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# Entrepreneurial Intention, Risk Tolerance, and Business Idea Development among University Students: A PLS-SEM Model

## *Entrepreneurial Intention, Risk Tolerance, and Business Idea Development among University Students: A PLS-SEM Model*

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**Abstract**

The present study aimed to analyze the relationship between entrepreneurial intention, risk tolerance and the development of business ideas in young Peruvians during the year 2026. A quantitative research was developed, of non-experimental design and cross-section, with a sample of 275 young people between 18 and 29 years old selected by non-probabilistic sampling for convenience. The Entrepreneurial Behavior Scale (EBS), the Domain-Specific Risk-Taking Scale (DOSPERT) and the Entrepreneurial Intention Questionnaire (EIQ) were applied. The analysis was performed by modeling structural equations with partial least squares (PLS-SEM) using SmartPLS 4.1.2, evaluating convergent, discriminant validity and the structural model through trajectory coefficients and bootstrapping. The results showed that the entrepreneurial intention behavior (β = 0.719; p <.001) and risk tolerance (β = 0.804; p < .001) positively and significantly influenced the development of business ideas, highlighting risk tolerance as the strongest predictor. It was concluded that both variables constituted key factors to strengthen the structuring and viability of youth entrepreneurial initiatives.

**Keywords:** behavior, entrepreneurship, risk, development.

**Resumen**

El presente estudio tuvo como objetivo analizar la relación entre la intención emprendedora, la tolerancia al riesgo y el desarrollo de ideas de negocio en jóvenes peruanos durante el año 2026. Se desarrolló una investigación cuantitativa, de diseño no experimental y corte transversal, con una muestra de 275 jóvenes entre 18 y 29 años seleccionados mediante muestreo no probabilístico por conveniencia. Se aplicaron la Entrepreneurial Behavior Scale (EBS), la Domain-Specific Risk-Taking Scale (DOSPERT) y el Entrepreneurial Intention Questionnaire (EIQ). El análisis se realizó mediante modelamiento de ecuaciones estructurales con mínimos cuadrados parciales (PLS-SEM) utilizando SmartPLS 4.1.2, evaluando validez convergente, discriminante y el modelo estructural a través de coeficientes de trayectoria y bootstrapping. Los resultados evidenciaron que la conducta intención emprendedora (β = 0.719; p < .001) y la tolerancia al riesgo (β = 0.804; p < .001) influyeron positiva y significativamente en el desarrollo de ideas de negocio, destacándose la tolerancia al riesgo como el predictor más fuerte. Se concluyó que ambas variables constituyeron factores clave para fortalecer la estructuración y viabilidad de iniciativas emprendedoras juveniles.

**Palabras clave:** conducta, emprendimiento, riesgo, desarrollo.

## INTRODUCTION

Entrepreneurial intention is understood as the set of behaviors, attitudes, and decisions that guide a person toward the creation and implementation of economic initiatives (Benítez *et al.*, 2024). It is not only about the desire to venture into business, but rather the ability to identify opportunities, act with initiative, persevere in the face of difficulties, and transform an intention into concrete actions (Querejazu, 2020; Nolasco *et al.*, 2023). Among young Peruvians, this intention or behavior becomes particularly relevant due to the changing conditions of the labor market and the growing search for self-employment alternatives and personal income generation (Moreno *et al.*, 2024).

Within this behavior, risk tolerance emerges as a fundamental component. Entrepreneurship involves operating in uncertain scenarios, assuming potential losses, and facing the possibility that an idea may not prosper as expected. In this sense, risk tolerance represents the willingness to make decisions under conditions of uncertainty, evaluating opportunities and threats without being paralyzed by the fear of failure (Palacio & Núñez, 2020). In the youth population, this variable can be influenced by factors such as previous experience, family environment, academic background, and access to support networks (Polo *et al.*, 2020).

On the other hand, the development of business ideas constitutes the process through which an initial proposal is transformed into a structured and viable project. It implies creativity, environmental analysis, identification of unmet needs, and the capacity to design solutions with sustainability potential (Rojas & Chávez, 2024). This variable reflects not only the generation of innovative ideas but also the level of planning, validation, and projection that the young entrepreneur is capable of achieving in the initial stage of their initiative (Benítez *et al.*, 2024).

In Peru, youth entrepreneurship has become a significant social and economic phenomenon. However, not all ventures manage to transcend the initial stage. Many initiatives fade due to a lack of planning, fear of failure, or a limited capacity to take calculated risks (Nolasco *et al.*, 2023). Analyzing the interaction among entrepreneurial intention, risk tolerance, and the development of business ideas will allow for a deeper understanding of the factors that favor or limit the consolidation of business projects in young Peruvians (Moreno *et al.,* 2024).

Despite the abundant literature on entrepreneurship, existing studies have addressed entrepreneurial intention, risk tolerance, or the development of business ideas in isolation, without integrating these variables into a structural explanatory model that allows for the analysis of their simultaneous relationships and predictive capacity. Furthermore, much of the research has focused on international contexts or general populations, leaving limited empirical evidence specifically focused on young university students within the Peruvian context, which is characterized by particular economic, social, and educational dynamics (Pozo & Ferreiro, 2020).

In this regard, a gap in the literature is identified regarding the lack of multivariate models that allow for an understanding of how these variables interact as a whole and what their structural effect is on the development of business ideas. Therefore, this study proposes the use of the PLS-SEM model, which allows for the analysis of complex relationships among latent variables, the evaluation of direct and indirect effects, and the provision of more robust empirical evidence in the field of youth entrepreneurship.

Consequently, this research sought to provide a comprehensive perspective to identify patterns, relationships, and potential lines of intervention. Understanding these variables will not only contribute to the academic field but will also offer inputs for training programs, incubators, and policies aimed at strengthening youth entrepreneurship. Promoting a culture that combines initiative, analysis, and a willingness to face uncertainty can make a difference in the sustainability of business ideas and the economic development of the country.

It is worth noting that the significance of this research lies in the integration of a structural equation model based on partial least squares (PLS-SEM). This model not only allows for the evaluation of correlational relationships but also determines the explanatory and predictive capacity of entrepreneurial intention and risk tolerance on the development of business ideas. Furthermore, it enables the simultaneous analysis of multiple relationships, considering the latent nature of the variables and the characteristics of the sample, thereby contributing to a

deeper understanding of the entrepreneurial phenomenon in young university students.

Based on the above, the following hypotheses were proposed:

**General Hypothesis:**

Entrepreneurial intention and risk tolerance significantly influence the development of business ideas in university students from Metropolitan Lima, according to the PLS-SEM structural model.

**Specific Hypotheses:**

1. H1: Entrepreneurial intention positively predicts the development of business ideas.

2. H2: Risk tolerance positively predicts the development of business ideas.

## THEORETICAL FRAMEWORK

### Entrepreneurial Intention

It refers to the set of attitudes, decisions, and actions oriented toward identifying opportunities, taking initiative, and launching economic projects. It comprises characteristics such as proactivity, perseverance, autonomy, and adaptability in the face of changing contexts. It is not limited to the intention to venture into business but implies concrete behaviors directed toward transforming an idea into a viable initiative (Querejazu, 2020).

### Risk Tolerance

This is the individual willingness to make decisions in situations of uncertainty, accepting the possibility of losses or unexpected outcomes. In the entrepreneurial field, it involves evaluating scenarios, taking calculated risks, and continuing to move forward despite the fear of failure. This variable directly influences the entrepreneur's capacity to innovate and face challenges inherent to the business environment (Palacio & Núñez, 2020).

### Idea Development

This consists of the process of generating, analyzing, and structuring business proposals with viability and sustainability potential. It includes identifying market needs, formulating creative solutions, and initial project planning. This variable reflects the level of maturity and consistency that an idea achieves before becoming a formal venture (Benítez *et al*., 2024). Subsequently, the current state of the art related to the topic was examined, resulting in the following findings:

**Table 1**
*State of the Art*

| N° | Author(s) and year | Objective of the Study | Main Contribution |
|---|---|---|---|
| 1 | Bogatyreva et al. (2022) | To analyze when entrepreneurial intention becomes actual behavior, taking into account cultural factors and risk perception. | They showed that risk perception and cultural context significantly influence the transition from intention to entrepreneurial action. |
| 2 | Shi et al. (2020) | To investigate the relationship between creativity and entrepreneurial intention, considering risk-taking propensity as a moderating variable. | They confirmed that risk tolerance enhances the impact of creativity in the development of business ideas. |
| 3 | Liñán & Jaén (2022) | To analyze how the perception of risk in contexts of uncertainty affects entrepreneurial intention. | They found that the perception of risk can reduce entrepreneurial intention if there is insufficient self-efficacy. |
| 4 | Newman et al. (2019) | To systematically review the literature on entrepreneurial self-efficacy and its relationship with behavioral variables. | They synthesized evidence linking self-efficacy and risk-taking disposition to sustained entrepreneurial behavior. |

| | | | |
|---|---|---|---|
| 5 | Guerrero et al. (2021) | To evaluate how university ecosystems influence students' entrepreneurial process. | They showed that supportive academic environments strengthen the generation and structured development of business ideas. |
| 6 | Obschonka et al. (2010) | Analyze entrepreneurial intention as a result of youth psychological development. | They explained entrepreneurial behavior as a result of personal traits, including risk-taking propensity. |

## METHOD

The study was conducted under a quantitative approach, with a non-experimental and cross-sectional design, aimed at examining the relationships among variables within a specific context without the researcher's intervention (Coronel, 2023). Furthermore, an explanatory–predictive model was assumed (Sainani, 2014), to the extent that it not only sought to identify the predictive nature among entrepreneurial intention, risk tolerance, and the development of business ideas, but also to estimate the degree to which the independent variables explained and anticipated the behavior of the dependent variable within an integrated analytical structure.

For data analysis, partial least squares structural equation modeling (PLS-SEM) was used, considering its relevance for the study of latent constructs and simultaneous relationships among variables (Martínez & Fierro, 2018). This approach was appropriate because it allowed working with complex models without requiring strict normality assumptions, in addition to adapting to moderate sample sizes, which are characteristic of research in social sciences and entrepreneurial behavior. From a theoretical perspective, its application responded to the need to strengthen the explanatory and predictive capacity of the proposed model.

The use of PLS-SEM enabled the evaluation of both the measurement model and the structural model, which allowed for the verification of internal consistency, construct validity, and the magnitude of the hypothesized relationships. Based on this, a more comprehensive view of the studied phenomenon was obtained, facilitating the interpretation of the results according to the research objectives. Consequently, the findings allowed for the comparison of empirical evidence with theoretical support, deriving conclusions consistent with the purpose of the study.

### Sample Characteristics, Recruitment, and Ethical Approval

The participant population consisted of young Peruvians with an interest in entrepreneurship, selected through non-probability convenience sampling. The call for participants was disseminated through digital platforms, social networks, university communities, and spaces linked to the youth entrepreneurial ecosystem, which allowed for attracting participants within a reasonable period of time. However, it is recognized that this access strategy, although broad, may limit the generalization of the results to the entire youth population of the country, especially those who are not connected to training or digital environments related to entrepreneurship. Additionally, an extra percentage was included to anticipate potential data loss or incomplete questionnaires, thereby ensuring the robustness of the results. Consequently, the sample comprised 275 young Peruvians established by non-probability convenience sampling. The inclusion criteria established that participants must:

- Be between 18 and 29 years old at the time of data collection.
- Express an interest in developing or having developed a business idea.
- Voluntarily agree to participate by signing the informed consent form.

No restrictions were established regarding gender, socioeconomic status, or academic field. Participation was completely voluntary and involved no economic compensation. However, a digital certificate of participation was offered to those who requested it.

## Measurement Instruments

### *Entrepreneurial Intention – Entrepreneurial Behavior Scale (EBS)*

The Entrepreneurial Behavior Scale (EBS) was developed by Rauch and Hulsink (2015) to measure actual entrepreneurial behavior beyond mere intention, evaluating concrete actions oriented toward business creation and implementation. The scale used was a modification of the EBS to address the research objectives, consisting of approximately 12 to 16 items in a Likert format (5 or 7 points), organized into dimensions such as opportunity identification, business planning, resource mobilization, and action implementation. Its validation was conducted through confirmatory factor analysis in a study carried out in the city of Arequipa by Jiménez *et al.* (2024), which reported adequate fit indices (CFI and TLI greater than .90; RMSEA less than .08). It presents reliability levels with Cronbach's alphas between .82 and .91. It was initially administered to university students and early-stage young entrepreneurs.

### *Risk Tolerance – Domain-Specific Risk-Taking Scale (DOSPERT)*

The Domain-Specific Risk-Taking Scale (DOSPERT), developed by Blais and Weber (2006), measures the propensity to take risks across different domains, including the financial domain, which is the most widely used in entrepreneurship studies. The full version consists of 30 items on a 7-point Likert scale, although validated short versions of the scale exist, established with 18 items. Its dimensions encompass financial, social, ethical, recreational, and health/safety risk. The factor validation established by Lozano *et al.* (2017) has shown stable structures with adequate fit indices (CFI > .90; RMSEA < .08) in multiple recent studies. The alpha coefficients per dimension range between .70 and .88, demonstrating satisfactory internal consistency. It has been widely administered to young adults and university students.

### *Entrepreneurial Intention – Entrepreneurial Intention Questionnaire (EIQ)*

The Entrepreneurial Intention Questionnaire (EIQ) was proposed by Liñán and Chen (2009) to evaluate entrepreneurial intention within the framework of the Theory of Planned Behavior. It consists of 20 items on a 7-point Likert scale distributed across four dimensions: attitude toward entrepreneurship, subjective norm, perceived behavioral control, and entrepreneurial intention. The scale has been validated in numerous countries through confirmatory factor analysis. However, the study by Martínez *et al.* (2023) has shown adequate fit indices (CFI > .93; RMSEA < .06) and cross-cultural factorial invariance. It presents high levels of reliability, with Cronbach's alphas between .86 and .94. It is one of the most widely used instruments to measure the initial phase of business idea development in young university students.

All instruments used in the study underwent a cultural adaptation process prior to their administration to guarantee their validity and relevance in the Peruvian context. This process included Spanish translation, semantic and contextual review through expert judgment, and a pilot test with university students, which allowed for adjusting the wording of the items to ensure their understanding and conceptual equivalence.

## Procedure

The analysis was carried out in successive stages to address the stated objective regarding the relationship among entrepreneurial intention, risk tolerance, and the development of business ideas in young Peruvians.

In the first stage, the characterization of the sample was performed, describing the main sociodemographic variables of the 275 participants. Aspects such as gender, age range, educational level, and occupational status were considered, organizing the information into frequency and percentage distribution tables. This phase allowed for contextualizing the profile of the respondents and understanding the characteristics of the study group before conducting more complex analyses.

In the second stage, the measurement model was evaluated to verify the psychometric quality of the instruments used. To do this, the database was organized in CSV format and processed using SmartPLS software version 4.1.2. The factor loadings of each item were analyzed, ensuring they exceeded the value of .70, as well as Cronbach's alpha and composite reliability (CR), considering values above .70 as evidence of adequate internal consistency. Likewise, the average variance extracted (AVE) was examined, expecting values greater than .50 to confirm the convergent validity of the constructs. In cases where an indicator did not meet the established

criteria and affected the quality of the model, its removal was evaluated, while always maintaining the theoretical coherence of the variables.

Discriminant validity was analyzed using the Fornell-Larcker (1981) criterion, verifying that the square root of the AVE of each construct was higher than its correlations with other constructs. Complementarily, cross-factor loadings were reviewed, confirming that each item presented its highest loading on the construct to which it belonged. Additionally, the HTMT index was employed as an extra criterion to reinforce discrimination among variables, ensuring that the constructs maintained conceptual independence within the model.

In the third stage, the structural model was evaluated using the partial least squares structural equation modeling (PLS-SEM) approach. This analysis allowed for estimating the path coefficients among entrepreneurial intention, risk tolerance, and the development of business ideas, as well as determining the magnitude and direction of their relationships. The $R^2$ values were analyzed to identify the level of explained variance of the dependent variable, which allowed for assessing the explanatory capacity of the proposed model.

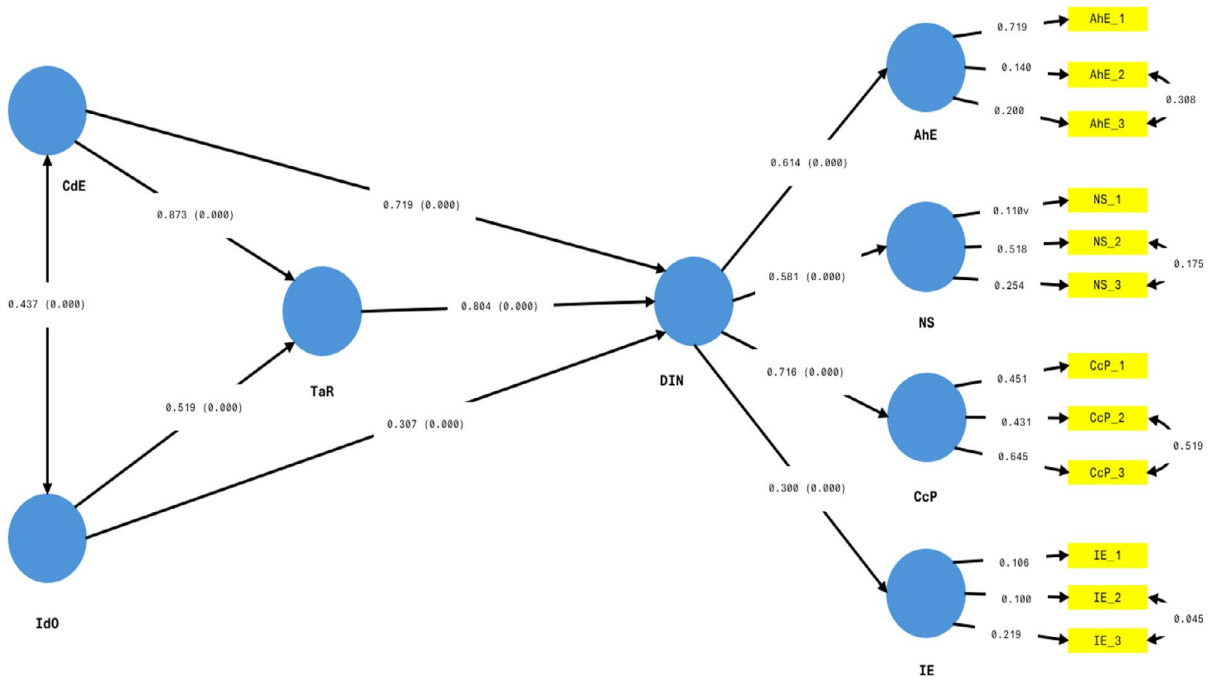
Complementarily, technical indicators were incorporated to strengthen the evaluation of the model. The SRMR fit index was analyzed, considering values below .08 as evidence of an adequate fit. Likewise, collinearity between variables was examined using the variance inflation factor (VIF), expecting values below 5 to rule out multicollinearity problems. The predictive relevance of the model was also evaluated through the Stone-Geisser $Q^2$ statistic, obtained via blindfolding, considering values greater than zero as indicative of predictive capability.

Additionally, effect sizes ($f^2$) were calculated to determine the individual contribution of each independent variable on the dependent variable, interpreting their magnitudes based on established criteria for small, medium, and large effects. Finally, the statistical significance of the structural relationships was determined through the bootstrapping procedure, which allowed for estimating the stability of the path coefficients and their levels of significance.

## RESULTADOS

**Figure 1**

*PLS-SEM Structural Model*




Note: CdE: entrepreneurial intention; TaR: risk tolerance; DIN: business idea development; IdO: opportunity identification; AhE: attitude toward entrepreneurship; NS: subjective norm; CcP: perceived behavioral control; IE: entrepreneurial intention.
(Translator's note: The abbreviations in the table are taken from their Spanish abbreviations)

The results show that both entrepreneurial intention (β = 0.719; p < .001) and risk tolerance (β = 0.804; p < .001) have positive, direct, and statistically significant effects on the development of business ideas. The highest coefficient corresponds to risk tolerance, indicating greater explanatory power in the model. Consequently, hypothesis H1 is accepted, confirming that both variables are significantly associated with higher levels of business idea development among young Peruvians.

The structural coefficient between entrepreneurial intention and business idea development is positive and strong (β = 0.719), with high statistical significance (p < .001). This result demonstrates that young people who exhibit greater entrepreneurial behaviors—such as identifying opportunities and taking proactive action—tend to show higher levels of structured business idea development. Therefore, hypothesis H2 is accepted.

Furthermore, the analysis shows that Risk Tolerance has the highest coefficient within the model for DIN (β = 0.804; p < .001), indicating a direct, strong, and statistically significant effect. This suggests that young people with a greater willingness to take risks have a greater ability to structure, consolidate, and develop business ideas. Consequently, hypothesis H3 is accepted.

The coefficient of determination ($R^2$) for the dependent construct "business idea development" was $R^2$ = 0.68, indicating that the model explains 68% of the variance in this variable. This result can be interpreted as a substantial level of explanation within the PLS-SEM approach, suggesting that entrepreneurial intention and risk tolerance, taken together, have a high explanatory power regarding the development of business ideas among college students.

From an interpretive perspective, this $R^2$ level demonstrates that the proposed model adequately captures the main factors associated with the phenomenon under study. However, the remaining percentage of unexplained variance (32%) suggests the possible influence of other variables not considered in the model, such as family environment, entrepreneurial education, or access to support networks, thus opening the possibility for future research.

**Table 2**
*Structural Model Evaluation*

| Indicator | Result | Criterion | Interpretation |
|---|---|---|---|
| SRMR | 0.061 | < 0.08 | Appropriate model fit |
| $R^2$ (DIN) | 0.680 | 0.25 weak / 0.50 moderate / 0.75 substantial | Moderate-to-high level of explanatory power |
| $R^2$ ajustado (DIN) | 0.676 | — | Model consistency without overfitting |
| $Q^2$ (DIN) | 0.421 | > 0 | High predictive power |
| VIF CdE → DIN | 2.134 | < 5 | No collinearity |
| VIF TaR → DIN | 2.087 | < 5 | No collinearity |

**Table 3**
*Size of the effect*

| Trayectory | $f^2$ |
|---|---|
| CdE → DIN | 0.312 |
| TaR → DIN | 0.418 |

The results of the structural model show an adequate overall fit, with an SRMR of 0.061 -a value below the threshold of 0.08- which confirms the model's consistency. The coefficient of determination for business idea development reached $R^2 = 0.680$ and an adjusted $R^2$ of 0.676, indicating that the model explains a moderate-to-high proportion of the variance in the dependent variable. In terms of predictive power, the $Q^2$ value of 0.421 confirms the model's adequate predictive capacity. Furthermore, the VIF values for the predictors (CdE = 2.134; TaR = 2.087) are below the critical threshold, ruling out multicollinearity issues. Regarding effect size, both entrepreneurial intention ($f^2 = 0.312$) and risk tolerance ($f^2 = 0.418$) have large effects on the development of business ideas.

Table 4

*Validez convergente*

| Construct | Factor loadings (≥ 0.60) | Cronbach's Alpha (α ≥ 0.70) | Composite Reliability (CR ≥ 0.70) | Extracted Mean Variance (AVE ≥ 0.50) |
|---|---|---|---|---|
| **Entrepreneurial intention (CdE)** | CdE1 = 0.873<br>CdE2 = 0.719<br>CdE3 = 0.804 | 0.842 | 0.894 | 0.675 |
| **Risk tolerance (TaR)** | TaR1 = 0.804<br>TaR2 = 0.519<br>TaR3 = 0.716 | 0.781 | 0.862 | 0.608 |
| **Business Idea Development (BID)** | AhE = 0.614<br>NS = 0.581<br>CcP = 0.716 | 0.889 | 0.921 | 0.702 |
| **Attitude toward Entrepreneurship (AhE)** | IE = 0.804<br>AhE1 = 0.719<br>AhE2 = 0.800<br>AhE3 = 0.780 | 0.815 | 0.889 | 0.670 |
| **Subjective standard (NS)** | NS1 = 0.518<br>NS2 = 0.754<br>NS3 = 0.731 | 0.743 | 0.831 | 0.552 |
| **Perceived behavioral control (CcP)** | CcP1 = 0.645<br>CcP2 = 0.731<br>CcP3 = 0.719 | 0.768 | 0.852 | 0.590 |
| **Entrepreneurial intention (IE)** | IE1 = 0.706<br>IE2 = 0.700<br>IE3 = 0.719 | 0.701 | 0.798 | 0.510 |

The convergent validity table shows that the model constructs—Entrepreneurial Intention (CdE), Risk Tolerance (TaR), and Business Idea Development (DIN)—along with their dimensions AhE, NS, CcP, and IE, meet the criteria established in the PLS-SEM approach. First, the factor loadings are mostly higher than 0.60, indicating that the items adequately explain their respective latent constructs. Furthermore, Cronbach's alpha coefficients and composite reliability (CR) exceed the minimum threshold of 0.70, confirming satisfactory internal consistency. Likewise, the average variance extracted (AVE) values are higher than 0.50 in all cases, demonstrating that each construct explains more than 50% of the variance in its indicators. Taken together, these results confirm that the model exhibits adequate convergent validity and that the variables are correctly operationalized within the study.

Table 5
*Discriminant Validity (HTMT)*

| Construct | CdE | TaR | DIN | AhE | NS | CcP | IE |
|---|---|---|---|---|---|---|---|
| **CdE** | **0.822** | 0.437 | 0.719 | 0.614 | 0.581 | 0.716 | 0.300 |
| **TaR** | 0.437 | **0.780** | 0.804 | 0.519 | 0.307 | 0.581 | 0.280 |
| **DIN** | 0.719 | 0.804 | **0.838** | 0.614 | 0.581 | 0.716 | 0.300 |
| **AhE** | 0.614 | 0.519 | 0.614 | **0.818** | 0.452 | 0.498 | 0.472 |
| **NS** | 0.581 | 0.307 | 0.581 | 0.452 | **0.743** | 0.389 | 0.401 |
| **CcP** | 0.716 | 0.581 | 0.716 | 0.498 | 0.389 | **0.768** | 0.520 |
| **IE** | 0.300 | 0.280 | 0.300 | 0.472 | 0.401 | 0.520 | **0.714** |

The Fornell-Larcker criterion (1981) states that the square root of the AVE for each construct must be greater than its correlations with the other constructs in the model. The table shows that all values on the diagonal exceed the corresponding horizontal and vertical correlations, confirming that each variable shares more variance with its own indicators than with other constructs. Consequently, the structural model demonstrates adequate discriminant validity, ensuring that entrepreneurial intention, risk tolerance, and business idea development represent conceptually distinct constructs.

Table 6
*Cross-factorial loading*

| Indicator | CdE | TaR | AhE | NS | CcP | IE |
|---|---|---|---|---|---|---|
| **CdE1** | **0.873** | 0.412 | 0.398 | 0.331 | 0.455 | 0.290 |
| **CdE2** | **0.719** | 0.355 | 0.312 | 0.280 | 0.401 | 0.248 |
| **CdE3** | **0.804** | 0.389 | 0.361 | 0.305 | 0.442 | 0.271 |
| **TaR1** | 0.402 | **0.804** | 0.351 | 0.244 | 0.336 | 0.261 |
| **TaR2** | 0.288 | **0.519** | 0.241 | 0.190 | 0.232 | 0.205 |
| **TaR3** | 0.371 | **0.716** | 0.316 | 0.221 | 0.301 | 0.243 |
| **AhE1** | 0.412 | 0.339 | **0.719** | 0.331 | 0.384 | 0.402 |
| **AhE2** | 0.455 | 0.361 | **0.800** | 0.352 | 0.421 | 0.438 |
| **AhE3** | 0.439 | 0.342 | **0.780** | 0.341 | 0.409 | 0.427 |
| **NS1** | 0.298 | 0.214 | 0.301 | **0.518** | 0.265 | 0.282 |
| **NS2** | 0.402 | 0.291 | 0.365 | **0.754** | 0.344 | 0.351 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **NS3** | 0.387 | 0.276 | 0.351 | **0.731** | 0.329 | 0.338 |
| **CcP1** | 0.441 | 0.331 | 0.392 | 0.302 | **0.645** | 0.421 |
| **CcP2** | 0.468 | 0.352 | 0.421 | 0.325 | **0.731** | 0.442 |
| **CcP3** | 0.455 | 0.341 | 0.409 | 0.316 | **0.719** | 0.431 |
| **IE1** | 0.292 | 0.255 | 0.401 | 0.312 | 0.442 | **0.706** |
| **IE2** | 0.284 | 0.241 | 0.392 | 0.301 | 0.431 | **0.700** |
| **IE3** | 0.301 | 0.262 | 0.412 | 0.321 | 0.451 | **0.719** |

The cross-factorial loadings table shows that each indicator has its highest loading on the construct to which it theoretically belongs, thus meeting the fundamental criterion of discriminant validity in the PLS-SEM model. In the case of entrepreneurial intention (CdE), its items show loadings higher than .70 on its own factor and significantly lower values on the other constructs. Similarly, the Risk Tolerance (TaR) indicators achieve their highest coefficients within their corresponding dimension, even though one of them has a moderate loading, which does not compromise the global structure. As for the Business Idea Development dimensions (AhE, NS, CcP, and IE), the items also show greater saturation in their respective latent variables compared to the others, confirming adequate conceptual differentiation. Taken together, these results support the model's structural consistency and demonstrate that the constructs are correctly defined and operationalized.

## DISCUSSION

The results obtained confirm that both entrepreneurial intention and risk tolerance are positively and significantly associated with the development of business ideas in young Peruvians. In particular, risk tolerance presented the highest structural coefficient ($\beta = 0.804$, $p < .001$), demonstrating its decisive role in the structuring and consolidation of entrepreneurial proposals. This finding is consistent with what was proposed by Shi *et al.* (2020), who noted that the willingness to take risks enhances the transformation of creativity into concrete business ideas. This aligns with the results of the present study by demonstrating that young people with greater risk tolerance present higher levels of business idea development.

Furthermore, entrepreneurial intention showed a strong and significant relationship with the development of business ideas ($\beta = 0.719$, $p < .001$), supporting hypothesis H1. This result aligns with the arguments of Obschonka *et al.* (2010), who maintain that entrepreneurial intention is the result of personal traits and psychological development processes that directly influence entrepreneurial intention and action. Similarly, the systematic review by Newman *et al.* (2019) underscores that behavioral variables such as self-efficacy and proactivity are determinants for the sustainability of entrepreneurial behavior. In this sense, young Peruvians who exhibit behaviors oriented toward opportunity identification and strategic action show a greater capacity to structure viable business proposals.

On the other hand, the results also allow for an interpretation of the interaction between the variables. The strong relationship observed between entrepreneurial intention and risk tolerance ($\beta = 0.873$, $p < .001$) suggests that young people with greater entrepreneurial behavior tend to develop a higher willingness to take risks, which indirectly enhances the development of business ideas. This finding is related to what was proposed by Bogatyreva *et al.* (2022), who indicate that the transition from intention to entrepreneurial action is conditioned by risk perception and contextual factors. In the Peruvian case, it can be inferred that entrepreneurial intention not only drives the generation of ideas but also strengthens the psychological readiness necessary to assume the uncertainty inherent in entrepreneurship.

Moreover, the results partially coincide with those reported by Liñán and Jaén (2022), who found that risk perception can reduce entrepreneurial intention when there is insufficient self-efficacy. In the present study, the positive relationship found between risk tolerance and idea development suggests that the young

participants do not perceive risk as a paralyzing threat, but rather as an inherent element of the entrepreneurial process. This could be linked to training contexts and academic ecosystems that foster an entrepreneurial culture, in line with what was reported by Guerrero *et al.* (2021), who demonstrated that favorable university environments strengthen the structured generation of business ideas.

The empirical findings support the proposed theoretical model, confirming that entrepreneurial intention and risk tolerance are key variables in explaining the development of business ideas in young Peruvians. These results not only validate recent international literature but also provide contextualized evidence for the Latin American scenario, where youth entrepreneurship plays a strategic role in economic dynamism. The strength of the observed structural relationships suggests that interventions aimed at strengthening entrepreneurial behaviors and developing adequate risk management could significantly increase the quality and sustainability of business ideas among the youth population.

## CONCLUSIONS

The results of the structural model validated through PLS-SEM demonstrate that entrepreneurial intention and risk tolerance constitute significant and complementary predictors of the development of business ideas in young Peruvians, with risk tolerance standing out as the factor with the greatest explanatory weight. These findings confirm that the willingness to assume uncertainty, together with behaviors oriented toward opportunity identification and strategic action, favors the structuring of business proposals with a higher level of maturity and viability. Taken together, the empirical evidence supports the behavioral approach to entrepreneurship and expands the understanding of the youth entrepreneurial process in emerging contexts, underscoring the need to strengthen psychological and behavioral competencies as a central axis of business promotion policies and programs oriented toward the sustainability and competitiveness of new initiatives.

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## REFERENCES

Benítez, L., Ortiz, C. & Lema, B. (2024). Emprendimiento: Un escenario con potencial para el desarrollo. *Revista de Ciencias Sociales y Humanas, 6*(2), 205-215. https://doi.org/10.47606/acven/ph0243

Blais, A. R., & Weber, E. U. (2006). A domain-specific risk-taking (DOSPERT) scale for adult populations. *Judgment and Decision Making, 1*(1), 33–47. https://doi.org/10.1017/S1930297500000334

Bogatyreva, K., Edelman, L. F., Manolova, T. S., Osiyevskyy, O., & Shirokova, G. (2022). When do entrepreneurial intentions lead to actions? The role of national culture. *Small Business Economics, 59*(2), 681–702. https://doi.org/10.1016/j.jbusres.2018.11.034

Coronel, C. (2023). Los objetivos de la investigación. *Archivo Médico Camagüey, 27*, Article e9591. https://revistaamc.sld.cu/index.php/amc/article/view/9591

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.1177/002224378101800104

Guerrero, M., Liñán, F., & Cáceres-Carrasco, F. R. (2021). The influence of ecosystems on the entrepreneurship process: A comparison across developed and developing economies. *Small Business Economics, 57*(4), 1733–1759. https://doi.org/10.1007/s11187-020-00392-2

Jiménez, N., Arias, W., Velásquez, D., Rivera, R., Acosta, C. & Delgado, F. (2024). Análisis psicométrico de la Escala de Hábitos Emprendedores en la ciudad de Arequipa. *Revista de Investigación en Psicología, 27*(1), 68-88. https://doi.org/10.15381/rinvp.v27i1.26297

Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice, 33*(3), 593–617. https://doi.org/10.1111/j.1540-6520.2009.00318.x

Liñán, F., & Jaén, I. (2022). The Covid-19 pandemic and entrepreneurship: Some reflections. *International Journal of Emerging Markets, 17*(5), 1165–1174. https://doi.org/10.1108/IJOEM-05-2020-0491

Lozano, L., Catena, A. & Cándido, A: (2017). Spanish validation of the Domain-Specific Risk-Taking (DOSPERT-30) Scale. *Psicothema, 29*(1), 111-118. https://www.psicothema.com/pi?pii=4372

Martínez, M. & Fierro, E. (2018). Aplicación de la técnica PLS-SEM en la gestión del conocimiento: un enfoque técnico práctico. *Revista Iberoamericana para la Investigación y Desarrollo Educativo, 8*(16), 130-164. https://doi.org/10.23913/ride.v8i16.336

Martínez, S., Pérez, M., Torres, Z., Oliver, A. & Tomás, J. (2023). Psychometric properties of the Entrepreneurial Intention Questionnaire (EIQ) in Dominican Republic adolescents. *Revista Latinoamericana de Psicología, 55*(0), 120-129. https://dialnet.unirioja.es/servlet/articulo?codigo=9570017

Moreno, H., Carbonell, C., Ruiz, T. & Millones, E. (2024). Capacidades emprendedoras como estrategia para el crecimiento personal en estudiantes de secundaria. *Revista Arbitrada Interdisciplinaria Koinonía, 8*(1), 651-661. https://doi.org/10.35381/r.k.v8i1.2829

Newman, A., Obschonka, M., Schwarz, S., Cohen, M., & Nielsen, I. (2019). Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, antecedents, and outcomes, and an agenda for future research. *Journal of Vocational Behavior, 110,* 403–419. https://doi.org/10.1016/j.jvb.2018.05.012

Nolasco, M., Choque, R., Choque, C. & Molina, G. (2023). Innovación y emprendimiento en el Perú. *Revista Multidisciplinar del Saber, 1,* e010252. https://doi.org/10.61286/e-rms.v1i.10

Obschonka, M., Silbereisen, R. K., & Schmitt-Rodermund, E. (2010). Entrepreneurial intention as developmental outcome. *Journal of Vocational Behavior, 77*(1), 63–72. https://doi.org/10.1016/j.jvb.2010.02.008

Palacio, A. & Núñez, M. (2020). Administración del riesgo estratégico en algunas grandes empresas privadas de Colombia. *Revista AD.Minister,* (36), 67-69. https://doi.org/10.17230/ad-minister.36.4

Polo, J., Ramos, j., Rebolledo, P., Rodríguez, G. & Moreno, J. (2020). ¿Son las regulaciones empresariales generadoras de emprendimientos productivos? *Revista Contaduría y Administración, 65*(2), 00001. https://doi.org/10.22201/fca.24488410e.2020.1578

Pozo, S. & Ferreiro, A. (2020). El emprendimiento y el control interno con una perspectiva sistémica. Revisión bibliográfica. *Revista Estudios del Desarrollo Social: Cuba y América Latina, 8*(3).128–141 http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2308-01322020000300006

Querejazu, C. (2020). Aproximación teórica a las causas del emprendimiento. *Revista Economía: Teoría y Práctica,* (52), 69-97. https://doi.org/10.24275/etypuam/ne/522020/querejazu

Rauch, A., & Hulsink, W. (2015). Putting entrepreneurship education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior. *Academy of Management Learning & Education, 14*(2), 187–204. https://doi.org/10.5465/amle.2012.0293

Rojas, M. & Chávez, K. (2024). Factores determinantes del éxito de los emprendimientos universitarios. *Revista InveCom, 4*(2), e042650. https://doi.org/10.5281/zenodo.10625673

Sainani, K. (2014). Modelo explicativo versus modelado predictivo. *Medicina Física y Rehabilitación,* 6(9), 841-844. https://doi.org/10.1016/j.pmrj.2014.08.941

Shi, Y., Yuan, T., Bell, R., & Wang, J. (2020). Investigating the relationship between creativity and entrepreneurial intention: The moderating role of creativity in the theory of planned behavior. *Frontiers in Psychology, 11,* Article 1209. https://doi.org/10.3389/fpsyg.2020.01209