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Paper in Innovation Studies no. 2025/02

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Exploring Chilean student perceptions of Opportunity entrepreneurship?

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Abstract

This study explores how Chilean university students perceive entrepreneurship, exploring whether they see it as an opportunity to address societal challenges or primarily as an enterprise creation. The research focuses on how these perceptions vary by gender in front of sociodemographic, academic, and institutional influential factors. Using a quantitative approach, we collected data from a sample of 973 students from different fields of study and conducted statistical analyses to determine the importance of factors that determine entrepreneurial attitudes. The results reveal that the majority of students see entrepreneurship as an opportunity to influence society and address social issues. Sociodemographic factors do not show statistical significance, suggesting that, within this specific population, they do not substantially alter the motivations for entrepreneurship. Although students may share similar views on the opportunity or business nature of entrepreneurship, the factors shaping this perception differ by gender. Among these factors, the value of active and engaged university support, especially in the form of experiential learning methodologies, in fostering opportunitydriven entrepreneurship is highlighted. In contrast, resources such as infrastructure and institutional culture, while important, appear to play a more limited role. This research underscores the need for a holistic approach to entrepreneurship education, but with special attention to particular differences between the segments being served, integrating institutional support with hands-on learning methods to better cultivate an entrepreneurial culture to economic growth and mindset geared towards addressing societal problems.

Keywords: Entrepreneurship, Higher education, Opportunity-driven entrepreneurship, Gender disparities, Chile.

JEL-code: L26, I23

1. Introduction

Chile's economic landscape, shaped significantly by neoliberal policies since the 1970s, places a pronounced emphasis on market-driven growth and entrepreneurship as central pillars for national development. This economic model has encouraged individual enterprise, competition, and innovation, aligning well with Chile's regional status as a leader in entrepreneurial activity. Madariaga (2020) explains the durability of Chile's neoliberalism as a product of the interplay of ideas, institutions, and interests, which together have established a framework that consistently promotes entrepreneurship as a key vehicle for socioeconomic advancement. Within this context, both *opportunity (push)* and *necessity-driven (pull)* entrepreneurship play important roles in the development of ideas and projects of people, with different focuses. Nevertheless, opportunity entrepreneurship, driven by innovation, the needs of society, and market potential, is increasingly supported by policy, whereas necessity entrepreneurship often arises from economic necessity, reflecting underlying structural inequalities in the labor market (GEM, 2023; Fairlie & Fossen, 2018).

The emphasis on entrepreneurship within Chile is further supported by international indicators that demonstrate the country's strong position in various areas of entrepreneurship. Chile ranks third globally in female entrepreneurship (GEM, 2023) and has maintained a leading position in the Latin American region in the Global Innovation Index (GII) from 2014 to 2022, underlining the impact of innovation policies on entrepreneurial success. Moreover, the OECD's *Education at a Glance 2024* report highlights the key role of higher education in fostering entrepreneurial skills, especially in developing countries, where Chile stands out with a relevant investment in education (OECD, 2024). In Chile, the Ministry of Education and the Chilean Economic Development Agency (CORFO) have developed programs to integrate entrepreneurship into higher education curricula, considering it a key driver of economic resilience and social mobility. These initiatives aim to cultivate entrepreneurial skills among students, empowering them to engage in opportunity-driven enterprises that align with the country's development goals (CORFO, 2024).

Given this context, understanding the role of higher education in shaping students' motivations and perceptions toward entrepreneurship is essential for furthering Chile's socio-economic development strategies. This paper seeks to explore how different elements within higher education influence Chilean students' views on entrepreneurship, examining whether they perceive it as a pathway to address societal challenges (opportunity) or merely as an alternative means of employment (necessity). The study addresses two primary research questions: (1) Do male and female students share similar motivations for entrepreneurship? (2) How does higher education shape students' views on entrepreneurship as an opportunity versus a necessity?

These questions are particularly relevant in a context where gender disparities in entrepreneurship remain significant, with women more likely to engage in economic-driven entrepreneurship due to persistent social and economic barriers (Stoker et al., 2024). The methodology employed in this study involves a quantitative approach, gathering data from a survey of university students across various academic disciplines in Los Rios Region, in Chile. This design enables us to analyze the role of gender in how different factors influence entrepreneurial attitudes, perceptions, and motivations.

The structure of this paper begins with a review of the relevant literature, providing background on the intersection of higher education and entrepreneurship, together with a gender context. Following this, the methodology section outlines our research approach, detailing the sample

selection, data collection, and analytical methods used. The results and discussion section presents findings that differentiate between male and female students' perceptions of entrepreneurship, as well as insights on how these views vary across academic disciplines and other institutional factors on education. Finally, the conclusion explores the implications of these findings and offers highlights for fostering an inclusive, opportunity-driven entrepreneurial culture within Chile's universities.

This research contributes to a broader understanding of how higher education can shape entrepreneurial perspectives in emerging economies, highlighting the importance of contextspecific strategies that address gender and both opportunity and necessity-driven motivations. By focusing on the Chilean context, this study underscores the need for educational and policy frameworks that not only promote entrepreneurship but also tailor support to the distinct motivations and challenges faced by different demographic groups within the student population.

2. Theoretical Framework

2.1 Opportunity vs necessity entrepreneurship

Venkataraman (1997) describes entrepreneurship as a process of opportunity recognition, the creation of goods and the exploitation of opportunities, being inseparable from the innovation process (Rahdari, 2016). For this reason, entrepreneurship is increasingly recognized as a solution to various economic, social, and environmental challenges (Filser et al., 2019). The Global Entrepreneurship Monitor (GEM) model recognizes the importance of the social value of entrepreneurship (e.g. ability to generate innovative solutions to social problems, promote sustainable development, and improve the quality of life in communities), and it is seen as an essential factor for its promotion. Taking this aspect as a reference, it identifies two main motivations for entrepreneurial activity: Opportunity entrepreneurship (OE), and Necessity entrepreneurship (NE), (Reynolds, et al., 2001; Giacomin et al., 2011). Opportunity entrepreneurs identify options to give solutions to market and society gaps (Lim et al., 2024), while necessity entrepreneurs start ventures due to a lack of better employment options (Mohan et al., 2018; Fairlie & Fossen, 2017), driven by economic hardship or unemployment (Lim et al., 2024).

These categories are also referred to as "pull" and "push" entrepreneurs, respectively (Alam et al., 2021). Research indicates that OE is pro-cyclical and associated with more growthoriented businesses, while NE is counter-cyclical (Fairlie & Fossen, 2017). Both types are influenced by socio-economic and perceptual factors, but in different ways (Mohan et al., 2018). OE has been found to have a positive and significant effect on socioeconomic development, while NE shows no such impact (Shrivastava & Shrivastava, 2013). Opportunity entrepreneurs report higher life satisfaction compared to employees, whereas necessity entrepreneurs do not show this effect (Larsson & Thulin, 2018) and, generally, opportunity entrepreneurs are known to have more profitable ventures compared to necessity-driven entrepreneurs and have stronger long-term growth intentions and impact (Cervelló-Royo et al., 2020).

O'Donnell et al. (2024) analyzed 285 papers on necessity entrepreneurship. Many of these studies provide empirical evidence supporting the premise that NE represents an inferior class of entrepreneurial activity compared to OE (García-Lorenzo, et al., 2018). The reasons for defining NE as distinct from—and invariably worse than—OE are numerous (Burtch, et al.,

2018) and encompass various dimensions of the phenomenon as well as multiple levels of analysis. According to the literature analyzed, in contrast to OE, EE in developing countries, as is Chile, is characterized by the following features: lower financial capital, lower human capital, lower social capital, and a less supportive institutional environment. These inputs result in reduced innovation, a domestic focus with less inclination to internationalize, and a prioritization of cost leadership over differentiation. Consequently, NE is associated with lower profitability, evidence suggesting lower income levels compared to wage work, a higher likelihood of involuntary exit, and lower levels of job and life satisfaction compared to OE, although some conflicting evidence exists. However, NE is still perceived more favorably than unemployment (O'Donnell et al., 2024).

Both, opportunity and necessity entrepreneurship contribute to economic growth in different ways. Nevertheless, global strategic guidelines and efforts aim to stimulate and support the development of OE. Its orientation can bridge the gap between unemployment and sustainable economic growth, contributing to sustainable development goals, through innovation and value creation (Lim et al., 2024). It remains a challenge for countries, especially in the global South (Filser, et al., 2019).

The dichotomy of Necessity and Opportunity motivation has been frequently used to explain Women's Entrepreneurial Motivation (WEM) (Lingappa & Rodrigues, 2023). Most researchers agree that entrepreneurial motivation is usually a combination of multiple factors rather than a single factor alone (Alexandre et al., 2019; Kirkwood, 2009). Factors affecting women's entrepreneurship success include education, experience at the individual level, and access to resources at the micro-environment level (Cabrera & Mauricio, 2017). Women's entrepreneurial motivations also vary between developed and developing countries, with contextual differences influencing the classification of factors as necessity or opportunity-driven (Lingappa & Rodrigues, 2023). Social and cultural forces may either restrict or extend the mode in which women perceive opportunities and engage in entrepreneurial activity (Carsrud & Brännback, 2011).

In emerging economies, especially regarding women's entrepreneurship, behavioral economists tend to focus closely on how the specific context impacts entrepreneurial decisionmaking (Yadav et al., 2022). In Chile, a country that leads the South American rankings in entrepreneurship and innovation rates, the main motivation for engaging in the entrepreneurial process has been the difficulty in finding a job due to the scarcity of employment options (80%). This motivation presents a significant increase of 11 percentage points concerning the early-stage entrepreneurial population in 2019 (GEM Chile, 2020).

Education is a relevant development tool in Chile (Didier, 2018). It is seen as an important factor in the professional profile and in the support of human resources to give solutions to the challenges of the country (Banha, et al., 2022). In this line, Jardim et al. (2021), after analyzing 29 educational programs in different countries around the world, indicate that education does not generate an increase in entrepreneurial intention, but education represents a relevant platform for promoting entrepreneurial skills and students' understanding of entrepreneurship and its impact on society, at all levels of education.

2.2 University support systems in fostering entrepreneurship

Policymakers and academics are increasingly interested in student entrepreneurship (Meoli et al. 2020), mainly because businesses run by university professionals (i) have an economic impact and contribute to job creation (Åstebro et al. 2011); (ii) represent a means to put to use

and exploit knowledge generated in universities (Shah & Pahnke 2014); and (iii) develop solutions that respond to societal needs (Hahn 2020).

Entrepreneurship Education (EE) is a young and less institutionalized field in the academic system (Neck & Corbett, 2018), but the growing interest in it by different actors places the research field at the intersection between different disciplinary domains, resulting in a distinctive subfield of research with a largely unique profile (Hägg & Gabrielsson, 2020). Entrepreneurship Education is based on the development of transversal competencies, understood as a set of knowledge, skills, and attitudes (Hartog, 2001; Bellocchio, 2010), and enterprising behaviors including both business and non-business contexts (Gabrielsson et al, 2020). It seeks to get more people to turn their ideas into action, helping students to integrate into society as agents of change. For this reason, the OECD considered EE an essential element for sustainable economic development (Zahra & Welter, 2008).

Educational methodologies are considered the key tools to improve competencies (Fernández, 2016) and these "facilitate the development of a truly comprehensive education by encompassing all the dimensions of the human being (knowing, knowing how to do and knowing how to be), and these are a reference for overcoming merely academic teaching" (Agudo et. al., 2013). These dimensions coincide with the common components proposed by different authors as elements of competencies: knowing (knowledge), doing (skills), and knowing how to be (attitudes) (Rojas et al., 2019). Despite the promotion of active methodologies (e.g. service-learning, gamification, internships in institutions), they are shown to be in a state of low applicability - traditional methodologies predominate in higher education (Jones & Iredale, 2020), in particular, master lectures (Fernández, 2016). A dynamic orientation in education generates certain resistance due to the traditional conception of education on the part of students and their families (Perales-Franco & McCowan, 2021).

To know progress in this topic, Landström et al. (2022) identify five subgroups of EE researchers based on their different perceptions of interest: the "action-oriented advocates" with a focus on practical, impactful research that generates new theoretical insights; "critical advocates" that emphasize novel paradigms and theoretical contributions, often questioning conventional approaches to EE; "practice-oriented builders" prioritize methodologically robust, practical applications, particularly in teaching and learning contexts; "general incrementalists" gradually contribute to theory, showing moderate interest in practical outcomes.; and "spectators" exhibit limited engagement with either theoretical innovation or practical application. These clusters show the need to balance theoretical and practical contributions, recognizing that some approaches prioritize real applicability while others stress the importance of critically questioning the theoretical and methodological foundations of the field. The analysis also reveals that EE is a strongly topic-driven research field, where researchers find particularly interesting areas such as teaching and learning entrepreneurship, entrepreneurial characteristics, and EE outcomes. This thematic focus, together with a strong interest in innovation, in questioning previous research and its practical relevance, are common features of emerging and young research fields (Landström & Harirchi, 2019).

In the Global South, it is more common to find researchers aligned with the profile of "practiceoriented builders" (Landström et al, 2019). This group is characterized by its focus on practical relevance and methodologically sound contribution that can be directly applied to local contexts. In developing countries, studies tend to prioritize research that offers immediate and applicable solutions to local socio-economic challenges, such as job creation, entrepreneurial skills development, and social impact at the community level. This practical approach fits the urgent needs of the Global South, where applied research can generate a more visible and rapid impact. While practical research is essential, the inclusion of a deeper and more critical perspective ("action-oriented advocates" and "critical advocates"), examining the underlying theories of entrepreneurship, especially in non-Western contexts, would help to better adapt educational approaches and public policies to local realities. This would allow EE in the Global South to not only respond to immediate needs but also contribute to the development of a theoretical basis that reflects the cultural and socio-economic diversity of these regions.

2.3 Entrepreneurial activity from the gender perspective.

Research on gender and entrepreneurship reveals complex relationships. While some studies suggest that female entrepreneurial activity is not significantly correlated with gender equality (Sarfaraz et al., 2014), others find that gender affects entrepreneurial activity levels and innovation (Kharlamova et al., 2020).

The relationship between gender and entrepreneurship is multifaceted, involving factors such as government support, sociocultural norms, and linguistic structures (Dheeer, et al, 2019). While progress has been made in understanding these connections, the complex interplay of factors affecting gender disparities in entrepreneurship requires further investigation to develop effective strategies for promoting gender equality in entrepreneurial activities.

On another hand, GEM (2023) indicates that Total Entrepreneurial Activity (TEA) rates increase with educational attainment for both men and women. However, women entrepreneurs tend to be more educated than men, with higher levels of graduate education (W/M 1.08). Among female entrepreneurs, 63% perceive opportunities, a figure that is close to parity with that of men. In terms of perceived business start-up skills, 79.5% of women perceive that they have the skills to start a business, compared to 84.2% of men. Only Europe, North America, and Sub-Saharan Africa show parity in perspective of their skills. Globally, 67.9% of women, compared to 72.3% of men, indicated that they are not intimidated by fear of failure, being the largest gap in middle-income countries (9%) (Elam et al, 2023). In entrepreneurship education, Hägg et al, (2023) highlights the fact that men and women have a similar motivation to start an opportunity entrepreneurship.

Martínez-Rodríguez et al. (2023) use an empirical analysis showing that more women enter entrepreneurship out of necessity than in search of an opportunity, both in countries with higher levels of GDP and in countries with lower levels of GDP. Much research has been conducted to determine which explanatory factors affect female entrepreneurship and need-based female entrepreneurship, without great consensus. Globally, women were more likely than men to report starting a business due to job scarcity. The highest entrepreneurial intention rates were observed in low-income countries, where approximately 28% of women expressed intentions to start a business (GEM, 2023). In fact, job scarcity is the main reason that most entrepreneurs start a business; almost three in four women (72.9%) cited this reason for starting a business compared to about two-thirds of men (67.2%). Regionally, rates were highest for women in Latin America and the Caribbean (82.2%). And, one in five women reported business exit due to family reasons, about 43% more often than men (GEM, 2023).

These scenarios show a gap between women's perceptions of their understanding and capabilities for entrepreneurship, which shows an opportunity entrepreneurship orientation, as opposed to the main motivation that drives and shapes their entrepreneurial projects, which shows higher rates of necessity entrepreneurship. The gender balance approach (Tatum et al., 2013) emphasizes that gender balance is not about equal numbers (King et al., 2010; Lewis and Simpson, 2012), but rather about changing perceptions of who might be a future entrepreneur (Hytti and Heinonen, 2013; Jones, 2014), thus challenging the taken-for-granted norms that have developed over time and expanding the capabilities for all people equally.

Gender stereotypes negatively affect female students' entrepreneurial intentions, but entrepreneurship education can mitigate this effect and increase intentions for all students, particularly females (van Ewijk & Belghiti-Mahut, 2019). The trend toward parity in the GEM data reflects the effectiveness of certain policies adopted in pursuit of equality (Elam et al, 2019). However, it is not unknown that there are still many contexts where women need support in terms of equality, and policy measures that promote female entrepreneurship should be implemented: optimization of government spending (training and mentoring courses, public procurement, strengthening of networks, support in reconciling business and family life, etc.), government incentives to subsidize high interest rates to support women in accessing finance, and improving business education to increase women's self-confidence in their own entrepreneurial skills (Martínez-Rodríguez, et al., 2023)

3. Methodology

3.1 Survey Data

To conduct this study on university students' perceptions of entrepreneurship education, a data collection strategy based on a quantitative approach was developed. A structured survey was designed to capture Chilean students' perceptions of entrepreneurship and its stimulation at the university. The data collection instrument was a self-administered questionnaire composed of closed questions, which allowed measuring attitudes and perceptions related to different dimensions of entrepreneurship, such as environmental capabilities, barriers to entrepreneurship, level of development of types of entrepreneurship, and level of development of entrepreneurship.

The study sample consisted of 973 university students from Los Rios region, in southern Chile, from different academic disciplines, obtaining a representative view of the student perception of entrepreneurship. The questionnaire was disseminated through institutional e-mails, encouraging voluntary participation. The anonymity of the participants was guaranteed and the exclusive use of the data for academic purposes was emphasized. The collection period lasted approximately three months, from March to May 2021, which made it possible to obtain a sufficiently broad and diverse sample for the analysis.

Our sample included 652 female and 321 male students with an age range from 18 to 53 years old, and an average of 23 years old. The participation in the five areas of knowledge was: biomedicine (303), basic sciences (61), humanities (473), engineering (136), and social sciences (222). 679 students are not originally from Valdivia, the capital of Los Rios region, and 429 students were in the 3rd year or later in their studies.

3.2 Variables

The set of chosen variables is based on the literature and provides a comprehensive framework for analyzing student perceptions of entrepreneurship, allowing us to understand how both personal characteristics and the academic environment influence students' views on the role of entrepreneurship in their lives and society. The independent variables have been grouped into three main categories, covering socio-demographic, academic, and institutional factors that might influence how students perceive entrepreneurship. Socio-demographic factors allow us to understand how students' personal characteristics and social context influence their perception of entrepreneurship. Factors related to academic background may also affect perceptions of entrepreneurship, as interests and skills may vary according to the

education received. Finally, the institutional factors are related to the environment and the educational support students receive to develop entrepreneurial competencies and projects.

We considered a range of personal and educational variables related to diverse aspects of the students and their education experience. We include explanatory variables for age, and dichotomous variables to gender, mobility from the place of birth, level of career advancement, and participation in an entrepreneurial course or project. We constructed dummies for the five fields of study: Medicine, Sciences, Humanities, Engineering, and Social Sciences (the reference category). The academic support variables were derived through factorial analysis, which grouped items into categories representing the capabilities provided by the university, support for entrepreneurship education, and classroom methodologies. All the variables are relevant to analyses because subjective perceptions might be influenced by educative-related experiences (Herrmann et al., 2017).

- Dependent Variable: This variable measures how university students perceive entrepreneurship, either as an opportunity to solve social problems (opportunity, coded as 1) or as an alternative to traditional employment (necessity, coded as 0). Responses will capture the motivations and perceived impact of entrepreneurship at the personal and community level.
- Independent Variables:

- Sociodemographic Factors: age, gender, mobility.

- Academic factors: year of study, and area of study.

- Institutional Factors: capabilities offered by the university, support for entrepreneurship education, and classroom methodologies.

Independent Variables		Obs	Mean	Std. Dev	Min	Max
	Age	973	22.79 8	4.693	18	53
Sociodemograph ic	Gender (1:female - 0: male)	973	0.670	0.470	0	1
	Mobility (from the city where he/she/ was born)	973	0.302	0.459	0	1
Academic	Advanced stage (early: 1-2 year / advance: 3 o more year)	973	0.441	0.497	0	1
	Medicine	973	0.333	0.4715	0	1
	Science	973	0.142	0.349	0	1
	Humanities	973	0.125	0.331	0	1
	Engineering	973	0.172	0.377	0	1
	Social sciences	973	0.228	0.420	0	1
	Entrepreneurial course	973	2.111	0.726	1	3

Table 1	Quantitative	description	of inde	nendent	variables
	Quantitutivo	accomption		pondoni	vanabioo

	Entrepreneurial project experience	973	0.069	0.253	0	1
	Capability: Infrastructure (improve knowledge)	973	2.804	1.284	1	5
	Capability: Institutional culture	973	3.103	1.282	1	5
	Project aid: Networks	971	0.221	0.413	0	1
Institutional	Project aid: Management	971	0.274	0.443	0	1
	Project aid: Events	971	0.532	0.499	0	1
	Educative Support: Promotion	973	0.265	0.433	0	1
	Educative Support: Knowledge	973	0.246	0.418	0	1
	Educative Support: Experience	973	0.226	0.414	0	1
	Methodologies: Interactive	973	3.265	1.328	1	5
	Methodologies: Active	973	3.654	1.200	1	5
	Methodologies: Expositive	973	4.050	1.028	1	5

3.3 Statistical Technique

Given that the dependent variable in this study is binary (1 = students perceive entrepreneurship as an opportunity, 0 = they view it as a form of subsistence, necessity), a logit regression model was applied to estimate the relationship between the students' perceptions of entrepreneurship and a set of independent variables. This choice of technique is appropriate because the logit model is designed to handle dichotomous outcomes by estimating the probability that a given observation falls into one of the two categories.

The logit regression equation can be expressed as follows:

$$log(\frac{P(Y=0)}{P(Y=1)}) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$$

Where:

P(Y=1) is the probability that a student perceives entrepreneurship as an opportunity,

P(Y=0) is the probability that the student sees it as subsistence,

 β_0 is the intercept, and

 $\beta_1,\beta_2,...,\beta_n$ are the coefficients associated with the independent variables $X_1,X_2,...,X_n$ which include sociodemographic, academic, and institutional factors. The coefficients represent the

change in the log odds of perceiving entrepreneurship as an opportunity for a one-unit change in the corresponding independent variable.

To interpret these coefficients more intuitively, we consider both the value of the coefficient and the p-value. The p-value indicates whether the estimated coefficient is statistically significant, i.e. whether there is sufficient evidence to claim that there is a relationship between the independent and dependent variables in the population studied.

4. Results and Discussion

4.1 Influence factors on students' perception of entrepreneurship

First, we employed a logit regression model to examine the likelihood that sociodemographic, academic, and institutional factors shape university students' perceptions of entrepreneurship. This method allowed us to estimate the probability of students viewing entrepreneurship as an opportunity or necessity based on these predictors. By analyzing the coefficients, we assessed the strength and direction of the association between each independent variable (e.g., gender, field of study, institutional support) and the dependent variable (opportunity-driven versus necessity-driven perception, coded as 1 for opportunity and 0 for necessity). The statistical significance of these associations provided insights into which factors most strongly influence entrepreneurial perspectives within this population.

The logistic regression model included 971 observations and demonstrated a modest yet statistically significant fit, as indicated by a Log Likelihood of -543.59, an LR chi2 value of 43.17 (p< 0.005), and a Pseudo R2 of 0.0382. These results suggest that while the explanatory power of the included variables is limited, the model provides a meaningful insight into how these aspects influence students' perceptions of entrepreneurship. Below, we offer a detailed analysis of the results across different categories, focusing on the variables with significant contributions to the model.

opportunity_entrep	Coeff	
	Age	-0.014
Sociodemographic	Female	-0.235
	Mobility	-0.047
	Advanced Stage	0.160
	Medicine	0.050
	Science	0.282
Academic	Humanities	-0.061
	Engineering	-0.557**
	Social sciences	0 (omitted)
	Entrepreneurial course	0.300***

Table 2. Influence of educational and sociodemographic factors on students' perception of entrepreneurship.

	Entrepreneurial project	-0.166
	Capability: Infrastructure (knowledge)	-0.121*
	Capability: Institutional culture	0.143**
	Project aid: Networks	0.029
	Project aid: Management	-0.028
	Project aid: Events	-0.045
Institutional	Educative Support: Promotion	0.652*
	Educative Support: Knowledge	-0.448
	Educative Support: Experience	-0.232
	Methodologies: Interactive	-0.050
	Methodologies: Active	0.034
	Methodologies: Expositive	0.065
Obs		971
Prob > chi2		0.0030
_cons		-0.0301

* *p* B 0.10; ** *p* B 0.05; *** *p* B 0.01

Sociodemographic factors

The logistic regression results indicate that sociodemographic factors do not have a statistically significant effect on university students' likelihood of perceiving entrepreneurship as an opportunity rather than a means of subsistence.

In this sample, the negative coefficient in age indicates that older students are slightly less likely to perceive entrepreneurship as an opportunity. This contrasts with some studies in the broader entrepreneurial literature, such as research by Maalaoui, et al., (2023), which suggests that older individuals are often better equipped to identify entrepreneurial opportunities due to increased experience and resources. However, in the specific context of university students, where age differences tend to be small (range 18-53 years in the sample; but 82.63% are between 18-25 years old), this effect might be diluted, as younger and older students alike are still in the early stages of their career development and may not yet have accumulated significant entrepreneurial experience. Thus, age does not appear to play a major role in how students differentiate between opportunity-driven and subsistence-driven entrepreneurship in this sample.

The variable for mobility (residing outside one's place of birth) shows a negative value, understanding that students coming from other cities are less likely to perceive entrepreneurship as an opportunity. This could be consistent with Porfírio et al. (2024), who argue that non-locals are more likely to be necessity entrepreneurs. This may be because this

population sometimes has limited financial capital and less familiarity with the workings of the local market, making it difficult for them to understand the structures and particularities (Desidério, 2014). It is important to note that the 'mobility' variable has a degree of endogeneity, as mobility includes causes and effects beyond the scope of this study (Antonakis et al., 2010).

Finally, female students are less likely to perceive entrepreneurship as an opportunity compared to male students. Mayorga-Melendez (2020) highlights women's greater sensitivity to the social dimensions of entrepreneurship, yet their ventures are more frequently necessitydriven. They are more likely to be linked to necessity rather than opportunity entrepreneurship, both in high- and low-GDP countries, and especially in contexts where traditional employment opportunities are limited (Martínez-Rodríguez, et al., 2023).

Overall, while this model's lack of significance hinders firm conclusions, the directional tendencies observed warrant further exploration of how gender intersects with contextual and structural barriers in shaping entrepreneurial motivations.

Academic factors

The analysis of academic profile factors offers results about how students' field of study, academic progress, and some specific entrepreneurial activities influence their perceptions of entrepreneurship as an opportunity for societal solutions or as a means of subsistence. Regarding the academic advancement variable (whether the student is in an advanced stage of their studies), researchers suggest that as students advance in their education, they are exposed to more complex social and economic issues, potentially increasing their competencies and awareness of entrepreneurship's role in society (Farquharson, et al., 2024). In our case, the academic advancement coefficient is 0.160 and the *p*-value is 0,34, indicating that being further along in their academic journey does not significantly affect whether students view entrepreneurship as an opportunity or necessity.

When examining the influence of different fields of study in comparison to Social Sciences (which serves as the reference category), the results show mixed patterns. For instance, students from Humanities (-0.061) show slightly negative, but statistically insignificant, coefficients. Similarly, students from Medicine (0.050) and Science (0.282) exhibit a positive, but also non-significant coefficient, indicating that their field of study does not influence their entrepreneurial perceptions either. A notable finding comes from the Engineering field, which shows a statistically significant negative coefficient (-0.557, p< 0.05). This proposes that engineering students are significantly less likely to perceive entrepreneurship as an opportunity for societal impact and are more inclined to view it as a form of employment or necessity. This is somewhat surprising given that engineering fields are typically associated with innovation and technology-driven entrepreneurship. This result aligns with Hu et al. (2021), who suggest that engineering students often prioritize and cognitively produce solutions to technical problem-solving over societal outcomes when considering entrepreneurial ventures.

In contrast, the variable for taking an entrepreneurial course shows a positive and statistically significant coefficient (0.300, p<0.01), indicating that students who have taken entrepreneurship-related courses are considerably more likely to view entrepreneurship as an opportunity for societal impact. This demonstrates that formal entrepreneurial education tends to increase students' perceptions of entrepreneurship as a tool to develop solutions that address societal needs (Hahn 2020), and open their views on the role of entrepreneurship beyond subsistence and employment (Cascavilla et al., 2022).

Finally, participation in an entrepreneurial project shows a negative and non-statistically significant effect (-0.166), indicating that while practical exposure to entrepreneurship is valuable, it does not necessarily shift students' perceptions toward viewing entrepreneurship as a solution for societal issues. This may be due to the nature of the projects themselves, which might be more focused on developing practical business skills rather than emphasizing broader societal impacts, usually based on project-based entrepreneurial learning for fostering a market opportunity-driven entrepreneurial mindset (Fayolle & Gailly, 2015).

University support

The analysis of university support reveals that a university culture that promotes entrepreneurship, risk-taking, and problem-oriented innovation, could positively influence students' perceptions towards opportunity entrepreneurship. For such a culture to thrive, the infrastructure must be adequately prepared and aligned with the institution's entrepreneurial objectives to support projects coherently and efficiently. Within the study sample, these factors exhibit contrasting effects on students' views of opportunity-based entrepreneurship. Culture has a positive impact (0.142, p<0.05), whereas infrastructure influences in a negative way (-0.121, p<0.1). This aligns with the conclusions of Fayolle and Gailly (2015), who emphasize that institutional culture plays a key role in fostering an entrepreneurial mindset but must be combined with other elements such as active student participation, support for implementing initiatives, and entrepreneurship education. In this context, the provision of infrastructure primarily encourages students to perceive entrepreneurship as a means of employment, though its overall effect remains moderate. Isenberg (2016) argues that physical infrastructure is only one part of a broader ecosystem that supports entrepreneurship, and without complementary factors such as mentoring and networking, its impact could be limited, as these universities' results show. To foster entrepreneurship, universities need to implement their practices in line with their policies, recommending the promotion of blended learning, diversification of funding sources, and formalization of entrepreneurship support at all institutional levels (Papa & Demo, 2018).

Forms of project support, such as management centers of projects (e.g. entrepreneurship promotion and support center, administrative and financial management unit, patent registration and formalization center, entrepreneurship research center) and events show negative coefficients (-0.028; -0.045) but lack statistical significance. Although they might be a necessary resource, they do not independently drive students to see entrepreneurship as an opportunity. Conversely, networks indicate a positive coefficient (0,029), though it is also not statistically significant. One possible explanation is that the networks available to students are well connected to different actors of entrepreneurial and innovation ecosystems, making them more effective at sensing and stimulating students in an integral way. Regarding entrepreneurial education support, two variables - knowledge (-0.448) and experience (-0.232) - show negative coefficients, while promotion has a positive coefficient (0.652, p<0.10). Only promotion is marginally significant, suggesting that promotional activities frame entrepreneurship beyond business creation or employment. However, in formal education, the conceptualization of entrepreneurship has a traditional approach. Nabi et al. (2017), argue that promoting the broader social impacts of entrepreneurship helps students to see it as a viable and important career path.

The analysis of methodologies used in entrepreneurial education yields some important findings, but these are not statistically significant. Interactive methodologies show a negative coefficient (-0.050), indicating that such methods may discourage students from viewing opportunity entrepreneurship. This finding contrasts the literature, which highlights the

evolution of entrepreneurship education towards more interactive and experiential approaches. Makaya et al. (2023) propose an approach to managing interactions in entrepreneurship courses, emphasizing the importance of teachers developing social intelligence. Rodrigues (2023) identifies experiential learning as a valid approach, recommending collaborative pedagogical models such as problem-based learning and design thinking. Perhaps the lower applicability of interactive methods (an average of 3.2 on a scale of 1 to 5), compared to the active and expository methods (3.7; 4.1), prevents the full pedagogical potential from being developed in students. In contrast, active and expository methodologies show a positive value (0.34; 0.065), indicating that didactic and practical methods need a theoretical complement to better teach students to perceive entrepreneurship from different approaches. This aligns with Simba & Ojong (2017), who advocate for a committed scholarship to bridge the gap between theory and practice in entrepreneurship, proposing a multilevel framework that shapes entrepreneurial intentions and their focus.

4.2 Academic influence on students' perception of entrepreneurship according to gender

The statistical analysis of students' perceptions of entrepreneurship, categorized by gender, reveals some interesting insights into how students view the primary impact of entrepreneurship. Overall, in Table 3, most students (73.07%) perceive entrepreneurship as an opportunity to provide solutions to societal needs, which is consistent with some studies on the topic (Reynolds, et al., 2001; Giacomin et al., 2011), while a smaller proportion (26.93%) view it as a necessity, essentially a means for employment and generating income. This distribution suggests that most students associate entrepreneurship with innovation and societal contribution, which aligns with a global shift towards opportunity-driven entrepreneurship, as noted in the GEM reports (Guerreo & Serey, 2020).

Entrepreneurshi p	N٥	%	Gender	N٥	%
Opportunity	711	73.07	Female	471	66.24
			Male	240	69.08
Necessity	262	26.93	Female	181	33.76
			Male	81	30.92

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disaggregated by gender, we see that both female and male students largely share the perception that entrepreneurship represents an opportunity for societal impact, although the percentage of males who hold this view is slightly higher. These gender differences, while not strong, may reflect broader trends in the entrepreneurship literature, where studies often find that women are more likely to engage in entrepreneurship out of necessity, while men may pursue it as an opportunity for innovation or growth (Whitlock et al, 2023). GEM reports that 30% more women start businesses out of necessity than men. Regionally, Latin America and sub-Saharan Africa show high rates of women's intentions at almost 30%, but Latin America presents a much higher gender gap in intentions at about 15% (Elam et al., 2019).

These findings indicate that while both genders are aligned in viewing entrepreneurship as a vehicle for opportunity, there remains a subtle, underlying divide in how necessity-driven entrepreneurship is perceived. This could reflect structural inequalities in labour markets,

where women might face more barriers to formal employment, thus being more inclined to view entrepreneurship as a fallback option. This discrepancy highlights a remaining societal gap, where systemic barriers may restrict the full alignment of women's entrepreneurial aspirations with opportunity-driven success (Carsrud & Brännback, 2011).

Global statistics on entrepreneurship tend to highlight that, while opportunity-driven entrepreneurship tends to dominate in more developed economies, necessity-driven entrepreneurship is more prevalent in developing regions, where formal employment markets are limited (Elam, et al 2019). This pattern is to some extent reflected in the results of this study, suggesting that, despite Chile's economic growth, there are still sectors of the population, especially women, who may resort to need-driven entrepreneurship rather than opportunity-driven entrepreneurship.

Theoretical frameworks such as Push-Pull Theory (Uhlaner & Turik, 2007) can be applied to further understand these dynamics, where "push" factors like unemployment may drive necessity entrepreneurship, while "pull" factors like market opportunities motivate opportunity-driven ventures. For Kirwood (2009) the three gender differences in the incidence of motivations to entrepreneurship are: women were more influenced by a desire for independence; women considered their children as motivators more so than did men; men were influenced more by job dissatisfaction than were women.

Figure 1 provides a detailed breakdown of students' perspectives on the impact of entrepreneurship (opportunity or necessity), categorised by gender and knowledge fields. The analysis reveals several key insights. First, across all fields of knowledge, a significant majority of students associate entrepreneurship with opportunity rather than necessity, in line with the national trend (Guerrero, 2020).





When further broken down by the field of knowledge, some important variations emerge. Although the sample size varies across knowledge fields, making direct ordinal comparisons impractical, the data does reveal a semi-homogeneous distribution of perspectives on the impact of entrepreneurship between genders within each field. Specifically, approximately three-quarters of students across all knowledge areas believe that the primary motivation for entrepreneurship is driven by opportunity in the humanities and biomedicine fields.

A notable deviation from this trend occurs among engineering students, where one-third of the students in this field view necessity as the primary motivator for entrepreneurship. In contrast, Basic Sciences stands out with a significantly higher proportion of students favouring opportunity-driven entrepreneurship compared to the general average. In this field, 89% of male students and 88% of female students identify opportunity, rather than necessity, as the primary driver of entrepreneurial activity. This insight highlights the varying motivations for entrepreneurship across disciplines, underlining the influence of academic context in shaping students' entrepreneurial perspectives.

These results generally align with global trends in entrepreneurship education, where opportunity-driven entrepreneurship is becoming more prevalent, particularly in contexts where students have access to academic resources and supportive ecosystems. However, the slight variation by field of knowledge indicates that academic background plays a role in shaping how students perceive entrepreneurship's primary function. The fields of humanities and biomedicine, for example, show a stronger emphasis on opportunity-driven entrepreneurship, which could reflect the ways in which these fields prioritise societal impact and innovation. Meanwhile, engineering shows a more nuanced view, where entrepreneurship is equally seen as a solution to economic needs and a pathway to technological innovation.

These findings also lend support to the Push-Pull Theory in entrepreneurship, where "pull" factors such as societal problem-solving are strong motivators for students in fields like humanities, while "push" factors related to employment concerns may be more prevalent among students in biomedicine and engineering. This underscores the need for a differentiated approach to entrepreneurship education, one that recognizes the varied motivations across different fields of study. Understanding these nuances can help universities tailor their entrepreneurship programs to better meet the specific needs and aspirations of students in each academic discipline.

Table 4 reveals significant differences in the influence of the independent variables to assess students' perceptions of opportunity or necessity entrepreneurship, but now differentiating by gender.

		Male	Female
opportunity_entrepreneurship		Coeff	Coeff
Sociodemographic	Age	-0.021	-0.012
	Mobility	-0.172	0.022
Academic	Advanced Stage	0.255	0.136

Table 4. Influence of educational and sociodemographic factors on student' perception on entrepreneurship by genders

	Medicine	-0.245	0.092
	Science	0.207	0.363
	Humanities	0.710	-0.268
	Engineering	-0.972**	-0.465
	Social sciences (reference variable)	_	_
	Entrepreneurial course	0.240	0.345***
	Entrepreneurial project	-0.154	-0.146
	Capability: Infrastructure (knowledge)	-0.135	-0.157*
	Capability: Institutional culture	0.166	0.176**
	Project aid: Networks	-0.413	0.283*
	Project aid: Management	0.135	-0.097
	Project aid: Events	0.062	-0.140
Institutional	Educative Support: Promotion	0.105	0.742*
	Educative Support: Knowledge	0.222	-0.521
	Educative Support: Experience	0.048	-0.392
	Methodologies: Interactive	-0.447***	0.090
	Methodologies: Active	0.841***	-0.244*
	Methodologies: Expositive	-0.245*	0.172**
Obs		320	651
LR chi2		37.38	38.91
Prob>chi2		0.0105	0.0068
_cons		0.5571	-0.5647

* p B 0.10; ** p B 0.05; *** p B 0.01

Figure 2. Coefficients by gender.



Main differences between the genders

Figure 2 presents the coefficients from logit regressions conducted separately for male and female students, allowing for a gender-based comparison of the factors influencing entrepreneurial perceptions. These coefficients reveal notable variations in the impact of independent variables across genders, providing insights into both shared and divergent determinants shaping male and female students' perspectives on entrepreneurship. This differentiation underscores the importance of tailored approaches when addressing gender-specific entrepreneurial education and support

The variables that are statistically significant differ entirely between male and female students, with no overlap. The only exception lies in the variables related to methodologies, but these display opposing effects: when the variable shows a positive association for males, it is negative for females, and vice versa.

In sociodemographic variables, age presents negative coefficients in female and male. But mobility shows different influences by gender, negative for men and positive for women. Both variables, age and mobility, do not have statistical significance.

Academic disciplines present higher differences, in line with García-Aracil et al. (2021). For instance, in comparison to Social Science (reference category), Engineering exhibits negative coefficients, with statistical significance, suggesting that men in engineering are less likely to view entrepreneurship as an opportunity, potentially seeing it more as a necessity or employment fallback. Women in Engineering seem to perceive entrepreneurship in the same

way too, but without statistical significance. This field is recognized as traditional and enjoys a good position in the labour market, with quite different employment rates among different fields, which affects how students perceive their own employability (Cardoso, 2012). Medicine values are negative for male and positive for females. Humanities shows differences between gender, but with a positive coefficient for male and a negative for female. In this case, both medicine and humanities don't present statistical significance in any genders.

Regarding institutional capabilities and project aid, significant differences emerge between genders, particularly in the statistical relevance of these variables for female students. For males, most coefficients are positive, with only infrastructure and networks showing slight negative values; however, none of these variables are statistically significant. In contrast, for females, three variables demonstrate statistical significance: infrastructure, institutional culture, and networks. This disparity highlights the differentiated influence that institutional capabilities and project aid have on shaping male and female students' perceptions and reception of entrepreneurship.

Finally, teaching-learning variables also show fluctuation, simplifying that male students are more sensitive to the pedagogical approaches used in entrepreneurship education. In educational support just one variable stands out for its statistical importance, although slight; this is promotion. Methodologies are the variables with highest statistical weight. However, the genders present opposite results in positive and negative values of these methodologies, it means, how these methodologies influence their perspective on the modality of entrepreneurship as an opportunity. Furthermore, it is observed that practical methodology, in males, and conceptual understanding, in females, are the most influential for an opportunity entrepreneurship orientation. However, undergraduate preferences vary, with some favoring structured, lightly active methods, suggesting a need for integrated approaches that reinforce knowledge transfer within the knowledge fields and student's context (Bingham et al., 2015).

These results highlight that most significant gender differences emerged in certain academic disciplines, institutional support and in response to specific educational methodologies. These findings suggest gender-based interventions in entrepreneurial education, especially in technical fields, may be necessary to align perceptions more closely across genders and ensure that both male and female students view the importance of entrepreneurship as an opportunity to improve the society.

Promoting opportunity entrepreneurship for female students

The logit regression results reveal key factors that are more likely to promote opportunitydriven entrepreneurship in women and shed light on areas where educational interventions may have a particular impact. The most statistically significant variable for women is entrepreneurial courses (p = 0.01), which has a positive coefficient (0.345), which is in line with the approach of the entrepreneurship education has shown promise in raising entrepreneurial intentions and motivations, particularly for female students (van Ewijk & Belghiti-Mahut, 2019). Structured learning experiences dedicated to entrepreneurship have a direct and significant impact on how female students perceive entrepreneurial opportunities. Such courses likely provide essential knowledge, skills, values, frameworks and intentions towards entrepreneurship are shaped and their identity developed. That enables students to recognise entrepreneurship as a viable pathway to innovation and problem-solving (Hägg et al., 2023). The infrastructure capabilities present a negative and statistical significance (-0.157 p<0.1). These results may be due to the fact that there is still infrastructure for entrepreneurial development in universities, which mostly address or specialize in economically focused entrepreneurial projects, rather than innovation and the added value of a project, or that its implementation in schools remains limited (Hardie et al., 2020). The variable institutional culture also shows a statistically significant influence on women's perceptions of opportunity-driven entrepreneurship, with a coefficient of 0.176 (p<0.05). This finding indicates that a supportive institutional environment, emphasizing innovation and entrepreneurship, positively shapes entrepreneurial intent, potentially broadening students' perceptions of entrepreneurship from a practical career path to a means of creating societal impact.

Additionally, the variable promotion of entrepreneurship within the education process also proves positive significance for females (0.742 p<0.1). This result highlights initiatives aimed at promoting entrepreneurship at university, such as workshops, events, and awareness campaigns, which play an important role in influencing female students' understanding of entrepreneurship. The promotion activities influence students' social entrepreneurial intentions, highlighting the need for systematic approaches to evaluate motivational factors (Bazan et al., 2020). Promotion-related support may inspire and encourage women by showcasing successful entrepreneurial role models or by providing visibility to opportunities that they may not have considered previously. The relatively high coefficient suggests that such promotional efforts are particularly impactful in fostering entrepreneurial intentions among female students.

Regarding the methods used in the classroom, active and expositive methodologies indicate statistical significance, but active in a negative way, and expositive in a positive focus to the opportunity entrepreneurship, in line with Simba & Ojong (2017), who value theoretical processes as a pillar and foundation for more interactive and dynamic methodologies.

This exercise shows entrepreneurial courses, institutional culture and support, and teachinglearning methodologies emerge as critical factors in encouraging female students to view entrepreneurship as an opportunity. These targeted interventions would help address gender disparities in entrepreneurial engagement and promote a more inclusive entrepreneurial ecosystem.

Promoting opportunity entrepreneurship for male students

The logit regression results for male students provide important insights into which factors promote opportunity-driven entrepreneurship among men in the university context.

The field of study plays a critical role, particularly in students of engineering (coefficient: -0.972. p<0.05), showing a strong and significantly negative coefficient. This value indicates that male students in these fields are less likely to view entrepreneurship as an opportunity than Social Sciences students, which is the field of reference. This could be due to the structured career or established employment market, where entrepreneurship may be perceived as a secondary or less secure option (Cardoso, 2012). Efforts to promote entrepreneurship in this and other disciplines may need to address this bias, possibly by integrating entrepreneurial thinking into the curricula and showing how it can complement traditional career paths in these fields.

On the other hand, methodologies used in the classroom also play a significant role in shaping male students' entrepreneurial outlook (Fernández. 2016). Interactive and expositive methodologies are negatively associated with the perception of entrepreneurship as an

opportunity. Interactive methodologies, which often rely on the principles of interaction, reliance on group experience and mandatory feedback processes for feedback, may not always provide the dynamic problem-solving skills needed to inspire entrepreneurial thinking (Agudo et al., 2013) and implementing dynamic learning strategies can be challenging due to established student learning cultures and expectations (Luscombe & Montgomery, 2016), like in traditional fields. Similarly, expositive methodologies, which involves a more passive approach, lecture-based learning style, may not engage students in the kind of active learning that fosters creativity and opportunity recognition.

Active methodologies (0.841, p<0.01) demonstrate a strong positive association with opportunity-driven entrepreneurship among male students (Fernández, 2016). This aligns with findings that university students exhibit a heightened perception of the value of active learning methods for developing practical and entrepreneurial skills (Magana et al., 2018). Active learning approaches, which typically involve hands-on activities, collaboration, and real-world problem-solving, seem to significantly enhance male students' perception of entrepreneurship as an opportunity (Rojas et al., 2019). This result points to the fact that engaging students is practical, experiential learning fosters the kind of critical thinking and creativity needed to see entrepreneurship as a viable and impactful career path and produces a higher learning (Korff, 2016).

This finding indicates that the key variables influencing male students' perceptions of entrepreneurship as an opportunity include their field of study and the learning methodologies they are exposed to. Negative perceptions in the field of engineering suggest that this discipline may need targeted interventions to promote entrepreneurial thinking. At the same time, the use of active learning methodologies appears to be crucial in fostering opportunity-driven entrepreneurship among male students. These findings propose adapting educational strategies to encourage a more entrepreneurial mindset, particularly in male-dominated fields, through active and engaging learning experiences.

5. Conclusion

Students' perceptions and motivations for entrepreneurship are significantly shaped by gender

The findings indicate that a significant majority of students regard entrepreneurship as an opportunity to address societal challenges, with a notable alignment in perspectives between men and women. This consistency may be reflective of the effectiveness of public policies in the region aimed at fostering a culture of sustainability, collective well-being, and gender equality.

Nevertheless, despite women also viewing entrepreneurship as an opportunity, they continue to lead in necessity-driven entrepreneurship. This highlights the persistent structural barriers and inequalities that disproportionately affect this group. It underscores the need for a more in-depth analysis of the underlying factors that compel women to engage in necessity-based entrepreneurship.

Furthermore, while students may share similar views on the opportunity-driven nature of entrepreneurship, the factors that shape this perception differ across genders. In this regard, academic profiles and classroom methodologies emerge as key influences that impact men and women differently. Institutional capabilities and project support show probabilities of influencing opportunity-driven entrepreneurship only among women, whereas educational methodologies affect both genders but in opposing directions. This suggests that educational strategies should be tailored to more effectively meet the distinct needs and realities of each group.

General impact of the university process in the student's perspective of the entrepreneurship

The results reveal observable trends, such as female students being less inclined to view entrepreneurship as an opportunity. However, none of the sociodemographic variables, including gender, age and mobility, emerge as statistically significant in shaping entrepreneurial perceptions within this specific university student population. This suggests that while these factors may influence entrepreneurial attitudes in broader societal contexts, they do not play a decisive role in determining whether students perceive entrepreneurship to address societal challenges or as a necessity-driven fallback for economic survival.

When considering the role of academic progress and field of study, the data indicate that these factors, generally, do not significantly influence students' perceptions of entrepreneurship as a tool for societal impact. However, engineering students emerge as an exception, as they are more likely to view entrepreneurship in terms of employment and subsistence. This points to a potential gap in how entrepreneurship is framed within technical disciplines, where the emphasis may lean more towards immediate economic gain rather than broader societal contributions. In contrast, entrepreneurial courses appear to have a strong effect on shaping students' perceptions toward opportunity-driven entrepreneurship, highlighting the need for more intentional and targeted educational interventions. Such interventions could be essential in cultivating a more comprehensive understanding of entrepreneurship's potential to address societal issues across all academic disciplines.

Furthermore, the results highlight the fundamental role of certain educational models, in particular active pedagogical methodologies for men and expository methodologies for women, in the formation of students' entrepreneurial perspective, showing the importance of the practical approach in the teaching-learning process for men, and the conceptual basis for women in the development of this perspective.

While infrastructure, culture and the fostering of entrepreneurship are undoubtedly important, their influence seems more limited to women only. This suggests that fostering a truly opportunity-oriented entrepreneurial mindset among students may require a more integrated and practical approach, combining educational resources, institutional support and real-world engagement.

Overall, these findings point to the need for a holistic and comprehensive entrepreneurship education strategy. Universities should aim to develop programmes that go beyond the mere provision of resources, integrating a strong institutional culture with active, experiential learning that encourages students to see entrepreneurship as a viable pathway to creating social change. This approach would ensure that entrepreneurship is not only seen as a tool for personal economic gain, but to address broader societal challenges, thus fostering a more impactful entrepreneurial mindset among students and their environment. Given the findings, universities play an important role in shaping how students perceive and engage with entrepreneurship. Beyond the gendered or sociodemographic differences already discussed, institutions must consider broader structural and policy-level changes to foster a more inclusive, opportunity-driven entrepreneurial ecosystem. One key implication is the need for universities to develop interdisciplinary, real-world-focused entrepreneurial ecosystems by integrating entrepreneurship education into all fields of study, promoting a more holistic understanding of entrepreneurship's societal impact. These ecosystems should not only be limited to business or entrepreneurial courses but should also span multiple faculties, allowing students from different academic backgrounds to collaborate, innovate, and apply entrepreneurial thinking to diverse societal challenges.

Limitations and Future Research Directions

This study is based on a sample of 973 students, which, while substantial, could be expanded for greater generalisability. The reliance on quantitative methods, specifically descriptive statistics and logit regression, presents interpretive limitations, as these approaches may not fully capture the complexity of entrepreneurial perceptions. Additionally, the novelty of the topic in the regional context restricts the ability to conduct direct comparative analyses with previous research. Future studies could address these gaps by including mixed-methods approaches and expanding the geographical and demographic scope of the sample. While this study has provided valuable insights into how university students perceive entrepreneurship, further research could focus on institutional factors that foster entrepreneurship at a more granular level. For instance, exploring specific pedagogical approaches, such as project-based learning or design thinking, influence students' entrepreneurial mindsets across different fields of study. Additionally, further investigation is needed into how university infrastructure and external networks (such as industry partnerships, government policy, and community engagement) affect students' ability to engage in entrepreneurship that addresses societal challenges.

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