Specifically, sequential methodological triangulation (Morse, 1991) was employed to conduct a more comprehensive analysis of the determinants of SE among university students in Central America and to ensure more accurate information (Bell *et al.*, 2018). Twelve university students from Central American countries—Costa Rica (8), Nicaragua (1), and Guatemala (3)—were contacted

(Table 1). Instead of being randomly selected, these participants were chosen based on the study's purpose (Greene et al., 1989). The interviews were conducted in the second semester of 2023, for an average of 20 minutes and were recorded and fully transcribed.

In summary, the interview covered a broad spectrum—from the interviewee's personal experiences and motivations to a detailed examination of how various elements of the university environment (such as exposure to social issues, internships, mentoring, financial literacy, and specialized education) may have influenced their inclination and capacity to create a social enterprise. The objective of gathering these perspectives was to identify which of these factors exert the greatest influence within the context of this study (e.g., Lafuente et al., 2021). Analysis of the responses facilitated the refinement of the study variables and their organization into thematic subsections, providing a more nuanced understanding of the determinants of social entrepreneurial intention.

Table 1. Qualitative analysis: characteristics of the students (sample = 12)

Student	Country	Age	Sex
A	Guatemala	39	Women
B	Guatemala	36	Men
C	Guatemala	34	Men
D	Costa Rica	22	Men
E	Costa Rica	25	Men
F	Costa Rica	21	Women
G	Costa Rica	22	Women
H	Costa Rica	20	Women
I	Costa Rica	21	Men
J	Costa Rica	22	Women
K	Costa Rica	20	Women
L	Nicaragua	21	Women

4. Results

4.1 Quantitative analysis

The Pearson correlation coefficients between the variables under study are presented in Table 2. A moderate to strong positive correlation was observed between the variables *Socially Oriented Entrepreneurial Education*, *Financial Education*, *Links with social organizations*, *Professional Practices in Socially Responsible Enterprises* and *Social Mentors and Social Entrepreneurship* and the dependent variable *Initiative of university students to create social enterprises*, with coefficients ranging from 0.673 to 0.756. This suggests a tendency for these variables to exhibit positive covariation. In contrast, the control variables—country, employment status, and sex—generally demonstrated weak correlations with the other variables included in the analysis, indicating a limited influence on the primary constructs under study.

Table 3 shows the results of the ordinal logistic regression, which modeled the ordinal dependent variable *Initiative of university students to create social enterprises*. The overall model was statistically significant ($\chi^2 = 441.268$, $p < 0.001$), indicating that the set of predictor variables explains a significant proportion of the variance in the ordinal dependent variable, although the Pseudo R-squared of 0.100 suggests that the explained proportion is modest.

Specifically, *Socially Oriented Entrepreneurial Education* had a positive and highly significant coefficient ($\beta = 1.128$, $p < 0.001$). This indicates that an increase in *Socially Oriented Entrepreneurial Education* is associated with higher odds of having a greater *Initiative of university students to create social enterprises*, holding other variables constant. The large coefficient suggests that this is the predictor with the greatest influence in the model. All of the above allows us to confirm our hypothesis 1: Socially oriented entrepreneurship education has a positive effect on the generation of SE in higher education students in Central America.

Table 2. Correlations between variables (sample = 421)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Country	1.000								
(2) Job condition	-0.096	1.000							
(3) Sex	0.525	-0.185	1.000						
(4) Socially Oriented Entrepreneurial Education	0.142	-0.051	0.106	1.000					
(5) Financial Education	0.020	0.025	0.000	0.751	1.000				
(6) Links with social organizations	0.079	-0.020	0.033	0.648	0.668	1.000			
(7) Professional Practices in Socially Responsible Enterprises	0.091	-0.071	0.089	0.651	0.680	0.720	1.000		
(8) Social Mentors and Social Entrepreneurship	0.161	-0.026	0.115	0.767	0.678	0.601	0.649	1.000	
(9) Initiative of university students to create social enterprises	0.118	0.015	0.042	0.756	0.699	0.744	0.673	0.676	1.000

Secondly, *Financial Education* also showed a positive and significant coefficient ($\beta = 0.397$, $p = 0.009$), indicating that an increase in *Financial Education* is associated with higher odds of having a greater *Initiative of university students to create social enterprises*, confirming our H2, which postulated that financial education has a positive effect on the generation of SE in higher education students in Central America.

Thirdly, a positive and highly significant coefficient was observed for the variable *Links with social organizations* ($\beta = 0.918$, $p < 0.001$), which allows us to confirm our hypothesis H3: Links with social organizations have a positive effect on the generation of SE in higher education students in Central America. Associated with the above, our fourth variable, *Professional Practices in Socially Responsible Enterprise*, also had a positive and significant coefficient ($\beta = 0.299$, $p = 0.037$), which supports the proposition of H4: The development of professional internships in socially responsible companies has a positive effect on the generation of SE in higher education students in Central America.

Finally, *Social Mentors and Social Entrepreneurship* showed a positive and significant coefficient ($\beta = 0.302$, $p = 0.040$), which demonstrates the significance of this construct for the model and allows us to confirm our H5: Support from social mentors has a positive effect on the generation of SE in higher education students in Central America.

Table 3. Ordered logistic regression (sample = 421)

Initiative of university students to create social enterprises	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Socially Oriented Entrepreneurial Education	1.128	.164	6.87	0	.806 1.45	***
Financial Education	.397	.153	2.60	.009	.098 .696	***
Links with social organizations	.918	.157	5.85	0	.611 1.226	***
Professional Practices in Socially Responsible Enterprises	.299	.144	2.08	.037	.018 .581	**
Social Mentors and Social Entrepreneurship	.302	.147	2.05	.04	.013 .59	**
Mean dependent var	0.000		SD dependent var		1.000	
Pseudo r-squared	0.100		Number of obs		421	
Chi-square	441.268		Prob > chi2		0.000	
Akaike crit. (AIC)	4489.658		Bayesian crit. (BIC)		5581.169	

*** $p < .01$, ** $p < .05$, * $p < .1$

4.2 Qualitative analysis

The qualitative analysis focused on detailed interviews with twelve Central American university students, who, due to their availability and willingness, agreed to participate in our survey. All of them stand out for their interest in SE.

The interviews aimed to assess the impact of the determinants studied and their link with the social entrepreneurial intention. Table 4 illustrates a summary of the effect of the determinants on students' SE intentions and other sub-determinants that students associated with the determinants proposed in the study. The interviewees emphasized the importance of all factors, but particularly highlighted social-oriented entrepreneurial education and the connection with communities or social organizations. Although the level of impact of each determinant may differ individually, there was unanimous agreement that all of them influenced their intention towards SE.

The most prominent element was social-oriented entrepreneurial education. An interviewee shared: 'I am very interested in getting involved in teaching how to improve the current lifestyle of that sector... Although they may be fine now, we are not eternal, and we cannot assist others if we do not leave an established structure' (B). This statement reflects a deep understanding of sustainability and long-term impact, suggesting that students see entrepreneurship education not only as a tool to start a business, but also as a means to create lasting social change.

This aspect was followed by interaction with communities or social organizations. Interviewees identified participation and education for sustainable development in communities as one of the most crucial sub-determinants for SE. This connection highlights the importance of hands-on experience and community engagement in developing social entrepreneurial intent.

Regarding financial education, an interviewee highlighted the need to strengthen and expand this area, commenting: 'Definitely, it would be beneficial to reinforce or expand it. Although the content of the topics is complete, they are complex subjects that could benefit from extra time to be properly understood' (C). This observation shows students' perception that financial education is an essential but underdeveloped component in their training for social entrepreneurship.

As for the determinant associated with professional practices in socially responsible companies, an interviewee stated: ‘Yes, I work in a socially responsible company and this definitely influences’ (A). This statement provides direct evidence of the positive impact of work experience in socially responsible companies on SE. Furthermore, concerning the reasons for starting social enterprises, another participant pointed out: ‘My goal is to offer others a new opportunity, to help those who lack the same opportunities or tools to feel supported and to know that it is possible to move forward’ (D). This altruistic motivation is a key factor in social entrepreneurship and reflects a strong commitment to social justice.

Finally, regarding mentor support, two equally important aspects were highlighted by the respondents: the work of the mentors and their support and mentorship in SE. One student mentioned: ‘The truth is that the presence of mentors was almost non-existent, very scarce in terms of involvement. A greater commitment from the mentors is needed to further encourage entrepreneurship’ (F); another interviewee added: ‘They could be of great help in providing us with guidance’ (D).

Table 4. Qualitative analysis

Determinants and sub-determinants	Absolute	Relative
Entrepreneurial Education with Social Orientation	30	25%
Courses and support resources in social entrepreneurship	10	8%
Business, financial or technical advice	7	6%
Business training and the need for a greater focus on HE	8	7%
Teamwork	5	4%
Communities or Social Organizations	28	24%
Participation and education for sustainable development in communities	8	7%
Accurate Disclosure and Transfer of Information	10	8%
Access to information	8	7%
Opportunity for Academic Development	2	2%
Financial education	23	19%
Importance of strengthening and expanding Financial Education	8	7%
Financial sustainability and its impact on participation in social projects	8	7%
Relevance of Financial Education during the Career	7	6%
Internships in socially responsible companies	22	18%
Professional Internships and Social Commitment	2	2%
Low-paid internships	6	5%
Influence of socially responsible companies	6	5%
Reason to create social enterprises	8	7%
Mentor support	16	13%
Mentors’ Work	8	7%
Support and mentoring in social entrepreneurship	8	7%
Total	119	100%

5. Discussion and Conclusions

Our first finding confirms the positive effect of entrepreneurship education on the development of social enterprises (SE) among higher education students in Central America. This aligns with existing literature, which highlights entrepreneurship as a driver of business growth, social progress, and regional economic development (Zemlyak et al., 2023). It also contributes to ongoing scholarly discussions regarding the broader impact of entrepreneurship education on business creation (Mohamad, 2023; Zemlyak et al., 2023), and more specifically, its role in fostering university-based social entrepreneurship (Xiang et al., 2022). Therefore, it is crucial to deliberately integrate business principles with social objectives to cultivate effective social entrepreneurship within universities (Chandra et al., 2021; Austin et al., 2006).

Particularly, Vázquez-Parra et al. (2021) emphasized that humanistic and ethical education is essential to form a positive perception of SE, and Rakicevic et al. (2023) point out that entrepreneurial education should lead to a better perception of the importance of SE. Similarly, the literature highlights that entrepreneurship education plays a significant role in shaping the psychological and emotional factors that indirectly influence students' intentions and behaviors toward social entrepreneurship (Duong, 2023). Through socially oriented entrepreneurial education, students gain greater awareness of the importance of SE in solving social problems, and a greater desire to initiate their own SE projects (Rakicevic et al., 2023).

A second key finding confirms the positive influence of financial education on the development of social enterprises (SE) among higher education students in Central America. This result aligns with prior research that underscores the importance of financial literacy in shaping entrepreneurial processes and ensuring the long-term viability of ventures (Abad-Segura & González-Zamar, 2019; Barba-Sánchez & Atienza-Sahuquillo, 2018). In the case of SE, financial education is especially relevant, as it equips students with the skills needed to manage resources efficiently, assess the economic feasibility of their projects, and make informed decisions (Chen & Volpe, 1998; Herdina et al., 2022). Moreover, it enables future social entrepreneurs to evaluate whether their initiatives are effectively addressing the targeted social issues (Valdés-Medina & Saavedra-García, 2019). In the specific context of SE, financial literacy becomes a critical enabler for balancing social impact with economic sustainability (Santos, 2012; Saebi et al., 2019). Developing sustainable, socially-oriented business models and accessing diverse funding sources—often outside traditional financial systems—demands a solid understanding of financial principles (Parekh & Attuel-Mendes, 2022; Austin et al., 2006). Therefore, strengthening financial education in university curricula not only supports the viability of emerging social ventures but also enhances students' capacity to integrate social and economic objectives, which is essential for the consolidation and scalability of SE initiatives (Valdés-Medina & Saavedra-García, 2019; Herdina et al., 2022).

A third key finding highlights the positive effect of Central American students' involvement with social organizations on the development of social ventures. This result aligns with existing literature, which emphasizes the pivotal role of educators connected to social organizations in fostering students' intention to engage in social entrepreneurship (SE) by exposing them to community challenges and the relevance of SE as a solution (Rakicevic et al., 2023).

Interaction with external stakeholders—particularly social sector organizations and socially responsible companies—emerges as a critical factor in promoting SE among university students. These linkages immerse students in the realities of social problems, help them understand the operational dynamics of the sector, and encourage the identification of opportunities to create impact-driven ventures (Austin et al., 2006; Saebi et al., 2019). Social organizations, defined by their explicit aim to achieve social development goals (Stinchcombe, 2000), serve as essential platforms for cultivating SE intentions (Rakicevic et al., 2023).

Moreover, the integration of transversal SE projects into academic courses—often developed in collaboration with social organizations—provides students with practical experiences to apply their knowledge and enhance their social entrepreneurial capacities (García-González & Ramírez-Montoya, 2021). Connections with alumni and active social

entrepreneurs further contribute to venture creation and help build supportive networks (Barbini *et al.*, 2021; Austin *et al.*, 2006). In sum, the interaction between the university and the social ecosystem plays a fundamental role in driving students' entrepreneurial intention and behavior (Lafuente-González & Leiva, 2022; Pinheiro *et al.*, 2022).

Additionally, the literature has mentioned how integrating cross-cutting SE projects in various courses enables students to develop their entrepreneurial potential (García-Gonzalez & Ramirez-Montoya, 2021), and how creating connections between students in the same course and recent graduates fosters the establishment of new enterprises (Barbini *et al.*, 2021). Finally, previous studies have emphasized that focusing on students as agents of change and developing SE educational programs promotes greater collaboration, economic growth, political capital, and social well-being in local and regional entrepreneurial ecosystems (Thomsen *et al.*, 2018). Students who trust in their ability to effectively address societal problems are more motivated to initiate their own SE projects and provide employment and income (Rakicevic *et al.*, 2023).

Our fourth finding reflects that professional internships in socially responsible companies have a positive effect on the generation of social ventures among higher education students in Central America. Literature supports this assertion, highlighting that professional practices or internships, as strategic participatory learning experiences for citizenship creation in the university curriculum (Bohórquez-Caldera, 2020). Furthermore, the application of knowledge gained through teaching, research, and university outreach activities during professional practice plays a crucial role in stimulating social entrepreneurship (SE) among students from the early stages of their university education (Backes, 2022).

Finally, the support of social mentors is essential in the generation of social ventures by higher education students in Central America. Literature provides solid support for this assertion, by identifying this approach as a common strategy in educational systems to promote entrepreneurship (Camacho, 2018; Hien & Cho, 2018). Literature has mentioned how socially oriented mentors in universities provide support and help students formulate feasible and socially sustainable business ideas and models (Rakicevic *et al.*, 2023) and how it helps reduce students' insecurities towards entrepreneurship (St-Jean & Jacquemin, 2022).

Entrepreneurial education, especially when it includes humanistic and ethical aspects, is fundamental to motivating students to become agents of social and economic change. We conclude that financial education is a critical component for the success and sustainability of social enterprises, highlighting the need for strong financial education in educational programs. Similarly, it can be concluded that involvement with social organizations is a key factor in fostering SE among university students in Central America, emphasizing the importance of social networks and community engagement in higher education. Finally, it can be asserted that professional practices in socially responsible companies are crucial for the development of SE, as they provide valuable practical experiences that complement academic training. The support of social mentors is also essential for inspiring and guiding students in the development of viable and sustainable social enterprises.

Additionally, the qualitative analysis reveals that university students in Central America perceive the examined determinants as influential in shaping their intention to become social entrepreneurs. However, the effectiveness of these factors varies, highlighting areas for improvement—particularly in mentoring support and the depth of financial literacy. Among the determinants, socially oriented business education and community engagement emerge as the most impactful, suggesting that higher education institutions should prioritize these elements in the design and implementation of their social entrepreneurship programs.

This study offers significant contributions to the understanding of social entrepreneurship (SE), both theoretically and practically. Firstly, it highlights the importance of social capital, demonstrating how connections with social organizations directly translate into entrepreneurial activities. This study contributes to the expansion of social capital theory by contextualizing it within the specific framework of university-based social entrepreneurship (SE) in Central America. Moreover, it reinforces the relevance of experiential learning theory, underscoring the pivotal role that professional practice and mentoring play in cultivating entrepreneurial competencies (Lafuente *et al.*, 2021). Together, these theoretical

contributions offer a robust foundation for future research and inform the development of evidence-based policies aimed at strengthening social entrepreneurship in higher education.

In terms of practical implications, this study suggests that mentoring programs should be integral components of entrepreneurial education, to facilitate students' access to mentors who offer guidance and practical support. Likewise, it highlights the need for educational institutions to foster partnerships with social organizations and companies to expand professional practice opportunities that drive SE. These recommendations can guide the design of more effective educational programs and the creation of support ecosystems for social entrepreneurs. Additionally, it is suggested that public policies should focus on facilitating collaboration between universities, social organizations, and the private sector, creating incentives for participation in mentoring programs and professional practices. These policy implications aim to strengthen the support ecosystem for social entrepreneurship, fostering the development of sustainable social enterprises and amplifying their capacity to generate meaningful social impact.

At a methodological level, this study highlights the relevance of using mixed methods. It is recommended to consider the inclusion of diverse actors from the SE ecosystem (professors, social entrepreneurship alumni, social actors) to explore more deeply how personal interactions and practical experiences influence entrepreneurial intention and action.

Future lines of research derived from this study include exploring how cultural and socioeconomic differences within Central America affect the relationship between education and SE. It is also recommended that future research examine the long-term impact of entrepreneurial and financial education on the sustainability and success of social enterprises established by university students. Furthermore, exploring the role of digital technologies in enabling and scaling social entrepreneurship in the region could yield valuable insights into new avenues for innovation and outreach (Lafuente et al., 2023).

This study presents some limitations that must be considered. Firstly, geographical coverage was limited to some countries in Central America, which restricts the generalization of the results to the entire region. To overcome this limitation, future research could expand the sample to include all Central American countries and use a comparative design to identify regional differences and similarities. Secondly, the analysis was limited to five variables of the university context, which may not capture the complexity of the SE phenomenon. To address this limitation, it is recommended to include a greater number of contextual variables, such as access to financing, government support, and entrepreneurial culture (Lafuente et al., 2022). Furthermore, qualitative methods could be used to deepen the understanding of the factors that influence SE. Finally, the cross-sectional design of this study limits the ability to establish definitive causal relationships. Future longitudinal research could offer deeper insights into the evolution of social entrepreneurship (SE) over time, capturing dynamic changes in student motivation, institutional support, and enterprise sustainability. Addressing these limitations would strengthen future studies and contribute to a more comprehensive understanding of the social entrepreneurship landscape in Central America.

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