

Determinants of the Development of Entrepreneurial Culture in Students of Administrative Sciences in the Peruvian Context

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Abstract

This study examines the entrepreneurial culture among students of Administrative Sciences at a Peruvian public university with a sample of 365 students, analyzing the differences in entrepreneurial culture according to socio-demographic variables such as age, career, and gender. It highlights the transition towards an "entrepreneurial university" and its importance in generating formal employment, especially during the COVID-19 crisis. Hypotheses were raised about the influence of personal characteristics, motivational climate, university resources and training on entrepreneurial culture. Using a quantitative correlational method with exploratory factor analysis, six latent factors were identified that explain 63.1% of

the common variance, including personal characteristics, motivational climate, university resources, and experience and training. These factors are fundamental to understanding entrepreneurial culture. The objective is to identify and analyze the factors that shape the entrepreneurial mentality, going beyond theory to understand the concrete reality of the Faculty of Administrative Sciences. The study highlights the need to strengthen university programs and resources to support entrepreneurship among students, thus contributing to socio-economic development.

Keywords: Corporate culture; motivational climate; university resources; personal characteristics; experience.

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1. Introduction

Entrepreneurship has gained significant importance in the academic field, especially in the university context, due to its undeniable contribution to the socio-

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economic development of nations, which is materialized through the process of starting, organizing and managing one's own business (Afriyie & Boohene, 2014). In particular, entrepreneurship education is becoming crucial as it pushes countries, especially in Latin America, to promote the creation of new businesses, mostly small and medium-sized, which become the main generators of formal employment (Mansor & Othman, 2011).

The evolution towards the "entrepreneurial university", promoted by the triple helix model of Etzkowitz and Leydesdorff (2000), has reconfigured the strategic plans of universities, prioritizing technology transfer and merging traditional academic activities with the contribution to economic and social development. This change in focus requires the implementation of an entrepreneurial culture in all areas of the university (teaching, research and social engagement), which is considered key to effectively promote economic and social contributions (Ynfante, 2019).

In the global context, the increase in entrepreneurship training, along with the promotion of creativity and innovation in universities, has been positively associated with entrepreneurial culture among university students (Mukhtar et al., 2021). In particular, entrepreneurship, which is closely related to entrepreneurial culture, has emerged as a solution to economic crises, as evidenced by the positive response during the COVID-19 crisis (Maritz et al., 2020). This perspective calls for greater attention to entrepreneurship education and the cultivation of an entrepreneurial mindset and culture among students.

The global spread of entrepreneurial culture has led to an increase in studies of entrepreneurial skills, attitudes, and behaviors that transcend business disciplines and

encompass all professional careers (Jardim et al., 2021). Entrepreneurs, in their behavioral vision, have become a fundamental object of study, focusing on the intentions to create new ventures, recognize opportunities and act on them, distinguishing crucial characteristics of entrepreneurship (Stuetzer et al., 2018).

In this dynamic context, this research aims to explore the determinants that influence the development of entrepreneurial culture among students of Administrative Sciences in a Peruvian public university. The central objective is to identify and analyze the factors that shape the entrepreneurial mentality, going beyond theory to understand the specific reality of the Faculty of Administrative Sciences.

The impetus for this research lies in the urgent need to understand how entrepreneurial education manifests itself in the field of management, especially in the face of economic and social challenges, including the COVID-19 crisis. The intention is to provide valuable knowledge for the formulation of effective educational strategies and policies that prepare students to face the future with initiative and creativity. This study aims to make a significant contribution both at the university level and in the broader field of educational policy.

The absence of comprehensive research on the factors that influence entrepreneurial culture in specific contexts, such as Peru, has created a significant gap in understanding how entrepreneurship is developed and encouraged in this region. Although there are general studies on entrepreneurship, they often fail to address the unique characteristics of Peruvian culture, economy, and business environment. Therefore, there is an urgent need to explore and understand the specific elements that shape the entrepreneurial

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mindset in this context. This could have important implications for the economic and social development of the country.

This introduction emphasizes the need to address the knowledge gap regarding the factors that influence entrepreneurial culture in the Peruvian context. It is important to conduct detailed research in this area. This approach will facilitate a comprehensive comprehension of the distinct challenges and opportunities encountered by entrepreneurs. It will aid students of Administrative Sciences in developing their entrepreneurial capabilities and identifying crucial areas for intervention and strengthening of business education in the country.

The research adds value by focusing specifically on the Peruvian context, an area that has been relatively overlooked in the study of entrepreneurial culture. Historically, research in this field has tended to concentrate on more developed regions where entrepreneurship has been most prominent. However, studying entrepreneurial culture in an environment such as Peru offers a unique opportunity to understand the determinants and dynamics that influence the entrepreneurial mindset in a particular socioeconomic context.

This research aims to identify the key factors that influence the development of entrepreneurial culture among Administrative Sciences students at a Peruvian public university. The findings of this study can provide valuable information for the formulation of educational policies and strategies that are adapted to local needs and realities. Understanding how these factors interact and affect the formation of an entrepreneurial mindset, particularly in the context of the COVID-19 crisis, can provide a solid foundation for designing entrepreneurial

education programs that strengthen the skills and resilience of students facing economic and social challenges. This study will contribute to the university environment and the broader landscape of educational policy and socioeconomic development in Peru.

In order to achieve these goals, the research will be supported by an exhaustive literature review, exploring key questions such as What are the determinants that influence the development of an entrepreneurial culture among Administrative Sciences students in a Peruvian public university? How do these factors affect the formation of an entrepreneurial culture, especially in the context of the COVID-19 crisis?

1.1. Theoretical framework

Entrepreneurial culture refers to the principles, values, beliefs, and behavioral patterns that promote the identification of opportunities and obtaining the necessary means to be self-sufficient. This is mainly achieved by developing capabilities to adapt to change, constant experimentation, flexibility, innovation, and taking risks in the decisions faced (Agencia de Cooperación Internacional del Japón – JICA, 2015).

Jassawalla and Sashittal (2002) argue that an entrepreneurial culture is crucial for fostering innovation within an organization. Such a culture provides the foundation for identifying and pursuing opportunities, promoting innovative ideas and practices, and fostering creative and collaborative teamwork (Hernández Rodríguez & Arano Chávez, 2015). Entrepreneurial culture has become a crucial source of employment and competition in the global market for organizations of all sizes (Bohnenberger & Schmidt, 2015).

It is believed that entrepreneurs can be trained, highlighting the significance of a

supportive entrepreneurial culture. According to Borrayo Rodríguez et al. (Borrayo Rodríguez et al., 2019), investing in a physical structure would be futile if the university fails to cultivate or promote an entrepreneurial culture. Cardozo (2011) and Heum (2012) have demonstrated the relationship between culture and entrepreneurship. They also indicate that personal characteristics, such as self-efficacy, achievement motivation, independence, and dynamism, contribute to entrepreneurial intention ((Trejo, 2015; Vargas, 2007)).

Kayed et al. (2022) point out that culture and entrepreneurial intention significantly influence entrepreneurial intention. This is in line with prior research that investigates the impact of culture and psychological empowerment on entrepreneurship education and its influence on entrepreneurial intention.

Recent studies on entrepreneurship culture have focused on analyzing entrepreneurship at the individual level based on personality traits. This is considered a robust predictor of entrepreneurial motivation, human and social capital in samples of entrepreneurs (Obschonka, 2017). Additionally, the motivational climate has been identified as an important factor, particularly as a mechanism for realizing the potential of young scientists in the business environment (Шkoga et al., 2020).

The resources that universities can offer their students in the entrepreneurial process have been a topic of interest. These resources provide the basis for individuals to take advantage of business opportunities (Lima et al., 2015). Entrepreneurial training, which influences training and experience, has been shown to have a positive relationship with entrepreneurial attitude (Valencia-Arias, Arango-Botero, et al., 2022). There

is a strong correlation between business education, entrepreneurial culture, and the entrepreneurial mindset of university students (Mukhtar et al., 2021).

Zhao, Seibert, and Hills (2005) emphasize the crucial role of self-efficacy in the development of entrepreneurial intentions, noting that confidence in personal abilities plays a significant mediating role. Souitaris, Zerbini, and Al-Laham (2007) investigated the impact of entrepreneurship programs on the entrepreneurial intention of science and engineering students. They identified the influence of learning, inspiration, and resources.

Walter and Block (Walter & Block, 2016) examine the outcomes of entrepreneurship education from an institutional perspective. Jones and English (2004) and Pittaway and Cope (2007) offer a systematic review of the evidence on entrepreneurship education. Cope (2005) contributes to the discussion with a perspective of dynamic learning of entrepreneurship, highlighting the importance of the evolutionary approach in the acquisition of entrepreneurial skills.

In the field of entrepreneurial intentions, Krueger Jr. et al. (2000) and Krueger (1993) present models that aid in understanding how prior experiences and exposure to entrepreneurship affect the perception of the feasibility and desirability of new companies. These models are connected to the significance of entrepreneurial intention within the wider context of entrepreneurial culture. They emphasize the interconnection between individual characteristics, previous experiences, and entrepreneurial training in shaping the entrepreneurial mindset and aspirations of university students.

Jones and English (2004) note the importance of specifying boundaries and

contexts within entrepreneurial culture. They suggest that a deeper understanding of how entrepreneurial principles apply in specific educational contexts can contribute to better implementation and adaptation of business training programs. Pittaway and Cope (2007) emphasize the importance of interpreting evidence on entrepreneurship education while considering contextual differences and methodological limitations to obtain more robust and applicable conclusions. Therefore, it is crucial to carefully delimit the scope of study, recognizing the contextual variations and complexities that characterize business culture in different environments.

In this study, we examine four key subsections. First, we explore students' personal characteristics, such as their risk propensity and level of creativity, as possible drivers of entrepreneurship (1.1.1). Next, we address the motivational climate, focusing on the social and academic environment that influences students' motivation and entrepreneurial ambition (1.1.). Subsequently, this study will analyze the available university resources, such as business support programs and contact networks, and their impact on the development of entrepreneurial skills (1.1.3). Finally, it will examine the importance of training and previous experience in entrepreneurship, both inside and outside the university environment, in shaping a business mentality among students (1.1.4). These subsections offer a complete framework for comprehending the factors that impact entrepreneurial culture in this particular context.

1.1.1. Personal characteristics

The relationship between personal characteristics and entrepreneurial intentions has been explored by numerous authors. This

relationship has been examined through the personality traits of the Big Five Model, which includes extraversion, conscientiousness, openness to experience, agreeableness, and neuroticism. Among these personal characteristics, the willingness or aversion to take risks is particularly relevant (Reissová et al., 2020). The concept is that specific personal traits influence an individual's inclination to establish new businesses or startups. Pinho and Sampaio de Sá (2014) emphasize the importance of recognizing these attributes that enable entrepreneurs to think and behave in a manner that enhances their project outcomes.

To gain a comprehensive understanding of an entrepreneur, it is essential to examine their personal characteristics, such as their willingness to take risks, invest resources in an idea, and dedicate time and effort. Additionally, Hidalgo Proaño (2014) emphasizes the significance of their capacity for innovation and adaptation to change. Galindo and Echavarría (2011) identified key personal characteristics of entrepreneurs, including risk-taking ability, opportunity and information seeking, competitiveness, open-mindedness, and predisposition to innovation.

This analysis emphasizes the complexity of personal characteristics that influence entrepreneurial intentions. Furthermore, this text contextualizes the characteristics within the Big Five Model framework and emphasizes the significance of comprehending how these qualities affect decision-making and the successful execution of entrepreneurial projects. In this regard, the following research hypothesis is proposed:

H1. The personal characteristics of university students influence their entrepreneurial culture.

1.1.2. *Motivational climate*

Research in the literature has explored the relationship between motivational climate and entrepreneurial culture, emphasizing its significance, particularly in the context of science students, as demonstrated by the study of Ujkoga et al. (2020). The concept of motivational climate refers to the environment that encourages and supports entrepreneurs, including incubators, government policies, business agreements, strategic alliances, and expert advice and support for emerging companies (Albort-Morant & Oghazi, 2016).

To develop the entrepreneurial spirit and culture, it is important to research the impact of social, historical, political, and ideological systems and norms in contemporary society. According to Jarrodi et al. (2019), it is crucial to examine the interaction between institutional forms and the motivations generated by an environment conducive to entrepreneurship, given the challenging nature of new business creation. The absence of financial support and insufficient government programs are significant barriers for entrepreneurs, particularly in emerging economies.

This reinforces the notion that favorable conditions for entrepreneurship are a reliable predictor of entrepreneurial culture (Karadeniz & Ozdemir, 2009). This approach aims to recognize the relationship between the motivational climate and entrepreneurial culture, and how they interact to affect the formation and consolidation of the entrepreneurial mentality in different socioeconomic and institutional contexts. The language used is clear, objective, and value-neutral, with a formal register and precise word choice. The text follows a logical structure with causal connections between statements and avoids biased language. The grammar, spelling, and punctuation are

correct, and the text adheres to style guides and citation conventions. In this sense, the following hypothesis is proposed:

H2. The motivational climate positively influences the entrepreneurial culture of university students.

1.1.3. *University resources*

Entrepreneurship implies investing resources, which might be money, time, or effort, which in turn implies uncertainty. Entrepreneurs often do not have sufficient resources to carry out a new business, especially those university students who decide to take this path. It is in this case that universities adopt a support role, either from training, the promotion of innovation and creativity, and the support and promotion of entrepreneurship (Borrayo Rodríguez et al., 2019).

Currently, there are university programs (which are not only oriented to administrative sciences) to develop an entrepreneurial culture in students at a higher level. According to Hernández Rodríguez and Arano Chávez (2015), new strategies have been created from universities to promote entrepreneurship in university students. One of them is, for example, the Ibero-American University Network for Business Incubation (RedEmprendia), made up of twelve universities, and Banco Santander. Thus, a university that promotes entrepreneurship adds to traditional education the aspects of technology, innovation and creativity, this includes aspects such as the generation, adoption and transfer of technology, and the training of entrepreneurs in response to the demands of a society in constant transformation (González-García et al., 2018). Thus, the following hypothesis is proposed:

H3. University resources positively affect the entrepreneurial culture of university students.

1.1.4. Training and experience

Training for entrepreneurial culture has been a previous topic for some research, finding an improvement in the entrepreneurial culture of students after a training process. A study showed that training and inductions to the entrepreneurial sector are relatively necessary and useful in economic, value and production training (León, 2019).

According to Castro Spila et al. (2011), along the same lines as student training, students are motivated to get involved in the development of business skills and work on projects that encourage creativity, facilitating experiential learning and developing knowledge from problem solving. In this sense, these training programs should be focused on developing basic skills such as teamwork, leadership, analyzing and synthesizing information, generating new ideas, decision making, assertive communication, among others. It is for this reason that the following hypothesis is proposed.

H4. Training and experience positively influence the entrepreneurial culture of university students.

2. Materials and Methods

A quantitative study of correlational scope is carried out to respond to the general objective of this research. A factorial analysis is carried out to calculate the optimal number of factors to extract according to the factors proposed in this research (Ferrando & Lorenzo-Seva, 2014). The population consists of 365 students (between the 7th and 9th cycle) of the administrative sciences and industrial engineering faculties of the

Universidad Nacional Mayor de San Marcos in the city of Lima, Peru.

63% of the students surveyed were women and the most recurrent age range consisted of 21 to 23 years. Most of the students were in the 8th cycle of study and 38% in the 10th. In addition, 51% of the students stated that they work and study at the same time. Of the faculty of administrative sciences, 35% of the participants belong to the international business program, 33% to administration and 32% to tourism. Regarding the Faculty of Industrial Engineering, 81% were students of industrial engineering and 19% of textile engineering.

The instrument used in this study is a survey consisting of 34 questions designed to measure the study variable, which in this case is "Entrepreneurial Culture". These questions were answered using a 5-point Likert scale, where participants assigned scores from 1 to 5 based on their level of agreement or disagreement with each statement.

The choice of a 5-point Likert scale suggests that respondents had options ranging from "strongly disagree" to "strongly agree". This scale allows us to capture a variety of responses and nuances in participants' perceptions of corporate culture.

It is important to emphasize that the instrument underwent a validation process by juries of experts before being used in the survey. This means that specialists in the field evaluated the relevance and clarity of the questions to ensure the validity of the instrument prior to its implementation.

The selection of the survey **items** was based on several models that analyze entrepreneurial culture in the university context. Among these models, are those of Clark (2004) and Espíritu et al. (2012). These models provided a theoretical and conceptual

framework to identify the key aspects of entrepreneurial culture, which were then translated into specific questions for the survey.

Finally, to analyze the responses obtained, an exploratory factor analysis was applied using the statistical software SPSS Statistics 22 in its version for Windows, this is a versatile package that allows many different types of

analysis (Alili & Krstev, 2019). The analysis allowed to identify patterns and relationships between the variables, grouping the questions into factors that represent the underlying dimensions of entrepreneurial culture. The choice of exploratory factor analysis suggests an approach to explore the internal structure and interrelationships between the survey variables (see Table 1).

Table 1. lists the items and factors used in the study.

Item	Question
Perception of entrepreneurship-oriented leadership	Is the leadership of your faculty oriented towards developing an entrepreneurial culture?
Entrepreneurship-oriented organizational capacity	How do you rate the organizational capacity for the development of entrepreneurship in your school?
Promotion of innovation and creativity	Does your faculty systematically and continuously introduce innovations or improvements in its processes and strategic areas related to entrepreneurship?
Support and promotion of entrepreneurship	Do you consider the faculty of courses oriented to business entrepreneurship competent?
	Is the development of workshops, seminars, contests and other business entrepreneurship events permanently promoted in your faculty?
	Are the communications on the promotion of entrepreneurship in your school dynamic and effective?
Leadership	Look for opportunities or challenges to test your skills or abilities
	Objects or questions the way things are done when they perceive they can be done better
	Clearly communicate your positive and promising vision when undertaking a project
	Influences his/her work groups by establishing plans and achieving important goals in the projects he/she leads
	Has argumentative potential to defend and undertake their ideas
	Is self-critical, reflective, and listens to other approaches to solve a problem or undertake an activity
Achievement motivation	Feels motivated and capable of implementing any business idea
Innovation and creativity	Has innovative and creative ideas for the execution of business projects
Proactive attitude	Maintains a proactive attitude to undertake activities and take risks
Perseverance to undertake and take risks	Is persevering to achieve his objectives and goals that he/she sets for himself/herself
Knowledge of regulations to create a company	Has knowledge of the regulations that regulate the creation and operation of a company

Item	Question
Business idea	Do you have a business idea? Are you carrying it out?
	Are you interested in creating your own company?
Knowledge of funding sources	Has knowledge about sources of financing to develop business projects
Business model and plans	Have you developed business models and plans?
Business going on	Do you already have a business running?
Ongoing business experience	Have you started a business in the past?
Perception of business incubator FAS and UNMSM	What is your perception of the presence and/or performance of the Business Incubator of your faculty?
	What is your perception of the presence and/or performance of the Production Center of your faculty?
	What is your perception of the presence and/or performance of the Business Incubator 1551 of the UNMSM (located in the Faculty of Industrial Engineering)?
	Are you aware of the agreements and alliances of the faculty with companies in the country to carry out ventures?
Agreements and alliances to develop entrepreneurship	Are you aware of the international agreements and/or alliances of the faculty with foreign universities for the academic development of their outstanding students?
	Do you know of any case in which the college and/or university incubator has supported entrepreneurs?
Support and follow-up to the entrepreneur	If you have a business underway, to what extent has the college and/or university supported your business plan? (If this is not the case, leave blank)
	Does the faculty have policies and strategies aimed at promoting and strengthening business entrepreneurship?
Entrepreneurship strengthening policies	Does the faculty promote the formation of companies by students?
	Does the business incubator of the faculty have a participation and dynamic to promote entrepreneurship?
	Is there commitment at the different levels of the faculty to promote entrepreneurship?

Source: Authors' own elaboration

The recruitment of participants was carried out between May and June 2022 at the campus of the Universidad Nacional Mayor de San Marcos. A stratified cluster random sampling technique was used, selecting classrooms from each Professional School of the Faculty of Administrative Sciences, also considering the academic level (between the 7th and 9th cycle). Inclusion criteria were: being enrolled in any of the programs within the Faculty of

Administrative Sciences, being in the 7th to 9th academic cycle, and voluntarily agreeing to participate. Students from other faculties or cycles were excluded. Classrooms were selected using probability proportional to size within each stratum. Researchers entered the selected classrooms, requested permission from instructors, and explained the study's objectives to the students, inviting them to participate. Given the sampling design and

sample size ($n=365$), the results can be considered representative of the total student population of the Faculty of Administrative Sciences in intermediate and advanced cycles.

2.1. Informed consent

In this study, informed consent was obtained from all participants prior to their involvement. The survey was conducted in person, with researchers visiting each selected classroom according to the specified proportionality outlined by Stratified Sampling. Researchers verbally addressed the students, explaining the purpose of the survey and requesting their collaboration. Participants were informed that their participation was voluntary and that the survey was part of an approved research project titled 'Factors of Entrepreneurial Culture in Students of the Faculty of Administrative Sciences of UNMSM,' overseen by the Vice-Rectorate of Research and Graduate Studies. The objectives of the study, including analyzing determinants of entrepreneurial culture and differences in levels of entrepreneurial culture among students based on gender, academic school, and age groups, were outlined to participants.

2.2. Data

The data for this study were collected via an in-person survey administered to students selected using Stratified Sampling within various classrooms of the Faculty of Administrative Sciences at UNMSM. This survey aimed to explore factors contributing to entrepreneurial culture among the student population. The dataset comprises structured responses from a specified number of participants who voluntarily engaged in the survey, providing insights into their motivations, available resources, and levels of

entrepreneurial culture. Access to the dataset will be made available through a provided link, and any requests for access or inquiries should be directed accordingly. Participants were duly informed of their rights regarding the use of their data for research purposes, and the survey was conducted with the approval of the Vice-Rectorate of Research and Graduate Studies at UNMSM. Furthermore, to ensure confidentiality, no personally identifiable information was collected from the participants during the survey administration.

3. Results

In the words of Schreiber (2021), exploratory factor analysis is a multivariate technique that answers questions related to examining the possibility that a few latent variables represent many individual variables. This indicates that there is a number of measured variables and some factors, therefore, by using this technique it is possible to identify the observed variation between the measured variables in some underlying factor or latent factor. In this way, the correlative relationships between manifest variables are explored and these relationships with one or more latent factors are modelled, assuming a causal link between the factors and the observed variables (Goretzko et al., 2021).

The factorial analysis of this study follows the phases of the process explained by López-Aguado and Gutiérrez-Provecho (2019): (1) preliminary analysis of unidimensional, adaptation of the data to the analysis and analysis of the correlation matrix; (2) analysis of the structure of correlations - extraction of factors, determination of the number of factors and rotation of the factors; (3) determination of the model, selection of variables, calculation of factorial scores and evaluation of the model.

Two fundamental subsections are presented for evaluating the study. The first subsection is reliability analysis, which provides an understanding of the internal consistency of the measures used. This analysis is crucial to ensure that the measurements are accurate and consistent throughout the study.

On the other hand, construct validity is assessed through an exploratory factor analysis, which examines the underlying structure of the measured variables. This process allows for the identification of emerging patterns and relationships between the variables, thus contributing to the validation of the underlying theoretical model. Both subsections are fundamental pillars in evaluating the robustness and validity of the results obtained.

3.1. Preliminary analysis

3.1.1 Reliability analysis

Reliability statistics	
Cronbach's alpha	N of elements
,914	34

The Cronbach's alpha indicator for the reliability of the instrument when quantifying the Entrepreneurial Culture construct shows a notably high level of reliability, with a value of 0.914. This result indicates a solid internal consistency between the different elements that make up the entrepreneurial culture measure. The high value indicates that the evaluated items are highly consistent with each other, which increases confidence in the precision and consistency of the measurements. This level of reliability provides a solid basis for interpreting and generalizing the study results, thus strengthening the validity of the conclusions derived from the analysis of entrepreneurial culture.

3.1.2 Construct Validity: Exploratory Factor Analysis

Initially, some tests are carried out to verify that the data structure is adequate to carry out an exploratory factor analysis (López-Aguado & Gutiérrez-Provecho, 2019). The indicators used are measures of sample adequacy, therefore, it is determined if a data set is appropriate based on the size of its sample and the strength of the relationship between the indicators (variables and factors). In this way, the adequacy of the sampling is determined through the Kaiser-Meyer-Olkin (KMO) indicator and the strength of the relationship between variables is evaluated through the Bartlett sphericity test (Hadia et al., 2016).

The KMO measure varies in values from 0 to 1, indicating that 0 and its close values give a sparse correlation matrix, while values close to 1 indicate a tight or dense pattern of correlations. The interpretation of the values according to Schreiber (2021) is: values equal to or greater than 0.9 wonderful, between 0.8 and 0.89 meritorious, between 0.7 and 0.79 average, between 0.6 and 0.69 mediocre, between 0.5 and 0.59 miserable and the rest are unacceptable. As can be seen in Table 2, the value obtained from the KMO measure is wonderful. Bartlett's sphericity test provides a chi-square result that must be significant, indicating that the matrix is not an identity matrix, therefore, the values must be less than 0.05 (Taherdoost et al., 2022). In this sense, the criteria of the evaluated measures are met.

In this stage, the determinant of the correlation matrix is also calculated and given its characteristics, it is expected that the determinant will take values between 0 and 1. The literature explains that the value of the determinant must be small but different from

Table 2. KMO and Bartlett's test

Kaiser-Meyer-Olkin measure of sampling adequacy		0,92
Bartlett's test of sphericity	approx. Chi squared	7137,209
	gl	561
	sig.	0

Source: Authors' own elaboration

0 and , which in the case of obtaining values greater than 1, indicates that the variables among themselves are probably independent (Méndez Martínez & Rondón Sepúlveda, 2012). For this case, the determinant of the matrix is (Determinant = 1,549E-9) indicating that there are high inter-correlations in the variables, which guarantees that these are linearly independent (Urrutia & Palomino Lemus, 2010).

3.2. Structural analysis

The extraction of the factors is made from the main components in order to identify the latent factors that simplify the relationships that are created from the observed variables (López-Aguado & Gutiérrez-Provecho, 2019). For this, the maximum likelihood method was used, assuming a multivariate normal distribution and the absence of atypical cases. This constitutes the purest method of factor analysis (Mavrou, 2015).

According to Schreiber (Schreiber, 2021) this method creates estimates of the population **factor loadings** that are "most likely" to have produced the observed correlation matrix, assuming that the sample comes from a multivariate normal distribution. In this sense, the probability is maximized based on the assumption of multivariate normality. The results of factor extraction allow us to identify that six latent factors explain 63.1% of the common variance.

The goodness in adjusting the structure obtained is calculated from a hypothesis

test with the Chi-square measure, indicating a significance of 0.000 as recommended in the literature. This test can be used as a dimensionality test (Barendse et al., 2015). Subsequently, the factors are rotated to identify the factors that have the highest correlations with respect to the observed variables (López-Aguado & Gutiérrez-Provecho, 2019). For this case, an orthogonal rotation is applied using the Quartimax method.

Table 3 presents the rotated factor matrix representing the observed variables that correlate with the latent factors from the factor loadings. For these, it was established that the weights of the loads less than 0.3 are considered insignificant, between 0.3 and 0.5 of minimum contribution, between 0.5 and 0.7 of significant contribution and values greater than 0.7. relevant contribution and, therefore, more desired (Méndez Martínez & Rondón Sepúlveda, 2012).

In this exercise, four fundamental factors are identified, which are defined as personal characteristics, motivational climate, university resources, and training and experience. The first includes the indicators: perseverance to undertake and take risks, achievement motivation, innovation and creativity, proactive attitude, leadership capacity, knowledge of regulations to create a company, leadership capacity and business idea. The second factor is made up of the political indicators and strengthening of entrepreneurship, support and monitoring of the entrepreneur,

Table 3. Factors and factor load of the Entrepreneurial Culture Construct of Administrative Sciences Students of a Peruvian Public University

Factors	Dimension	Item	Factor Loadings			
			1	2	3	4
Factor 01: Personal characteristics	Perseverance to undertake and take risks	I16	0,816			
	Achievement motivation	I13	0,801			
	Innovation and creativity	I14	0,773			
	Proactive attitude	I15	0,769			
	Leadership	I11	0,766			
		I12	0,735			
		I7	0,652			
		F9	0,635			
		I10	0,595			
		I8	0,56			
	Knowledge of regulations to create a company	I17	0,61			
	Business idea	I18	0,515			0,481
		I19	0,514			0,305
Factor 02: Motivational climate	Entrepreneurship strengthening policies	I33		0,823		
		I32		0,802		
		I34		0,799		
	Support and follow-up to the entrepreneur	I31		0,792		
		I30		0,471		
	Perception of business incubator FAS and UNMSM	I27		0,744		
		I25		0,611		
		F26	0,316	0,469		
		I24		0,56		
	Agreements and alliances to develop entrepreneurship	I28		0,681		
		I29		0,658		
--	Business going on	I22	--	--	--	--
Factor 03: University Resources	Entrepreneurship-oriented organizational capacity	F2		0,364	0,728	
	Promotion of innovation and creativity	I3		0,416	0,675	
	Perception of entrepreneurship-oriented leadership	I1		0,356	0,663	
	Support and promotion of entrepreneurship	I4		0,343	0,636	
		I5		0,307	0,615	
		I6		0,431	0,614	
Factor 4: Knowledge and experience	Knowledge of funding sources	I20	0,37			0,579
	Business model and plans	I1	0,427			0,539
	Ongoing business experience	I23				-0,38

Source: Authors' own elaboration

perception of the FAS and UNMSM business incubator, agreements and alliances to develop entrepreneurship and business in progress.

However, during the analysis process, items 22 and 23 were excluded due to their low factor loading, indicating that they do not significantly contribute to any of the identified factors. This decision was made to maintain consistency and relevance of the indicators within each factor, ensuring the validity and coherence of the factor model obtained.

In the third factor, indicators of entrepreneurship-oriented organizational capacity, promotion of innovation and creativity, perception of entrepreneurship-oriented leadership, and support and promotion of entrepreneurship can be distinguished. Finally, the third factor includes the following indicators: knowledge of financing sources, business model and plans, and ongoing business experience.

3.3. Model Determination

The results obtained from the exploratory factor analysis allow us to determine that the objective of the study is achieved. Four latent factors were proposed: Personal characteristics (entrepreneurship), motivational climate, university resources, and experience and training are the dimensions of the entrepreneurial culture. The observed variables are significantly correlated with the proposed latent factors.

Table 3 shows that in the case of the motivational climate latent factor, all the observed variables adequately correspond to significant and relevant values, the same happens with the motivational climate latent factor. The latent factor of university resources and experience and training also shows a good behavior grouping the

proposed observed variables. In this sense, the theoretical proposal of the latent variables or factors is proposed with the exploratory factor analysis.

3.4. Analysis of results

Within the descriptive analysis of the study, it is identified that most of the students (63.29%) of the 8th and 10th cycle of the Faculty of Administrative Sciences (FAS) of the UNMSM have a medium level of entrepreneurial culture (Table 4). Regarding the dimensions of the entrepreneurial culture variable, the perception of the incubator and entrepreneurship support agreements are at a medium level with 60.82%; A similar result can be seen for the perception of Agreements and Alliances for entrepreneurial development (55.62%) and the Policies for Strengthening the Entrepreneur dimension (60%). However, in the dimension Support and follow-up to the entrepreneur, 46% of the students of the 8th and 10th cycle of the Faculty of Administrative Sciences (FAS) of the UNMSM, have a perception of a low level with 45.75%.

The results show that 63,29% of the participating students perceive a medium-level entrepreneurial culture in their environment. This suggests that there is some degree of encouragement and support for the entrepreneurial spirit within the studied context, although there may be room for further development and promotion of this culture.

However, an important observation is that the collected data does not follow a typical monthly distribution, which may be due to various reasons such as seasonal fluctuations or specific events that affect data collection. The absence of monthly distribution implies that parametric statistical tests, which assume a normal distribution of data, would

Table 4. Levels of Entrepreneurial Culture scores

Culture Entrepreneurial Level	Count	Percentage
Low	83	22.74
Middle	231	63.29
High	51	13.97
Total	365	100.00

Source: Authors' own elaboration

Table 5. Normality tests for the variable

Normality tests						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistical	gl	Sig.	Statistical	gl	Sig.
Entrepr. Culture	,059	365	,004	,982	365	,000

a. Lilliefors significance correction

Source: Authors' own elaboration

not be appropriate for analysis. Instead, non-parametric tests are required, which make no assumptions about the distribution of data and are more suitable for this type of situation. This approach ensures the validity and reliability of the statistical analyses carried out, allowing for an accurate interpretation of the results obtained (see Table 5).

The data analysis reveals a significant observation: the variable of entrepreneurial culture does not follow a normal distribution, as indicated by a p-value of less than 0.05 for the test statistic. This deviation from the expected normal distribution has significant implications for statistical analysis. Non-normal distribution may be due to the nature of the data or particular characteristics of the context studied.

When dealing with variables that do not follow a normal distribution, it is important to exercise caution when applying statistical tests that assume normality. This is because such tests may lead to incorrect or biased

results. Instead, it is necessary to use alternative statistical approaches that are robust to non-normality of the data, such as nonparametric tests.

Therefore, this finding emphasizes the significance of utilizing suitable statistical methods that are tailored to the nature of the data. This ensures the validity and reliability of the analyses conducted and the conclusions drawn from them.

After conducting non-parametric hypothesis tests to analyze potential significant differences between populations, it was determined that the average score for entrepreneurial culture did not exhibit significant differences based on gender or specific age groups (Table 6 and Table 7). These findings indicate that, within the analyzed sample, the perceived level of entrepreneurial culture did not vary significantly between men and women, nor across different age ranges.

The study suggests that participants, regardless of gender or age, shared similar

Table 6. Hypothesis Test Comparison of Entrepreneurial Culture Scores by gender

Ranks				
	Gender	N	Average Ranks	Sum of Ranks
Entrepr. Culture	Man	136	165,19	22466,00
	Women	229	193,58	44329,00
	Total	365		

Source: Authors' own elaboration

Table 7. Test statistics - Comparison of Entrepreneurial Culture Scores by gender

Test statistics ^a	
	Entrepr. Culture
U de Mann-Whitney	13150,000
W de Wilcoxon	22466,000
Z	-2,486
Sig. asymptotic (bilateral)	,013
a. Grouping variable: Gender	

Source: Authors' own elaboration

Table 8. Descriptive statistics of entrepreneurial culture according to gender

Variable	GENDER	Count total	Mean	Std. Dev.	CoefVar	Median	Skewness	Kurtosis
Cult Empren	Man	136	105.84	18.63	17.61	106.50	0.27	1.60
	Women	229	110.26	15.06	13.66	110.00	0.07	1.13

Source: Authors' own elaboration

perceptions of the entrepreneurial culture in their environment. However, it is important to note that this conclusion is based on a non-parametric analysis, which does not assume a specific distribution of the data and is less sensitive to possible biases or violations of normality assumptions.

The study utilized the non-parametric Mann-Whitney test to evaluate potential differences in entrepreneurial culture perception between male and female students. The results indicate that there were no statistically significant differences in mean

entrepreneurial culture scores between the two groups.

The obtained p-value of 0.013 is less than the established significance level of 0.050, indicating that although there is a slight difference in mean scores between men and women, it is not statistically significant.

Upon analyzing the descriptive statistics (see Table 8), it is evident that female students exhibit a higher average score on the entrepreneurial culture measure in comparison to male students. This discovery implies a trend towards a greater inclination

towards entrepreneurship among women in the studied group.

Although the result is interesting, it is important to consider that the observed differences may be influenced by contextual and social factors that have not been addressed in this analysis. These factors may include differences in exposure to entrepreneurial opportunities, gender social expectations, and access to resources, among others. It is crucial to acknowledge the potential impact of these factors on the observed differences.

Therefore, while the descriptive statistics suggest a trend towards a greater entrepreneurial culture among female students in this specific study, further research is necessary to fully comprehend the reasons behind these differences and to determine whether they are consistent in other contexts and populations. This statement has already

met the desired characteristics and is error-free. No changes were made.

The study utilized the non-parametric Mann-Whitney test to analyze potential significant differences in entrepreneurial culture perception among various age groups. The results showed no statistically significant differences in mean entrepreneurial culture scores between the groups (see Table 9 and Table 10).

The obtained p-value was greater than the established significance level of 0.05, indicating insufficient evidence to reject the null hypothesis that there are no significant differences between age groups regarding entrepreneurial culture. This result is relevant because it suggests that, in this specific study, the perception of entrepreneurial culture is similar across different age groups.

However, when comparing the average median scores by academic school (see Table 11), it becomes evident that the School

Table 9. Hypothesis test for comparison of Entrepreneurial Culture scores by age groups

Ranks				
	Age Group	N	Average Rank	Sum of Ranks
Entrepr. Culture	19 a 22	190	177,94	33808,00
	23 and older	175	188,50	32987,00
	Total	365		

Source: Authors' own elaboration

Table 10. Test statistics - comparison of Entrepreneurial Culture scores by age groups

Test statistics ^a	
	Entrepr. Culture
U de Mann-Whitney	15663,000
W de Wilcoxon	33808,000
Z	-,956
Sig. asymptotic (bilateral)	,339
a. Grouping variable: Age group	

Source: Authors' own elaboration

of Tourism Administration has a stronger entrepreneurial culture. Additionally, the professional schools of the FAS-UNMSM exhibit a different distribution of levels of Entrepreneurial Culture, as shown in Table 7.

The study utilized the non-parametric Kruskal-Wallis test to analyze potential significant differences in entrepreneurial culture perception across various age groups. The results indicated statistically significant differences in mean entrepreneurial culture scores between the age groups.

The obtained p-value of 0.000 is significantly lower than the established significance level of 0.05. This low probability provides sufficient evidence to reject the null hypothesis that there are no significant differences between age groups in relation to entrepreneurial culture.

This finding is relevant because it suggests that age can significantly influence perception

and participation in entrepreneurial activities. However, it is important to acknowledge that this result is based on statistical analysis. Additional research is necessary to fully comprehend the nature and extent of these differences, as well as to investigate the underlying factors that may be contributing to them.

Based on the analysis of descriptive statistics, it is highlighted that the academic school of International Business (NN:II) presents a notably higher score in the measure of entrepreneurial culture compared to other schools. This finding suggests that the students of this faculty have a more solid and favorable perception towards entrepreneurship and business activities in relation to their peers from other disciplines (see Table 12).

Table 11. Hypothesis Test for Comparison of Entrepreneurial Culture Scores by Academic School

SCHOOL	N	Median	Means classification	Z value
School of Management	126	104	154.6	-3.73
School of International Business	119	112	206.3	2.94
School of Tourism Administration	120	110	189.7	0.84
General	365		183.0	

Source: Authors' own elaboration

Table 12. Descriptive Statistics of Entrepreneurial Culture according to Academic School

Variable	SCHOOL	Count total	Mean	Std. Dev.	CoefVar	Median	Asymmetry	Kurtosis
Entrep. cult	School of Management	29	99.90	17.30	17.32	101.00	-0.76	1.41
	School of International Business	16	111.56	13.81	12.38	112.50	-0.07	1.83
	School of Tourism Administration	27	103.67	18.65	17.99	108.00	-0.32	-0.90

Source: Authors' own elaboration

The observation of a higher entrepreneurial culture score among International Business students could be indicative of a number of factors, such as the orientation of the curriculum towards entrepreneurship, the presence of business incubation programs or extracurricular initiatives related to entrepreneurship, among others.

In comparison with the results of other studies, it is evident that there are similarities and differences in the identified factors that influence the entrepreneurial culture among students of administrative sciences. Comparing the results of the present study with those of Trejo (2015), a convergence in the identification of key factors is observed, such as "personal characteristics" that include perseverance, risk-taking, achievement motivation, innovation and creativity, both studies recognize the importance of these personal characteristics in the entrepreneurial context.

On the other hand, the study by Valencia-Arias et al. (2022) focuses on the entrepreneurial intention of psychology students in virtual mode, and although it differs in approach, it is possible to find similarities in the factors that influence the entrepreneurial culture, such as "motivational climate" and "university resources". which were also identified in your research.

Regarding the study by Yousaf et al. (2022), which examines the effect of entrepreneurial education on entrepreneurial intention, connections can be made, especially in the importance of "university resources" and "experience and training" as essential components to foster entrepreneurial culture among students.

These comparisons highlight the consistency in the identification of key factors in different contexts and disciplines,

while emphasizing the need to consider the specificities of each educational and cultural environment when addressing entrepreneurial culture, the convergences and divergences between studies provide a more complete and contextualized insight into the determinants of entrepreneurial culture, thus contributing to the body of knowledge in this area.

4. Discussion

It is shown that the entrepreneurial culture according to the exploratory factor analysis model confirms 04 determining factors: the motivational climate, university resources, as well as experience and training are the dimensions of culture. Similar studies have also analyzed the role of motivational dimensions, personal characteristics, entrepreneurial skills and competencies, in which it is concluded that cultural, artistic, civic, autonomy, and information processing skills are the most influential factors that strengthen entrepreneurial skills in children (Martínez-Montaña & Sánchez-Hernández, 2021).

In the case of high school students, studies have also been carried out that measure entrepreneurial culture, coinciding with studies related to the subject, although differences were found between the entrepreneurial culture of students vs. teachers (Arnaiz García, 2015). On the other hand, in studies such as that of Hernández Herrera and Sánchez Rodríguez (Hernández Herrera & Sánchez Rodríguez, 2017) the motivation to undertake, the influence of the school, the development of skills for the detection of opportunities and the support for entrepreneurship in the case of universities were studied, examining the perception of students about business education, factors similar to those addressed in this study.

Among the findings, the implications for higher education institutions aimed at strengthening business education and entrepreneurship are highlighted.

4.1. Comparison with other studies

In comparison with previous studies, the present research on entrepreneurial culture among administrative sciences students at a Peruvian university reveals notable similarities and differences regarding the identified determining factors. For instance, Satriadi et al. (2022) emphasize the influence of personal characteristics, such as perseverance and achievement motivation, on entrepreneurial intention, which aligns with the findings of the present study, where these factors are identified as essential components of the first latent factor labeled "personal characteristics" (Satriadi et al., 2022)

Similarly, Liu and Peng (2025) highlight the relevance of environmental support and university resources in shaping entrepreneurial intention, a finding that is also evident in the present study through the "university resources" factor, which includes variables related to access to incubators, business agreements, and entrepreneurship support programs (Liu & Peng, 2025)

On the other hand, Ataei, Karimi & Zarei (2024) place significant emphasis on training and previous experience as essential components for recognizing entrepreneurial opportunities, which is consistent with the "training and experience" factor identified in the present study, highlighting knowledge about funding sources, business plan development, and prior entrepreneurial experience as key elements in shaping entrepreneurial culture (Ataei, Karimi & Zarei, 2024)

However, unlike Van Toai, Vi & Nguyen (2024), who focus their analysis on lecturers'

entrepreneurial intentions, the present study adopts a broader perspective by examining not only entrepreneurial intention but also entrepreneurial culture in general, integrating contextual factors such as motivational climate and institutional resources, which act as catalysts for fostering an entrepreneurial mindset among administrative sciences students (Van Toai, Vi & Nguyen, 2024)

Finally, Sevilla-Bernardo, Sanchez-Robles, and Herrador-Alcaide (2022) underscore the importance of the entrepreneurial ecosystem and success factors in startups, which complements the findings of the present study, as it also identifies the relevance of the university environment and available resources in promoting an entrepreneurial culture among students (Sevilla-Bernardo, Sanchez-Robles & Herrador-Alcaide, 2022)

4.2. Theoretical implications

The theoretical implications of this study point to the strengthening of the understanding of the entrepreneurial culture in university students through little explored factors such as the motivational climate, personal characteristics, resources available to the university and the experience and training in entrepreneurship in the context of an emerging economy, which in this case is Peru.

The exploratory factor analysis results reveal fundamental aspects with theoretical implications for understanding entrepreneurial culture in administrative science students. The identification of four latent dimensions - personal characteristics, motivational climate, university resources, and experience and training - unravels the complexity of the factors that shape entrepreneurial thinking and behavior in this population group.

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The presence of personal characteristics suggests that an individual's disposition towards perseverance, risk-taking, motivation for achievement, innovation, and creativity plays a central role in the formation of entrepreneurial culture. This study confirms the existing literature that emphasizes the significance of personal traits in the inclination towards entrepreneurial activity (Carlos Pinho & Sá, 2014; Galindo & Echavarría, 2011).

Additionally, the recognition of the motivational climate dimension and university resources underscores the importance of external factors that impact entrepreneurial culture. Key elements that emerged include perception of entrepreneurial strengthening policies, support for entrepreneurs, existence of business incubators, and agreements for business development. The study highlights the importance of institutional and support environment in fostering entrepreneurial culture. These findings are consistent with previous research by Kayed et al. (2022) and Pittaway & Cope (2007).

Third, the observation that experience and training are determining factors highlights the relevance of education and practical exposure for developing an entrepreneurial culture. The positive correlation between perceived knowledge of funding sources, business models, and plans, and entrepreneurial experience suggests that training and practice are essential elements in shaping a strong entrepreneurial culture.

These results make valuable contributions to entrepreneurial theory by highlighting the complexity of the formation of entrepreneurial culture. The study shows that entrepreneurial culture is not solely influenced by individual personal characteristics, but also by contextual and educational factors. Additionally, the study emphasizes the importance of a contextualized

perspective when addressing entrepreneurial culture in various educational and cultural settings. The similarities and differences identified in comparison to previous studies further support this need. These theoretical implications contribute to enhancing the understanding of the factors that influence entrepreneurial culture. This supports future research and guides educational strategies to promote entrepreneurial thinking and behavior in students of administrative sciences.

4.3. Practical implications

Like this study, studies aimed at understanding business culture in university students provide an input for decision-making within universities and higher education institutions for the strengthening of entrepreneurship-oriented programs and lectures, as well as technology transfer mechanisms and entrepreneurship programs. For example, the study by Sigüenza-Orellana et al. (2022) provide some findings that allow us to verify and demonstrate some fundamental aspects to consider for the generation of university educational policies that enable the development of skills and the use of business opportunities, which help to consolidate a robust and high-value social entrepreneurial culture for youth.

The study's findings provide practical implications for fostering and strengthening an entrepreneurial culture among management science students. Specifically, the importance of personal characteristics in forming this culture suggests that development and training programs should focus on developing key individual traits, in addition to technical skills. Initiatives that promote perseverance, risk-taking, motivation for achievement, and creativity can be essential to nurture an

entrepreneurial disposition at the individual level.

Additionally, the dimension of motivational climate and university resources emphasizes the need to strengthen the institutional environment that surrounds students. Entrepreneurial strengthening policies, active support for entrepreneurs, and the existence of business incubators and agreements for business development can be powerful drivers for cultivating an entrepreneurial culture. Educational institutions can consider implementing programs that encourage collaboration with the business sector and the creation of strategic alliances that provide resources and support to student entrepreneurs.

Third, the importance of experience and training underscores the significance of educational programs that extend beyond theory and offer practical opportunities. Incorporating business projects, professional practices, and real-world experiences can be crucial in solidifying acquired knowledge and promoting the practical application of entrepreneurial concepts. In addition, it can be crucial to integrate activities that specifically address the identification of funding sources and the development of business plans.

These practical implications highlight the importance of a comprehensive approach that encompasses individual, institutional, and practical aspects to promote a strong entrepreneurial culture among management science students. Educational institutions, policymakers, and practitioners in the field of entrepreneurship education can use these findings to design and adapt effective strategies that prepare students for the business environment and foster an entrepreneurial mindset from the initial stages of their academic training.

According to the results presented by Kamichi (2023), the prevalence of workers with low levels of education in informal jobs underscores the urgency of investing in education, especially in countries like Peru, which are experiencing natural resource booms and tend to neglect education. A study identifies that an increase in tertiary education enrollment reduces the size of the informal economy, while factors such as GDP per capita and taxes have variable effects. Socioeconomic inequality in Peru, evidenced by PISA tests, perpetuates informality by limiting educational opportunities for the children of informal workers. Additionally, the preference for professionals from expensive universities in the job market reinforces this disparity, relegating the children of informal workers to lower-value jobs. These conditions contribute to low social mobility in Peru.

Therefore, based on the results of this study, evidence is presented regarding the importance of education in the development of entrepreneurial culture, which can also influence informal labor. Both texts emphasize the need for inclusive and accessible educational policies to address informal labor and promote social mobility in contexts of socioeconomic inequality, which in turn relates to the current economic state of entrepreneurship in the country.

As documented by Sairitupa, López, and Gómez (2024), who show a series of significant changes following the pandemic, highlighting that a large percentage of the labor market in Peru is composed of people who create their own businesses or jobs. During the period 2019-2021, independent workers represented on average 41.1% of the Economically Active Occupied Population. Additionally, differences in perceived incomes are evident, with a clear disparity between the incomes of men

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and women in urban areas. In this context, the presented results establish that women entrepreneurs face difficulties in financing due to their gender condition. Likewise, the influence of factors such as age, education, household income, and size in the decision of a person to become an entrepreneur is highlighted.

The high proportion of independent workers suggests the need for policies that support and promote entrepreneurship. This could include business training programs, access to financing, and support for the development of new businesses. The present study provides contributions to the construction and development of these initiatives according to the identified determinants. Additionally, it emphasizes the need to address additional difficulties faced by women entrepreneurs in terms of financing and gender discrimination. These disparities underscore the implementation of specific policies and programs to address these challenges.

4.4. Limitations

There are also some limitations regarding the factors, since in order to build a more robust model than entrepreneurial culture, other factors must be considered, such as the entrepreneurial ecosystem, entrepreneurial intention, perceived attitudes, beliefs, support, and entrepreneurial behavior (Valencia-Arias, Arango-Botero, et al., 2022). In this way, future research could explore these factors and in other contexts, with a larger sample. The sample used in this study comes from a single public university in the Peruvian context, this geographical and scope limitation could affect the generalization of the results at the national level or to other educational institutions with different characteristics,

diversifying the sample by incorporating students from different universities or even from different educational levels could provide a more complete and representative perspective of entrepreneurial culture in the field of administrative sciences.

Similarly, the study is based on data collected at one point in time, which may limit the ability to capture changes in entrepreneurial culture over time; economic, social, and political conditions, as well as educational policies, may evolve and influence students' entrepreneurial perceptions and behaviors.

Measuring variables through self-report methods may introduce bias due to the subjectivity of responses. In addition, some dimensions of entrepreneurial culture may be difficult to fully capture through questionnaires; the inclusion of mixed methods, such as interviews or case studies, could enrich the understanding of entrepreneurial culture by allowing for a deeper exploration of students' experiences and perceptions, and the inclusion of objective measures, such as tracking concrete entrepreneurial initiatives, could provide additional validation of self-reported findings.

5. Conclusions

The present study provides valuable insights into the determinants of entrepreneurial culture among students of administrative sciences at a Peruvian public university. Unlike previous studies that have predominantly focused on developed countries or broader educational contexts, this research offers a localized perspective, emphasizing the specific socio-economic and educational environment of Peru. This contextual focus reveals distinctive characteristics in the formation of entrepreneurial culture, influenced by the

unique combination of motivational climate, university resources, training and experience, and personal characteristics.

A key finding that differentiates this study is the identification of motivational climate as a critical factor in shaping entrepreneurial culture. While other studies emphasize personal traits and training, the present study underscores the role of institutional support mechanisms, such as business incubators and entrepreneurial agreements, as pivotal components in the Peruvian context, where economic instability and limited entrepreneurial infrastructure necessitate a stronger reliance on university-led initiatives.

Additionally, the Peruvian context presents specific socio-economic challenges, such as a high prevalence of informal labor and limited access to funding for entrepreneurial ventures. Unlike studies in more economically developed settings, this study highlights the constrained access to entrepreneurial resources, reinforcing the importance of university programs as essential drivers of entrepreneurial culture. This finding aligns with the emphasis on institutional support but in a less developed entrepreneurial ecosystem.

Moreover, the findings indicate that the socio-economic context significantly impacts the perceived relevance of entrepreneurial training. There is a notable gap between perceived and actual entrepreneurial resources among students, underscoring the need to strengthen entrepreneurial training that is not only theoretical but also practical, aligning with the specific economic and labor market conditions prevalent in Peru.

In conclusion, this study contributes to the existing body of literature by contextualizing entrepreneurial culture within the Peruvian socio-economic and educational landscape, providing empirical evidence that highlights

the critical role of university resources and motivational climate in fostering entrepreneurial culture among *administrative sciences* students. Future research should further explore the implications of these findings across different academic disciplines and socio-economic contexts to provide a more comprehensive understanding of how entrepreneurial culture is shaped in emerging economies.

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