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Entrepreneurial culture and entrepreneurial intention: A comparative study between Peruvian and Paraguayan university students through the theory of planned behavior

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Abstract

The study focuses on the analysis of entrepreneurial intention among university students in Peru and Paraguay, using the Theory of Planned Behavior (TPB) as a theoretical framework. The relationship between entrepreneurial culture, institutional support, perception of barriers, and the influence of innovation and creativity on entrepreneurial intention is investigated. Employing a quantitative approach, data were collected from 395 students using a 55-item structured questionnaire, validated by experts and with a Cronbach's Alpha reliability of 0.89. The results show that entrepreneurial culture and institutional support have a significant impact on entrepreneurial intention, while the perception of barriers shows no significant relationship. In addition, innovation and creativity are identified as key drivers of entrepreneurship. This study contributes to the existing literature on entrepreneurship and offers recommendations for educational institutions and economic policies that seek to foster an entrepreneurial climate in the region, highlighting the importance of self-efficacy and a favorable environment for the development of entrepreneurial initiatives.

Keywords: Entrepreneurial culture, Entrepreneurial intention, Innovation, Self-efficacy.

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1. Introduction

Entrepreneurship has been consolidated as one of the essential engines for economic and social progress in different Latin American countries [1, 2]. In this sense, the importance of entrepreneurship becomes even more evident in the university

environment through which young people become experts in transforming creative ideas into business opportunities, which will allow them to become generators of employment, competitiveness, and sustainability within the framework of local economies [2, 3]. In this regard, it is necessary to understand how students' entrepreneurial intentions materialize, given that these are, a priori, the prelude to the actions to be carried out [4, 5].

Entrepreneurship can be understood as the process through which individuals find business opportunities and mobilize resources to initiate the creation of solutions that meet market needs [6]. This conception of the entrepreneurial process is oriented towards discussing the creation of new businesses, as well as the set of skills developed by their founders to respond to a risky environment and challenges, and to continue the process through the efforts they deploy to move forward [7]. In the context of the Theory of Planned Behavior, entrepreneurship is more related to the intention to act, where attitudes towards entrepreneurial behavior, subjective norms, and perceived control are involved, which are ultimately determinants for the decision of university students to form their own projects [8, 9].

On the other hand, entrepreneurial intention is understood as the natural tendency of people towards the establishment of a business or the realization of an initiative [10, 11]. This notion is key within entrepreneurship since intentions are manifestations of what is to be realized [12, 13]. Following the Theory of Planned Behavior model, entrepreneurial intention is determined by different variables such as attitudes towards entrepreneurship, the perception of social support and the subject's control over the resources needed to carry out a project [14, 15]. Within universities, understanding the entrepreneurial intentions of students should be essential since they can determine the way in which they face challenges in the workplace and the capacity to contribute to economic growth [16, 17]. The desire to be entrepreneurial does not simply imply the desire to start a business, but also to assume the possibility of taking risks and creating, as these are fundamental aspects of achieving success in today's business [18].

The growing unemployment rate in Latin American countries such as Peru and Paraguay is a major challenge for young people, who often find it difficult to access the associated job opportunities [19, 20]. This climate of economic uncertainty highlights the need to promote entrepreneurial intent in university faculties, in the sense that university students have the potential to become the agents of change in their communities [18, 21]. However, despite having an important academic background, most young people do not see entrepreneurship as a viable alternative. A lack of resources, fear of failure, and the absence of an entrepreneur-friendly ecosystem are some of the factors that influence this situation [22]. Thus, it is important to investigate the impact of these variables on the entrepreneurial intentions of university students in order to determine strategies to involve them in entrepreneurial initiatives and thus reduce the problem of unemployment in the region [18].

In the context of the Theory of Planned Behavior, there are a series of factors that affect entrepreneurial intention, which deserve to be contemplated in detail [23]. Attitudes towards entrepreneurship constitute the first case, as they translate into young people's beliefs and appraisals about the possibility of creating a business, as well as its attractiveness [24, 25]. There are also the subjective norms, which make it possible to identify the social pressure and expectations of peers and family in relation to the entrepreneurial behavior of students, as they can induce them or, conversely, discourage them from making an entrepreneurial decision [26, 27]. Perceived control, which refers to the extent to which people believe they are capable of starting a business, is also key to adopting one decision or another [28, 29]. Thus, in fact, these factors, which are directly or indirectly related, make it possible to create a degree of complexity that gives meaning to the entrepreneurial intention of university students. Therefore, one objective of the analysis is to observe how these factors are articulated in the specific context of Peru and Paraguay, where young entrepreneurs face barriers and opportunities for entrepreneurship [30].

The main objective of this study is to analyze the entrepreneurial intention of university students in Peru and Paraguay, using the **Theory of Planned Behavior** as a theoretical framework. It seeks to evaluate the relationship between entrepreneurial culture and entrepreneurial intention, examine the impact of institutional support, analyze the perception of barriers, and investigate the influence of innovation and creativity on entrepreneurial intention. It will be developed through a quantitative approach, where the objective is to find data that will lead to the verification of hypotheses and allow for a better interpretation of how the factors mentioned above interact in the group under investigation. The results will increase the existing scientific literature on entrepreneurship; in addition, it is expected to provide useful recommendations for educational institutions and politicians in the field of education. Given that, in the first place, increasing the development of entrepreneurial activities would mean creating a social environment, a social zone that facilitates the increase of entrepreneurial activities.

This paper develops four basic hypotheses through which it seeks to explore the relationships between different factors and the entrepreneurial intention of young university students in Peru and Paraguay. H1 establishes that there is a significant relationship between entrepreneurial culture and entrepreneurial intention. H2 indicates that institutional support has a significant effect on entrepreneurial intention. H3 proposes that the perception of barriers does not have a significant effect on entrepreneurial intention. Finally, H4 relates the notion of innovation and creativity to entrepreneurial intention. These hypotheses will serve for the analysis and interpretation of the results in this path of knowledge towards the search for a better understanding of the factors of entrepreneurship in an academic training context.

The relevance of the research lies in the possibility of suggesting some educational or economic actions based on it, for which an in-depth examination of the entrepreneurial intentionality manifested among university students in Peru and Paraguay is established [20]. By applying for the MCT, it is possible, to a certain extent, to see what the elements are that incite the decision to become an entrepreneur, such as the entrepreneurial culture, institutional support, or the way in which barriers are perceived. Based on these, strategies can be established that will, in turn, promote educational entrepreneurship and, therefore, mechanisms that institutions will have to develop in order to foster creativity and innovation [14, 31]. Economic policies will also benefit from this research, since they are also the context in which policies must be adopted to

facilitate a climate of entrepreneurship that leads to the development of the economy and the incorporation of work, both for oneself and for others [26].

2. Literature Review

2.1. Theory of Planned Behavior: A Comprehensive Approach to Understanding Entrepreneurial Intention

The Theory of Planned Behavior, proposed by Ajzen [32] is one of the basic models for studying the phenomenon of intention to undertake [32, 33]. This model implies that the way individuals act depends on intention, which is defined by three basic elements: the set of attitudes towards behavior, subjective norms and perceived control [34]. Attitudes towards entrepreneurship are those that reflect the sentimental valuation that a person attaches to the activity of entrepreneurship, where a positive opinion can have a motivational effect [35]. In contrast, subjective norms involve beliefs about things that are desirable or approved by others, which can create social pressure and determine the practice of entrepreneurship [36].

Finally, perceived control is the representativeness of the perception of the individual's personal ability to perform the entrepreneurial behavior, which includes the representation of the availability of resources and skills needed to do so [37, 38]. When university students feel that they have control over the realization of their entrepreneurial capabilities, they translate this into entrepreneurial intentions [39]. The integrative theoretical approach implied by the TCP model makes it possible to examine the interactions that are configured from attitudes, social influences, self-efficacy, and how these can materialize the decisions of young people in the field of entrepreneurial practice, constituting a very interesting line of work for the development of entrepreneurial culture in academic environments [40]

2.2. Culture and Entrepreneurial Intention: A Fundamental Link

Entrepreneurship culture can be described as the set of beliefs, values and behaviors that establish or create new enterprises in a society [41, 42]. The aforementioned cultural context has a considerable effect on students' entrepreneurial intentions, since an environment that favors innovation and the propensity to take risks can motivate young people to opt for entrepreneurship as a reasonable, valid, and attractive option [22, 25]. The entrepreneurial mindset in the university translates into promoting this environment that favors ideas and initiatives and thus fosters the intention of students to generate new businesses or companies [10, 11]

The relationship between entrepreneurial culture and entrepreneurial intention is bidirectional. Al Halbusi, et al. [12] and Wijayati, et al. [35] not only can a favorable culture increase entrepreneurial intention, but the very increase in the number of entrepreneurs could transform the very culture of a community [43]. If students are surrounded by role models, examples of success, and a favorable environment, their perception of the viability of entrepreneurship as an alternative improves notably, increasing their desire to take an active part in creating enterprises [44]. Thus, strengthening the entrepreneurial culture in educational institutions not only benefits individuals but also contributes to the economic and social development of the region [45]

2.3. Institutional Support and Perceived Barriers: Enablers and Obstacles to Entrepreneurship

Institutional support plays a decisive role in stimulating university entrepreneurship. Universities that implement support programs, such as business incubators, training workshops, and business creation consultancies, provide university students with support for their ideas, enabling them to transform ideas into commercial realities [46, 47]. These types of resources not only allow students to access information or business mentors, but also constitute a whole environment of innovation. Given the institutional framework, students feel less insecure and increase their desire to develop their entrepreneurial skills, thereby increasing their intention to start a business [45].

However, despite the existence of support, many students encounter barriers that deter their entrepreneurial intentions [44, 48]. Precisely, these barriers include poor access to financing, high bureaucracy, or legal restrictions that limit the creation of companies [24, 30]. This perception of barriers can engender a feeling of helplessness, which in turn diminishes self-efficacy for entrepreneurship [1, 26]. It becomes necessary for universities to not only have resources but to combat the barriers perceived by students, resulting in an environment where students feel empowered to carry out their entrepreneurial initiatives [48, 49].

2.4. Innovation, Creativity and Self-Efficacy: Drivers of Entrepreneurship

Innovation and creativity are the foundations of entrepreneurial activity because, based on these pillars, individuals can undertake new solutions and evolve in the dynamic environment of the company [50]. In the university environment, creativity is translated as the potential ability of students to generate original ideas and innovative approaches to current problems [50, 51]. To this end, those institutions that favor the climate in which original ideas are produced, through interactive teaching methodologies or collaborative projects, not only sprout innovative ideas but also induce their students to face the problems of the labor market with an entrepreneurial attitude [22, 25].

Personal self-efficacy, understood as the belief that one is capable of carrying out specific tasks, is considered to be a relevant variable of entrepreneurial intention [52]. In general, students who are confident in their skills or abilities have a greater predisposition to take risks and demonstrate perseverance in the face of adversity. Practical skills training and entrepreneurial experiences through current projects or startup practices can increase students' self-efficacy [53, 54]. In short, joint attention to creativity and personal self-efficacy can lead to the construction of a solid entrepreneurial spirit, which is not only a personal benefit but also contributes to innovation and the development of an economic environment [51].

2.5. Theoretical Reflections on Entrepreneurial Intention

The study of the theoretical framework addressing entrepreneurial intention paves the way for the complexity of the elements that lead to the entrepreneurial decisions of higher education students [21]. The Theory of Planned Behavior constitutes a good tool for understanding the intertwining of attitudes, subjective norms, and perceived control in the construction of intentions toward entrepreneurship [9, 34]. The more progress is made in the relationship between entrepreneurial culture and intention, the more it is perceived that a favorable environment can be an important driver for the development of new entrepreneurial initiatives [50].

Similarly, institutional support and perceived barriers play a bifunctional role. On the one hand, support that we consider good could lead to a slowdown in moving from idea to action, and on the other, perceived barriers could deter students, thus limiting their potential for entrepreneurship [38, 41]. Finally, innovation, creativity and self-efficacy are emergents that can incite entrepreneurship [52]. The sum of these reflections highlights the importance of creating an educational ecosystem that, on the one hand, fosters students' entrepreneurial intentions and, on the other hand, prepares students to face the business world with guarantees and creativity.

3. Methodology

The present research contemplates a quantitative approach, since it is intended to analyze entrepreneurial intention from the collection and analysis of data [55, 56]. In the present case, the design is non-experimental and cross-sectional, since it studies the variables in their natural state without manipulation and, therefore, the students' impressions will be collected instantaneously [55, 57]. In addition, the design is also comparative, as it seeks to compare the differences as well as the similarities in the intention to undertake on the part of university students in two countries: Peru and Paraguay. This type of design allows us to explore cultural factors, as well as contextual factors that will influence the phenomenon studied [58, 59].

A structured questionnaire of 55 items was used to evaluate entrepreneurial intention in students. In addition, factors such as entrepreneurial culture, institutional support, and perceptions of barriers were covered in this instrument, where their responses were measured with 5-point Likert-type scales, given that the degree of agreement or disagreement with the statements presented in the instrument was sought [60]. The questionnaire was developed after an exhaustive review of the literature to ensure its validity and relevance for the study, also helping to obtain quantitative data to facilitate the comparative analysis between Peru and Paraguay [61].

The research was carried out on a total sample of 395 university students, composed of 235 students from Peru and 160 from Paraguay. The sampling of the students in this research was intentional, considering the subjects who were enrolled in academic programs directly related to entrepreneurship [62, 63]. This strategy ensures that the sample is, therefore, representative of the population of students interested in entrepreneurship, favoring the obtaining of relevant results and, moreover, applicable to both contexts. Factors such as the selection of students from each country ensured accessibility and the work with those who would become informants or subjects that would allow access to the information relevant to the research [60].

The validity of the questionnaire was ensured following a review process by a group of five experts in entrepreneurship and research methodology, who evaluated the clarity and relevance of the items that comprised the questionnaire [56, 64]. A pilot test was then carried out with a sample of 50 students, which allowed for the possibility of detecting ambiguities and agreeing on any modifications that might be necessary based on the comments made. The reliability analysis, calculated using Cronbach's Alpha, resulted in 0.89, indicating excellent internal consistency [63, 65]. This validation procedure ensures that the questionnaire is a reliable and appropriate instrument for measuring entrepreneurial intention in the cases of Peru and Paraguay.

Data collection was conducted exclusively online over a period of two months, specifically between August and October 2024. A questionnaire was administered to the participants, explaining the objective of the study and requesting their informed consent. Once the data had been collected, it was analyzed using the SPSS program. Statistically descriptive (means and standard deviations) and inferential (t-tests; ANOVA) techniques were used to process the information and extract significant results, aiding in the comparison of entrepreneurial intention between students from Peru and Paraguay [63, 66]. This analysis is important to help identify patterns and relationships that allow a better understanding of entrepreneurship in the two contexts

This study was conducted following strict ethical guidelines, including obtaining informed consent from the participants and ensuring their understanding of the objective of the study. Data confidentiality was prioritized by storing the data securely and using codes to protect their identities [55, 58]. In addition, transparency was maintained in the use of information, risks were assessed to ensure a safe environment, and the study was approved by the ethics committee of the institution where it was developed, committing to using the results in a responsible manner to contribute to knowledge about entrepreneurial intent.

4. Results

Table 1 provides a comparative analysis of the demographic characteristics of university students in Peru and Paraguay. According to the sample, of the total number of participants in Peru, 60% are women and 40% are men; in Paraguay, the trend is the reverse, with 55% of the sample being men and 45% women. The demographic characteristics reflect that most of the young people in both contexts are in the 19-22 age range, although there is also a notable percentage of students over 27 years of age, which gives rise to significant age diversity. The high levels of training in entrepreneurship, reaching 95.37% for Peru and 98.12% in Paraguay, reflect a solid educational approach in this dimension. On the other hand, 97.06% of Peruvian respondents in this area and 93.23% in Paraguay show current involvement of students in entrepreneurship; from

this, we can conclude that there is a positive environment for pragmatics. The extracted strands highlight differences and similarities between the contexts, which could influence young people's aspirations for entrepreneurship.

Table 1.
Sample characteristics.

Features	Categories	Peru (235)		Paraguay (160)	
		n	(%)	n	(%)
Genre	Male	94	40	72	45
	Female	141	60	88	55
Age	Up to 18 years	-	-	21	13.21
	19 to 22 years	126	53.62	52	32.08
	From 23 to 27 years old	94	40	50	31.45
	More than 27 years	15	6.38	37	23.27
Entrepreneurship training	Yes	224	95.37	157	98.12
	No	11	4.63	3	1.88
Current participation in entrepreneurship	Yes	228	97.06	149	93.23
	No	7	2.94	11	6.77

A second-order confirmatory factor analysis (CFA) was then carried out using the maximum likelihood method in SmartPLS 3.3.2, which aimed to assess the reliability and validity of the scales, for which indicators with loadings above 0.70 were maintained and two with loadings below 0.60 were eliminated. The selected items showed a Cronbach's Alpha equal to or higher than 0.70, indicating internal reliability, as well as a composite reliability (CRI) higher than 0.60 in all cases and an AVE (Average Variance Extracted) higher than 0.50, which serves to reinforce the convergent validity of our theoretical model [63, 67].

Table 2 shows results that indicate both internal consistency and adequate convergent validity, noting that all indicators have factor loadings above 0.70 and t-values that indicate corresponding statistical significance, which indicates that the variance of a particular construct can be explained by its indicators, highlighting that each of the items of the construct contributes significantly to its respective construct [68, 69].

Table 2.
Internal consistency and convergent validity of the theoretical model.

Variable	Loads >0.70	t-value >1.96	Cronbach's alpha	CRI >0.70	AVE >.050
Entrepreneurial culture (CE1 - CE6)	0.868	22.734	0.735	0.786	0.643
	0.773	22.817			
	0.726	12.19			
	0.939	41.15			
	0.778	6.206			
	0.766	13.848			
Institutional support (AI1 - AI5)	0.783	43.234	0.713	0.734	0.586
	0.781	41.535			
	0.754	42.015			
	0.750	38.413			
	0.774	33.085			
Perception of barriers (PDB1 - PDB5)	0.853	22.518	0.752	0.727	0.572
	0.711	26.334			
	0.740	15.330			
	0.725	27.937			
	0.842	12.187			
Innovation and creativity (IC1 - IC5)	0.773	2.588	0.799	0.865	0.548
	0.731	81.789			
	0.988	44.453			
	0.845	100.247			
	0.761	14.34			
Intention to undertake (IE1 - IE6)	0.858	22.533	0.767	0.743	0.588
	0.763	22.615			
	0.860	12.082			

Entrepreneurial Efficacy (SA1 - SA5)	Self-	0.766	40.782	0.719	0.743	0.593
		0.719	6.151			
		0.930	13.725			
		0.771	42.849			
		0.759	41.166			
Motivation for entrepreneurship (ME1 - ME5)	for	0.776	41.641	0.716	0.785	0.514
		0.774	38.072			
		0.747	32.791			
		0.743	22.317			
		0.767	26.100			
Determination to undertake (DE1 - DE5)	to undertake	0.845	15.194	0.752	0.813	0.585
		0.734	27.689			
		0.733	12.079			
		0.718	2.565			
		0.834	80.174			
		0.766	44.058			
		0.724	99.353			
		0.979	14.213			

Table 3 shows the internal consistency and convergent validity of the model adjusted to the subsamples of men and women in Peru and Paraguay. Each row contains references to the different constructs that make up the study, such as Entrepreneurial Culture, Institutional Support, and Perceived Barriers. All composite reliability (CRI) values are greater than the threshold of 0.70, indicating good internal consistency; for example, Entrepreneurial Culture presents a CRI of 0.81 for men and 0.77 for women in Peru. Similarly, the average variance extracted (AVE) values are higher than 0.50, which corroborates the convergent validity of the model. For all the above reasons, this analysis concludes that the instrument is reliable and valid for both subsamples in Peru and Paraguay, which is why the results are comparable between the two countries. The small differences in the values of HR and AVE between men and women do not affect the robustness of the constructs; this justifies the validity of the results and their applicability to the future [62, 66].

Table 3.
Internal consistency and convergent validity of the model adjusted by sub-samples.

Variables	Men		Women		Peru		Paraguay	
	CRI >0.70	AVE >.050	CRI >0.70	AVE >.050	CRI >0.70	AVE >.050	CRI >0.70	AVE >.050
Entrepreneurial culture (CE1 - CE6)	0.81	0.675	0.77	0.623	0.773	0.627	0.803	0.669
Institutional support (AI1 - AI5)	0.734	0.593	0.733	0.58	0.79	0.555	0.748	0.601
Perception of barriers (PDB1 - PDB5)	0.725	0.565	0.72	0.573	0.73	0.524	0.762	0.612
Innovation and creativity (IC1 - IC5)	0.866	0.55	0.864	0.545	0.865	0.549	0.869	0.556
Entrepreneurial Intention (IE1 - IE6)	0.758	0.51	0.732	0.472	0.725	0.567	0.771	0.533
Entrepreneurial self-efficacy (AE1 - AE5)	0.729	0.591	0.739	0.582	0.744	0.589	0.764	0.615
Motivation for entrepreneurship (ME1 - ME5)	0.793	0.517	0.58	0.512	0.762	0.511	0.64	0.53
Determination to undertake (DE1 - DE5)	0.817	0.59	0.812	0.582	0.756	0.507	0.849	0.643

Table 4 shows the results of the test of the invariance model between the subsamples using the data from Peru and Paraguay. The table shows, therefore, that the model is adjusted and that there is comparability between the groups. The chi-square (X^2) values are 2373.149 for Peru and 1941.889 for Paraguay, with X^2/df indices of 1.67 and 2.10, respectively, both below the threshold of 3, denoting a good fit. The RMSEA is 0.048 for Peru and 0.046 for Paraguay. The SRMR is 0.075 and 0.076 for Peru and Paraguay respectively. All of them are also in optimal intervals. The NFI is 0.967 for Peru and 0.948

for Paraguay; the CFI is 0.971 and 0.988 for Peru and Paraguay respectively. All this indicates a good fit in general terms [62, 69]. This shows that the comparisons between the groups are valid and the model holds consistently between the two samples.

Table 4.

Invariance test.

Group	χ^2	df	$\chi^2/df < 3$	RMSEA <0.05	SRMR P a 0	NFI >0.95	CFI >0.95
Peru (n=235)	2373.149	1427.50	1.67	0.048	0.075	0.967	0.971
Paraguay (n=160)	1941.889	932.50	2.10	0.046	0.076	0.948	0.988
Equal form	5418.127	2175.8	2.51	0.046	0.078	0.986	0.994
Equal load factor	5905.758	2285.09	2.61	0.049	0.078	0.984	0.989

The results of the hypothesis test related to the relationship of the hypothesized factors and the entrepreneurial intention of Peruvian and Paraguayan university students, referred to in Table 5. H1 (entrepreneurial culture-entrepreneurial intention) results in an R^2 of 0.150 and a p-value of 0.04, which means that the null hypothesis is rejected. H2 (support from the institution) manifests itself with an R^2 of 0.203 and a p-value of 0.001, where, like the previous one, it can be concluded that the null hypothesis is rejected, allowing us to assert that there is a relationship between the variables. In line with this, H3, which assesses the perception of barriers, results in an R^2 of -0.050 and a p-value of 0.300, where the null hypothesis cannot be rejected. That is to say, the no relationship between the variable of perception of barriers and the variable of intention to undertake is no relationship. Finally, H4 (innovation - creativity-entrepreneurship intention) offers an R^2 of 0.120 and a p-value of 0.020, where, again, the null hypothesis is verified and the relationship between both study variables is confirmed. In short, based on these findings, the importance of entrepreneurial culture, institutional support and innovation-entrepreneurship is confirmed and, in the case of the perception of barriers to entrepreneurship, there is no relationship.

Table 5.

Hypothesis Test.

Hypothesis	R^2 Differences	R^2 permuted	P-value Permutation <0.05	Result
H1: There is a significant relationship between the entrepreneurial culture and the entrepreneurial intention of students of a private university in Peru and Paraguay.	0.150	0.020	0.04	The null hypothesis is rejected, indicating that there is a significant relationship.
H2: There is a significant relationship between institutional support and the entrepreneurial intention of students at a private university in Peru and Paraguay.	0.203	0.010	0.001	The null hypothesis is rejected, indicating that there is a significant relationship.
H3: There is a significant relationship between the perception of barriers and the entrepreneurial intention of private university students in Peru and Paraguay.	-0.050	-0.005	0.300	The null hypothesis is not rejected, indicating that there is no significant relationship.
H4: There is a significant relationship between innovation and creativity and the entrepreneurial intention of students at a private university in Peru and Paraguay.	0.120	0.015	0.020	The null hypothesis is rejected, indicating that there is a significant relationship.

Table 6 shows the significant differences overall and by country (Peru/Paraguay) in relation to entrepreneurial intention. The results confirm the existence of a significant relationship between entrepreneurial culture and entrepreneurial intention; a Path of 0.150 and a p-value of 0.04 are obtained at the general level. In Peru, the Path P is 0.120 (p-value of 0.02), and in Paraguay, a Path of 0.170 (p-value of 0.03) is reported, confirming the presence of the relationship in both countries. In relation to institutional support, the relationship observed is that of a Path of 0.203, p-value = 0.001 in the general measure, a Path of 0.185 (p-value at 0.005) in Peru, and 0.215 (p-value at 0.002) in Paraguay, which also implies a significant relationship for both countries. With the type of questionnaire of perception of barriers, the Path is -0.050 with a p-value of 0.300, which suggests the absence of a significant relationship in the two countries. In the relationship between innovation and creativity and entrepreneurial intention, the Path is 0.120 (p-value of 0.02) at the general level, 0.100 (p-value of 0.025) for Peru, and 0.135 (p-value of 0.020) in Paraguay, thus confirming the significant relationship in both countries. These results confirm the association between entrepreneurial culture, institutional support, innovation and entrepreneurial intention, while the perception of barriers does not seem to have any effect.

Table 6.

Significant differences overall and by country (Peru and Paraguay).

Variables	General			Peru			Paraguay			Result
	(Path P)	(t > 1.96)	(p < 0.05)	(Path P)	(t > 1.96)	(p < 0.05)	(Path P)	(t > 1.96)	(p < 0.05)	
Entrepreneurial Culture -> Entrepreneurial Intention	0.150	2.531	0.04	0.120	2.180	0.02	0.170	2.680	0.03	Related
Institutional Support -> Intention to undertake	0.203	3.216	0.001	0.185	3.000	0.005	0.215	3.245	0.002	Related
Perception of Barriers -> Entrepreneurial Intention	-0.050	1.033	0.300	-0.030	1.050	0.280	-0.060	1.015	0.350	Not Related
Innovation and Creativity -> Entrepreneurial Intention	0.120	2.150	0.02	0.100	2.000	0.025	0.135	2.235	0.020	Related

5. Discussion

The results of the study revealed that entrepreneurial intention is determined by the interrelation of various components. In the first place, the determination of the culture of entrepreneurship is observed in a context that favors creativity, innovation, and risk tolerance [20] stands out. Thus, this type of culture will serve as a catalyst for university students to consider it as an alternative for the transmission of their intention, in addition to providing a positive filter in decision making [51].

On the other hand, institutional support plays a well-defined role; thus, university students who have resources such as mentoring programs, incubators, and funding will be more likely to develop plans that result in an exit in the creation of their own business [51]. However, this study also identifies and describes barriers that limit the determination of entrepreneurship intention among students such as fear of failure, lack of financial resources, and the bureaucracy of business creation genesis [49]. The findings also report a series of barriers that condition entrepreneurial intention, such as fear of failure, scarcity of financial resources, and existing bureaucracy in the formalization of business creation, among others [67]. In addition, the study emphasizes the different types and degrees of these barriers between the two countries, which shows that cultural and/or contextual differences must be taken into account when designing policies to support business creation [21].

This research is a significant contribution to the field of entrepreneurship, combining important theories and offering a comparative analysis among several Latin American contexts. First, by carrying out the Theory of Planned Behavior in this context, it demonstrates how attitudes, subjective norms, and perceived control determine students' entrepreneurial intentions [33] also contrasting the case of Peru with that of Paraguay offers a novel insight into how economic and cultural differences may influence the way entrepreneurship is perceived [50]. It thus adds an important element to the academic discourse dealing with the dynamics of entrepreneurship in Latin America. It also offers the specific barriers presented by students, such as limited access to funding and bureaucracy; this calls for educational policies that contemplate and seek the most effective ways to address them [25]. This article states that universities should be able to consider the development of more accessible and effective support programs, which could favor a warmer and more optimistic ecosystem in their community. The results not only enrich the existing knowledge on entrepreneurial intention but also provide an important basis for future research and policy in the region [44, 70].

The empirical evidence generated by this research highlights the need for universities to design teaching programs that promote both technical knowledge and an entrepreneurial mindset, which could be achieved through activities such as workshops and extracurricular activities that foster creativity [41, 71]. In addition, the creation of partnerships with the private sector is essential for youth to have access to financial resources and mentoring, as this can overcome the barriers that have been addressed in this study [35, 72]. Likewise, policymakers should undertake work aimed at reducing bureaucratic red tape and improving access to financing for young entrepreneurs, such as promoting tax incentives or working to simplify registration procedures [48, 71]. Finally, it is also necessary to build a culture of entrepreneurship as a viable career, through marketing campaigns that make local success stories visible [42, 73].

This study has a number of limitations that should be taken into account. First, the sample is constituted by students from specific universities in Peru and Paraguay, so it may not be representative of the student population of these two countries. In addition, although the focus on entrepreneurial intention is appropriate, it does not include the full complexity of the entire process of entrepreneurship, which includes action and business development. Another weakness is relying on quantitative methods, as they may not capture important qualitative nuances situated in the students' experiences. Finally, perceived barriers are also subject to history and context, which means that the results of this research may not be applicable to future generations of entrepreneurs.

Based on these limitations, several lines of future research are proposed. One option would be to conduct longitudinal studies in which students are followed over time to observe how their entrepreneurial intentions translate into effective actions. It would also be interesting to broaden the sample and extend it to students from different regions and different types of educational institutions, as it could lead to a more complete picture of entrepreneurial intentionality in Latin America. On the other hand, qualitative research such as the application and execution of in-depth interviews or focus groups could allow for a deeper understanding of students' experiences and perceptions of entrepreneurship. Finally, it would also be possible to investigate how specific programs to support entrepreneurship among graduates influence the rate of entrepreneurial success, thus helping to contribute to more effective policies.

6. Conclusions

The results of this study revealed that the entrepreneurial culture at universities in Peru and Paraguay had a significant influence on students' willingness to start their own businesses. This finding suggests that an academic environment that promotes innovation, calculated risk, and collaboration may have motivated young people to consider entrepreneurship as a viable alternative. Therefore, it is crucial that educational institutions implement activities and programs that strengthen these values, thus fostering an entrepreneurial mindset from the early stages of their education.

The study emphasized that entrepreneurship education must go beyond simply teaching technical skills. It is imperative that the curriculum integrates soft skills, such as resilience, creativity, and adaptability. These skills are essential if students are to feel not only prepared to meet the challenges of entrepreneurship but also to cultivate the confidence necessary to bring their ideas to fruition. By incorporating these competencies into academic training, students are more likely to become successful entrepreneurs.

Significant variability in perceptions of entrepreneurship and associated barriers was observed among students in both countries. While some viewed it as an exciting opportunity, others identified considerable obstacles, such as a lack of financial support and market uncertainty. This variety indicates that strategies to foster entrepreneurship must be tailored to the cultural and economic characteristics of each context. Universities should conduct ongoing research to gain a deeper understanding of these perceptions and adjust their entrepreneurship support programs accordingly.

The conclusions of this study show the importance of an adapted and comprehensive approach to the promotion of entrepreneurship in universities in Peru and Paraguay. Entrepreneurial culture, specific training, and the variety of entrepreneurial perceptions should be considered essential elements in the formulation of educational policies and programs. The joint effort between higher education institutions and the power of the State is important for the creation of an ecosystem that favors entrepreneurship but also promotes the social and economic development of the region. This collaborative effort can provide the opportunity to change the mentality of the youth and equip them with the necessary knowledge for early adaptation to the realities of the business world, in a dynamic manner that also encourages learning about the environment of their countries.

References

- [1] S. L. Martínez-Martínez, "Entrepreneurship as a multidisciplinary phenomenon: culture and individual perceptions in business creation," *Academia Revista Latinoamericana de Administración*, vol. 35, no. 4, pp. 537-565, 2022. <https://doi.org/10.1108/ARLA-02-2021-0041>
- [2] F. J. Díaz Bretones and M. Radrigán, "Attitudes toward entrepreneurship: The case of Chilean and Spanish university students," *CIRIEC-Esp. Rev. Econ. Pública Soc. Coop.*, vol. 94, p. 11, 2018. <https://doi.org/10.7203/CIRIEC-E.94.12668>
- [3] M. C. Boscán-Carroz, R. A. Meleán-Romero, K. J. Chávez-Vera, and Á. Calanchez-Urribarri, "Peruvian entrepreneurship within the framework of sustainable development," *RETOS. Revista de Ciencias de la Administración y Economía*, vol. 13, no. 26, pp. 223-236, 2023. <https://doi.org/10.17163/ret.n26.2023.03>
- [4] S. M. Ghouse, D. Barber III, and K. Alipour, "Shaping the future Entrepreneurs: Influence of human capital and self-efficacy on entrepreneurial intentions of rural students," *The International Journal of Management Education*, vol. 22, no. 3, p. 101035, 2024. <https://doi.org/10.1016/j.ijme.2024.101035>
- [5] N. Aboobaker, "Human capital and entrepreneurial intentions: do entrepreneurship education and training provided by universities add value?," *On the Horizon*, vol. 28, no. 2, pp. 73-83, 2020. <https://doi.org/10.1108/OTH-11-2019-0077>
- [6] G. Acheampong and E. Y. Tweneboah-Koduah, "Does past failure inhibit future entrepreneurial intent? Evidence from Ghana," *Journal of Small Business and Enterprise Development*, vol. 25, no. 5, pp. 849-863, 2018. <https://doi.org/10.1108/JSBED-03-2017-0128>
- [7] A. Caputo, V. H. A. Nguyen, and S. Delladio, "Risk-taking, knowledge, and mindset: unpacking the antecedents of entrepreneurial intention," *International Entrepreneurship and Management Journal*, vol. 21, no. 1, pp. 1-29, 2025. <https://doi.org/10.1007/s11365-024-01064-3>
- [8] L. Abrardi, C. Cambini, and L. Rondi, "Artificial intelligence, firms and consumer behavior: A survey," *Journal of Economic Surveys*, vol. 36, no. 4, pp. 969-991, 2022. <https://doi.org/10.1111/joes.12455>
- [9] I. Ajzen, "The theory of planned behavior: Frequently asked questions," *Human behavior and emerging technologies*, vol. 2, no. 4, pp. 314-324, 2020. <https://doi.org/10.1002/hbe2.195>
- [10] A. G. Agu, O. O. Kalu, C. O. Esi-Ubani, and P. C. Agu, "Drivers of sustainable entrepreneurial intentions among university students: an integrated model from a developing world context," *International Journal of Sustainability in Higher Education*, vol. 22, no. 3, pp. 659-680, 2021. <https://doi.org/10.1108/IJSHE-07-2020-0277>
- [11] D. Etse and A. Adu-Aboagye, "Effect of green organisational climate on green purchasing: The roles of employee green behavioural intentions and corporate environmental communication," *Sustainable Futures*, vol. 9, p. 100419, 2025. <https://doi.org/10.1016/j.sfr.2024.100419>

- [12] H. Al Halbusi, P. Soto-Acosta, and S. Popa, "Analysing e-entrepreneurial intention from the theory of planned behaviour: The role of social media use and perceived social support," *International Entrepreneurship and Management Journal*, vol. 19, no. 4, pp. 1611-1642, 2023. <https://doi.org/10.1007/s11365-023-00866-1>
- [13] A. Hassan, I. Saleem, I. Anwar, and S. A. Hussain, "Entrepreneurial intention of Indian university students: The role of opportunity recognition and entrepreneurship education," *Education+ Training*, vol. 62, no. 7/8, pp. 843-861, 2020. <https://doi.org/10.1108/ET-02-2020-0033>
- [14] A. Alzghoul, A. A. Khaddam, Q. Alshaar, and H. J. Irtaimch, "Impact of knowledge-oriented leadership on innovative behavior, and employee satisfaction: The mediating role of knowledge-centered culture for sustainable workplace," *Business Strategy & Development*, vol. 7, no. 1, p. e304, 2024. <https://doi.org/10.1002/bsd2.304>
- [15] J. Cui and R. Bell, "Behavioural entrepreneurial mindset: How entrepreneurial education activity impacts entrepreneurial intention and behaviour," *The International Journal of Management Education*, vol. 20, no. 2, p. 100639, 2022. <https://doi.org/10.1016/j.ijme.2022.100639>
- [16] M. I. A. Guillén, K. G. Álvarez, and I. Z. Arregui, "The economic and social dimensions of social enterprise. How does the specificity of the founding objectives influence this?," *Revesco: revista de estudios cooperativos*, vol. 144, p. 2, 2023. <https://doi.org/10.5209/reve.87971>
- [17] M. Bardales-Cárdenas, E. F. Cervantes-Ramón, I. K. Gonzales-Figueroa, and L. M. Farro-Ruiz, "Entrepreneurship skills in university students to improve local economic development," *Journal of Innovation and Entrepreneurship*, vol. 13, no. 1, p. 55, 2024. <https://doi.org/10.1186/s13731-024-00408-1>
- [18] A. Bernasconi, "University entrepreneurship in a developing country: The case of the P. Catholic University of Chile, 1985–2000," *Higher Education*, vol. 50, pp. 247-274, 2005. <https://doi.org/10.1007/s10734-004-6353-1>
- [19] T. Lopez and C. Álvarez, "Entrepreneurship research in Latin America: A literature review," *Academia Revista Latinoamericana de Administración*, vol. 31, no. 4, pp. 736-756, 2018. <https://doi.org/10.1108/ARLA-12-2016-0332>
- [20] B. Silupu, B. Usero, and Á. Montoro-Sánchez, "The transition toward the business formality of the Peruvian MSEs: How does the perception of entrepreneurs and the sector influence?," *Academia Revista Latinoamericana de Administración*, vol. 35, no. 1, pp. 100-114, 2022. <https://doi.org/10.1108/ARLA-05-2021-0106>
- [21] V. Chavez, Kerwin Jose, J. J. A. Velita, T. A. Martinez, and R. M. Ferrer, "Determinant factors of entrepreneurial culture in university students: An analysis from the theory of planned behavior at a peruvian university," *Sustainability*, vol. 16, no. 23, p. 10693, 2024. <https://doi.org/10.3390/su162310693>
- [22] L. Collins, P. D. Hannon, and A. Smith, "Enacting entrepreneurial intent: The gaps between student needs and higher education capability," *Education+ training*, vol. 46, no. 8/9, pp. 454-463, 2004. <https://doi.org/10.1108/00400910410569579>
- [23] J. Deprez, W. Robijn, and M. Euwema, "Old habits die hard? Development of an intrapreneurial behavioral component intervention," *Thinking Skills and Creativity*, vol. 53, p. 101579, 2024. <https://doi.org/10.1016/j.tsc.2024.101579>
- [24] O. B. Solís, I. M. C. Mendoza, F. R. V. Palomino, and R. Y. M. Rodríguez, "University youth entrepreneurship: An approach based on attitude, education, and behavioral control," *Revista Venezolana de Gerencia: RVG*, vol. 28, no. 9, pp. 377-389, 2023. <https://doi.org/10.52080/rvgluz.28.e9.24>
- [25] M. Kaur and S. Chawla, "Understanding the relationship between entrepreneurship education, entrepreneurial attitudes, and entrepreneurial intentions among engineering graduates: The moderating role of gender," *Journal of Work-Applied Management*, vol. 15, no. 2, pp. 200-215, 2023. <https://doi.org/10.1108/JWAM-05-2023-0039>
- [26] O. Cristi and W. Naudé, "Entrepreneurship and subjective well-being: Does the motivation to start-up a firm matter?," *J. Bus. Res.*, vol. 127, pp. 389-398, 2021. <https://doi.org/10.1016/j.jbusres.2020.11.044>
- [27] C. Y. Ip, "From green entrepreneurial intention to behaviour: The role of environmental knowledge, subjective norms, and external institutional support," *Sustainable Futures*, vol. 8, p. 100331, 2024. <https://doi.org/10.1016/j.sfr.2024.100331>
- [28] M. H. M. Alibraheem, "The moderating role of internal control system on the relationship between service quality of accounting information system and customer satisfaction: A study of some selected customers from commercial banks in Jordan," *Uncertain Supply Chain Manag.*, vol. 12, no. 1, pp. 567-572, 2024. <https://doi.org/10.5267/j.uscm.2023.8.015>
- [29] V. Vamvaka, C. Stoforos, T. Palaskas, and C. Botsaris, "Attitude toward entrepreneurship, perceived behavioral control, and entrepreneurial intention: Dimensionality, structural relationships, and gender differences," *Journal of Innovation and Entrepreneurship*, vol. 9, pp. 1-26, 2020. <https://doi.org/10.1186/s13731-020-0112-0>
- [30] T. Anjum, A. Amoozegar, M. Farrukh, and P. Heidler, "Entrepreneurial intentions among business students: The mediating role of attitude and the moderating role of university support," *Education+ Training*, vol. 65, no. 4, pp. 587-606, 2022. <https://doi.org/10.1108/ET-01-2021-0020>
- [31] A. B. Bakker and W. G. Oerlemans, "Daily job crafting and momentary work engagement: A self-determination and self-regulation perspective," *Journal of Vocational Behavior*, vol. 112, pp. 417-430, 2019. <https://doi.org/10.1016/j.jvb.2018.12.005>
- [32] I. Ajzen, "The theory of planned behavior," *Organizational Behavior and Human Decision Processes*, vol. 50, no. 2, pp. 179-211, 1991. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- [33] R. L. Adaryani *et al.*, "Predicting household food waste behavior: Bringing food literacy and purchasing power into the theory of planned behavior," *Journal of Retailing and Consumer Services*, vol. 82, p. 104119, 2025. <https://doi.org/10.1016/j.jretconser.2024.104119>
- [34] M. M. Cahigas, Y. T. Prasetyo, S. F. Persada, A. K. S. Ong, and R. Nadlifatin, "Understanding the perceived behavior of public utility bus passengers during the era of COVID-19 pandemic in the Philippines: Application of social exchange theory and theory of planned behavior," *Research in Transportation Business & Management*, vol. 45, p. 100840, 2022. <https://doi.org/10.1016/j.rtbm.2022.100840>
- [35] D. T. Wijayati, H. Fazlurrahman, H. K. Hadi, and I. D. C. Arifah, "The effect of entrepreneurship education on entrepreneurial intention through planned behavioural control, subjective norm, and entrepreneurial attitude," *Journal of Global Entrepreneurship Research*, vol. 11, no. 1, pp. 505-518, 2021. <https://doi.org/10.1007/s40497-021-00298-7>
- [36] P. C. C. Cueva and M. A. P. Rojas, "Organizational behavior and academic excellence: A study in a peruvian intercultural university," *Open Journal of Analytical and Bioanalytical Chemistry*, vol. 8, no. 1, pp. 017-021, 2024. <https://doi.org/10.17352/ojabc.000032>

- [37] J. J. Flores Pérez and R. Guevara, "Mediating effect of entrepreneurial passion in the relationship between entrepreneurial orientation and innovative work behavior," *Measuring Business Excellence*, vol. 27, no. 3, pp. 483-500, 2023. <https://doi.org/10.1108/MBE-10-2022-0126>
- [38] P. Aceituno-Aceituno, A. Casero-Ripollés, J.-J. Escudero-Garzás, and C. Bousoño-Calzón, "University training on entrepreneurship in business communication and journalism projects," *Comunicar*, vol. 26, no. 57, pp. 91-100, 2018. <https://doi.org/10.3916/C57-2018-09>
- [39] H. Akbar, H. Al-Dajani, S. Carter, and E. Shaw, "Defying contextual embeddedness: Evidence from displaced women entrepreneurs in Jordan," *Entrepreneurship and Regional Development*, vol. 31, no. 3-4, pp. 198-212, 2018. <https://doi.org/10.1080/08985626.2018.1551788>
- [40] I. Ajzen, "Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior 1," *Journal of applied social psychology*, vol. 32, no. 4, pp. 665-683, 2002. <https://doi.org/10.1111/j.1559-1816.2002.tb00236.x>
- [41] S. Beugelsdijk, "Entrepreneurial culture, regional innovativeness and economic growth," *Journal of Evolutionary Economics*, vol. 17, no. 2, pp. 187-210, 2007. <https://doi.org/10.1007/s00191-006-0048-y>
- [42] A. C. Urribarri, K. J. C. Vera, C. A. R. Reyes, and M. R. Cubas, "Innovative performance to strengthen the culture of entrepreneurship in Peru," *Revista Venezolana de Gerencia: RVG*, vol. 27, no. 100, pp. 1837-1858, 2022. <https://doi.org/10.52080/rvgluz.27.100.33>
- [43] Y. Bu, S. Li, and Y. Huang, "Research on the influencing factors of Chinese college students' entrepreneurial intention from the perspective of resource endowment," *The International Journal of Management Education*, vol. 21, no. 3, p. 100832, 2023. <https://doi.org/10.1016/j.ijme.2023.100832>
- [44] W. J. Aloulou, "Predicting entrepreneurial intentions of final year Saudi university business students by applying the theory of planned behavior," *Journal of Small Business and Enterprise Development*, vol. 23, no. 4, pp. 1142-1164, 2016. <https://doi.org/10.1108/JSBED-02-2016-0028>
- [45] C. Chien-Chi, B. Sun, H. Yang, M. Zheng, and B. Li, "Emotional competence, entrepreneurial self-efficacy, and entrepreneurial intention: A study based on China college students' social entrepreneurship project," *Frontiers in Psychology*, vol. 11, p. 547627, 2020. <https://doi.org/10.3389/fpsyg.2020.547627>
- [46] S. Sundar and M. Gurupandi, "Exploring strategic entrepreneurship research: A comprehensive decadal bibliometric analysis," *International Review of Management and Marketing*, vol. 15, no. 1, pp. 179-192, 2025. <https://doi.org/10.32479/irmm.17438>
- [47] K. Fichter and I. Tiemann, "Impacts of promoting sustainable entrepreneurship in generic business plan competitions," *Journal of Cleaner Production*, vol. 267, p. 122076, 2020. <https://doi.org/10.1016/j.jclepro.2020.122076>
- [48] D. Diez, L. Flores, and Carlos, "Social innovation through social entrepreneurship: Overview of global and colombian literature," *Rev. Cienc. Soc.*, 2021. <https://doi.org/10.31876/rcs.v29i2.39976>
- [49] D. Atmono *et al.*, "The effect of entrepreneurial education on university student's entrepreneurial self-efficacy and entrepreneurial intention," *International Journal of Evaluation and Research in Education*, vol. 12, no. 1, pp. 495-504, 2023. <https://doi.org/10.11591/ijere.v12i1.23262>
- [50] T. Ahmed, V. Chandran, J. E. Klobas, F. Liñán, and P. Kokkalis, "Entrepreneurship education programmes: How learning, inspiration and resources affect intentions for new venture creation in a developing economy," *The International Journal of Management Education*, vol. 18, no. 1, p. 100327, 2020. <https://doi.org/10.1016/j.ijme.2019.100327>
- [51] A. Biraglia and V. Kadile, "The role of entrepreneurial passion and creativity in developing entrepreneurial intentions: Insights from American homebrewers," *Journal of small business management*, vol. 55, no. 1, pp. 170-188, 2017. <https://doi.org/10.1111/jsbm.12242>
- [52] M. Hughes, P. Hughes, R. E. Morgan, I. R. Hodgkinson, and Y. Lee, "Strategic entrepreneurship behaviour and the innovation ambidexterity of young technology-based firms in incubators," *International Small Business Journal*, vol. 39, no. 3, pp. 202-227, 2021. <https://doi.org/10.1177/0266242620943776>
- [53] K. Alkaabi and S. Senghore, "Student entrepreneurship competency and mindset: Examining the influence of education, role models, and gender," *Journal of Innovation and Entrepreneurship*, vol. 13, no. 1, p. 36, 2024. <https://doi.org/10.1186/s13731-024-00393-5>
- [54] B. Lavanya and A. D. Rajkumar, "Bibliometric insights on mapping the landscape of cybersecurity: Uncovering the research potential in banking industry," *Multidisciplinary Reviews*, vol. 7, no. 6, pp. 2024113-2024113, 2024. <https://doi.org/10.31893/multirev.2024113>
- [55] S. T. Anderson and K. K. Lin, "Scientific method," Elsevier, 2024, pp. 13-15.
- [56] J. Booth, M. Coldwell, L.-M. Müller, E. Perry, and J. Zuccollo, "Mid-career teachers: A mixed methods scoping study of professional development, career progression and retention," *Education Sciences*, vol. 11, no. 6, p. 299, 2021. <https://doi.org/10.3390/educsci11060299>
- [57] M. K. Cain, Z. Zhang, and K.-H. Yuan, "Univariate and multivariate skewness and kurtosis for measuring nonnormality: Prevalence, influence and estimation," *Behavior research methods*, vol. 49, pp. 1716-1735, 2017. <https://doi.org/10.3758/s13428-016-0814-1>
- [58] Y. Feng, D. Duives, W. Daamen, and S. Hoogendoorn, "Data collection methods for studying pedestrian behaviour: A systematic review," *Building and Environment*, vol. 187, p. 107329, 2021. <https://doi.org/10.1016/j.buildenv.2020.107329>
- [59] J. F. A. Hanco, "Competitiveness: A strategic resource-based approach to business management," *TECHNO REVIEW. International Technology, Science and Society Review/Revista Internacional de Tecnología, Ciencia y Sociedad*, vol. 11, no. 5, pp. 1-15, 2022. <https://doi.org/10.37467/revtechno.v11.4449>
- [60] L. Liu, B. F. Jones, B. Uzzi, and D. Wang, "Data, measurement and empirical methods in the science of science," *Nature human behaviour*, vol. 7, no. 7, pp. 1046-1058, 2023. <https://doi.org/10.1038/s41562-023-01562-4>
- [61] J. Cohen, *Statistical power analysis for the behavioral sciences*. Routledge, 2013.
- [62] R. Luong and J. K. Flake, "Measurement invariance testing using confirmatory factor analysis and alignment optimization: A tutorial for transparent analysis planning and reporting," *Psychological Methods*, vol. 28, no. 4, p. 905, 2023. <https://doi.org/10.1037/met0000441>
- [63] K. F. Widaman and J. L. Helm, "Exploratory factor analysis and confirmatory factor analysis." Washington: American Psychological Association, 2023, pp. 379-410.
- [64] R. Hernández, C. Fernández, and P. Baptista, *Research methodology*. New York: McGraw-Hill, 2018.

- [65] M. Tavakol and R. Dennick, "Making sense of Cronbach's alpha," *International Journal of Medical Education*, vol. 2, p. 53, 2011. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- [66] K. J. Dunn and G. McCray, "The place of the bifactor model in confirmatory factor analysis investigations into construct dimensionality in language testing," *Frontiers in Psychology*, vol. 11, p. 1357, 2020. <https://doi.org/10.3389/fpsyg.2020.01357>
- [67] G. E. Rueda Barrios, J. F. R. Rodriguez, A. V. Plaza, C. P. Vélez Zapata, and M. E. G. Zuluaga, "Entrepreneurial intentions of university students in Colombia: Exploration based on the theory of planned behavior," *Journal of Education for Business*, vol. 97, no. 3, pp. 176-185, 2022. <https://doi.org/10.1080/08832323.2021.1918615>
- [68] J. F. Hair, G. T. M. Hult, C. M. Ringle, M. Sarstedt, N. P. Danks, and S. Ray, *Partial least squares structural equation modeling (pls-sem) using r: A workbook in classroom companion: business*. Cham: Springer International Publishing, 2024.
- [69] J. M. Becker, S. Wende, and R. Becker, *SmartPLS 3.3*. Boenningstedt: SmartPLS GmbH, 2023.
- [70] T. J. Bae, S. Qian, C. Miao, and J. O. Fiet, "The relationship between entrepreneurship education and entrepreneurial intentions: A meta-analytic review," *Entrepreneurship Theory and Practice*, vol. 38, no. 2, pp. 217-254, 2014. <https://doi.org/10.1111/etap.12095>
- [71] O. Al-Jayyousi, A. Al-Alawi, S. Al-Mahamid, and A. Bugawa, "Entrepreneurial university and organizational innovation: The case of arabian gulf university, Bahrain," Emerald Publishing Limited. <https://doi.org/10.1108/978-1-78973-627-420191008>, 2019, pp. 117-136.
- [72] F. Ceresia and C. Mendola, "Am I an entrepreneur? Entrepreneurial self-identity as an antecedent of entrepreneurial intention," *Administrative Sciences*, vol. 10, no. 3, p. 46, 2020. <https://doi.org/10.3390/admsci10030046>
- [73] R. Q. Danish, J. Asghar, Z. Ahmad, and H. F. Ali, "Factors affecting "entrepreneurial culture": The mediating role of creativity," *Journal of Innovation and Entrepreneurship*, vol. 8, no. 1, pp. 1-12, 2019. <https://doi.org/10.1186/s13731-019-0108-9>