

A Multidimensional Analysis Using a 5-Axis Model and a 360 Approach

Educational innovation and entrepreneurship ecosystems in Mexico

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Summary: This study analyzes the current state of the entrepreneurial ecosystem in Mexican universities using the five-pillar model (which encompasses the university, industry, government, the socio-ecological environment, and culture/the digital sphere), along with a 360-degree approach, with the aim of identifying structural challenges and strategic opportunities that foster innovation in education. The E2CB tool (Survey on the Entrepreneurial Ecosystem and Transversal Competencies) was developed and administered to a sample of 150 students at the Centro Universitario de Los Altos (CUAAltos) during the 2026A semester. This tool examines perceptions of the ecosystem through its five components, the development of six essential cross-cutting competencies, and the distinction between entrepreneurial intent—which lies in its unique ability to integrate an empirical diagnosis—focused on the intention to innovate and on students' actual confidence in their ability to do so. A descriptive and comparative analysis was conducted using radar charts, bar charts, and maturity matrices. The results revealed a surprising paradox: although 85% of students have the desire to start a business, only 18% feel confident enough to create highly innovative products. Furthermore, less than half perceive that the university provides them with the appropriate tools to achieve this. When evaluating the different dimensions, these received the most favorable ratings, while industry and government specifically showed the largest gaps. Regarding social skills, social responsibility and critical thinking stood out, highlighting the need to continue strengthening areas such as adaptability and leadership. The 360 Approach maturity matrix reveals strength in the curricular and digital components (level 5 in CUAAltos), but shows weakness in external engagement (level 3) and extracurricular activities (level 4). University entrepreneurship in Mexico faces a significant gap between aspirations and execution capacity, caused by limited connections with the industrial sector, reduced access to government support, and a lack of practical experiences that foster entrepreneurial confidence. Identified opportunities include: strengthening university incubators, creating networks between institutions and industry, facilitating access to public funding, integrating real-world challenge-based learning, and creating mentoring programs to bridge the trust gap. This research provides empirical evidence and an operational model that can be replicated to transform Mexico's university entrepreneurship ecosystem toward a sustainable and competitive innovation approach.

Keywords: University Entrepreneurship, Innovation Ecosystem, Soft Skills, Higher Education, Mexico, 5-Axis Model, 360 Approach.

Resumen: Este estudio analiza el estado actual del ecosistema emprendedor en las universidades mexicanas utilizando el modelo de los cinco ejes (que abarca la universidad, la industria, el gobierno, el entorno socio ecológico y la cultura/el ámbito digital), junto con un enfoque de 360 grados, con el objetivo de identificar los retos estructurales y las oportunidades estratégicas que fomentan la innovación en la educación. Se desarrolló la herramienta E2CB (Encuesta sobre el Ecosistema Emprendedor y las Competencias Transversales) y se aplicó a una muestra de 150 estudiantes del Centro Universitario de Los Altos (CUAAltos) durante el semestre 2026A. Esta herramienta examina las percepciones del ecosistema a través de sus cinco componentes, el desarrollo de seis competencias transversales esenciales y la distinción entre la intención emprendedora —que radica en su capacidad única para integrar un diagnóstico empírico— centrada en la intención de innovar y en la confianza real de los estudiantes en su capacidad para hacerlo. Se llevó a cabo un análisis descriptivo y comparativo utilizando gráficos de radar, gráficos de barras y matrices de madurez. Los resultados revelaron una paradoja sorprendente: aunque el 85 % de los estudiantes tiene el deseo de crear una empresa, solo el 18 % se siente lo suficientemente seguro como para crear productos altamente innovadores. Además, menos de la mitad percibe que la universidad les proporciona las herramientas adecuadas para lograrlo. Al evaluar las diferentes dimensiones, estas recibieron las valoraciones más favorables, mientras que la industria y el gobierno mostraron específicamente las mayores brechas. En cuanto a las habilidades sociales, destacaron la responsabilidad social y el pensamiento crítico, lo que pone de relieve la necesidad de seguir reforzando áreas como la adaptabilidad y el liderazgo. La matriz de madurez del Enfoque 360 revela fortaleza en los componentes curriculares y digitales (nivel 5 en CUAAltos), pero muestra debilidad en la participación externa (nivel 3) y en las actividades extracurriculares (nivel 4). El emprendimiento universitario en México se enfrenta a una brecha significativa entre las aspiraciones y la capacidad de ejecución, causada por las conexiones limitadas con el sector industrial, el acceso reducido al apoyo gubernamental y la falta de experiencias prácticas que fomenten la confianza emprendedora. Entre las oportunidades identificadas se incluyen: el fortalecimiento de las incubadoras universitarias, la creación de redes entre las instituciones y la industria, la facilitación del acceso a la financiación pública, la integración del aprendizaje basado en retos del mundo real y la creación de programas de mentoría para salvar la brecha de confianza. Esta investigación ofrece evidencia empírica y un modelo operativo que puede replicarse para transformar el ecosistema de emprendimiento universitario de México hacia un enfoque de innovación sostenible y competitivo.

Palabras clave: Emprendimiento universitario, ecosistema de innovación, competencias blandas, educación superior, México, Modelo de 5 Ejes, Enfoque 360.

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1. Introduction

University entrepreneurship has become a strategy for Mexico's economic and social development in the 21st century. Higher education institutions (HEIs) face the challenge of transforming their traditional mission of professional training and knowledge generation into a model that integrates innovation, technology transfer, and the creation of science and technology-based companies. This paradigm shift responds to the demands of a globalized economy that requires professionals capable of identifying opportunities, managing scarce resources, working in interdisciplinary teams, and generating innovative solutions to complex problems.

The historical developments of educational innovation and entrepreneurship ecosystems in Mexico and the rest of Latin America have been characterized by a gradual process of institutionalization and the strengthening of collaboration among universities, the government, and relevant industries. In Mexico, since the end of the 20th century, universities have begun to incorporate entrepreneurship-related programs by establishing technology business incubators, as in the case of the Tecnológico de Monterrey, which has promoted the development of entrepreneurial skills and the creation of technology-based companies (Guerrero et al., 2020; Portuguese Castro et al., 2019). But for a long time, entrepreneurship in the region was characterized as

traditional, with small businesses, highlighting a gap between academic training and actual innovation outcomes (Haro Ramírez, 2025).

In response, integrated models have been developed that aim to bring together key stakeholders in the ecosystem to foster an environment conducive to innovative and sustainable entrepreneurship (Vallejo-Imbaquingo & Robalino-López, 2025). Furthermore, the incorporation of educational technologies (EdTech) has begun to transform traditional teaching models, opening new opportunities to foster youth entrepreneurship in local contexts (Ho et al., 2018). Overall, these initiatives represent progress toward more sophisticated and collaborative systems that aim to overcome historical barriers and promote economic development centered on educational innovation and entrepreneurship in Mexico and Latin America (Rincón Soto et al., 2022; Vallejo-Imbaquingo & Robalino-López, 2025).

Furthermore, recent research emphasizes that university ecosystems must adapt to local contexts and leverage digital technologies to foster youth entrepreneurship, aligning with the Sustainable Development Goals (SDGs) and overcoming structural barriers specific to the region (Silva León et al., 2025). For example, the five-pillar model proposed by the University of Guadalajara integrates academia, industry, government, media, and socio-ecology to create optimal conditions for academic entrepreneurship and innovation (Navarro del Toro et al., 2025). It has also been documented that initiatives such as the UNESCO Chair in Mexico promote innovative educational projects that enhance complex competencies to address regional challenges (George-Reyes et al., 2024).

However, the transition to a robust entrepreneurial ecosystem within the Mexican university context faces numerous structural obstacles. The literature documents significant gaps between students' entrepreneurial intentions and their actual capacity to materialize innovative projects, stemming from insufficient links with the productive sector, limited access to financing, a deficit in soft skills, and a lack of coordination among key ecosystem actors (Jassir, 2018). These limitations translate into a troubling paradox: while a high proportion of students express entrepreneurial aspirations, only a minority manage to develop viable and scalable initiatives.

In this context, this study proposes and empirically validates two complementary conceptual frameworks for diagnosing and strengthening the university entrepreneurship ecosystem in Mexico: the 5-Axis Model and the 360-Degree Approach. The 5-Axis Model articulates five interdependent dimensions that influence the success of university entrepreneurship: University (education and research), Industry (linkages and market), Government (policies and funding), Socio-Ecological Environment (sustainability and social impact), and Culture/Digital (entrepreneurial mindset and technological literacy). The 360-Degree Approach, on the other hand, constitutes a cross-cutting strategy that integrates curricular, extracurricular, and external linkage components, digital infrastructure, and institutional culture to offer holistic and systematic entrepreneurial training.

The central objective of this research is to analyze the current state of the university entrepreneurship ecosystem at the University Center of Los Altos (CUAltos) of the University of Guadalajara, identifying strengths, weaknesses, and opportunities for improvement in each of the five axes and components of the 360 Approach. To this end, the E2CB instrument (Survey on Entrepreneurial Ecosystem and Soft Skills) was designed and applied to a sample of 150 students, evaluating their perception of the ecosystem, the level of development of key soft skills, and the gap between entrepreneurial intention and real confidence to innovate.

The findings of this study provide empirical evidence on the challenges and opportunities of university entrepreneurship in Mexico, offering a replicable operational model for other higher education institutions in the country. The relevance of this research lies in its capacity to inform the design of educational policies, institutional programs, and outreach strategies that transform the university entrepreneurial ecosystem toward a paradigm of sustainable, inclusive, and globally competitive innovation.

2. Theoretical Framework and Conceptual Foundations

2.1. University Entrepreneurship Ecosystems

The concept of a university entrepreneurship ecosystem is based on complex systems theory and the Triple Helix model proposed by Etzkowitz and Leydesdorff (2000), which posits the dynamic interaction between university, industry, and government as the driving force behind innovation. This approach has evolved into more comprehensive models that incorporate social, cultural, and environmental dimensions, recognizing that entrepreneurship does not occur in a vacuum, but rather in specific institutional and territorial contexts that condition its viability and scalability.

A robust university entrepreneurial ecosystem is characterized by the presence of multiple interconnected actors (students, academics, entrepreneurs, investors, public officials), supporting infrastructure (incubators, accelerators, co-working spaces, laboratories), financial resources (seed funds, venture capital, government support), enabling regulatory frameworks, and an institutional culture that values and rewards innovation and calculated risk (Isenberg, 2011). International literature documents that the most successful ecosystems, such as those in Silicon Valley, Boston, or Tel Aviv, share common characteristics: a high density of technical talent, access to patient capital, dense networks of mentors and experienced entrepreneurs, world-class research universities, and public policies that incentivize innovation (Feld, 2012).

In the Mexican context, several studies have documented significant progress in building university entrepreneurial ecosystems, particularly in large-scale public institutions such as the National Autonomous University of Mexico (UNAM), the National Polytechnic Institute (IPN), and the University of Guadalajara (UdeG). These institutions have developed incubation, acceleration, and technology transfer programs that have generated hundreds of technology-based and social enterprises (Dutrénit & Sutz, 2014). However, structural challenges persist, including fragmented efforts, a lack of coordination among key actors, insufficient links with the productive sector, and cultural barriers that prioritize seeking formal employment over creating businesses.

2.2. The 5-Axis Model: Conceptual Architecture

The focus on educational innovation and entrepreneurial ecosystems in Mexico, known as the “The 5-axis model” is based on a holistic approach that brings together five essential elements to improve the entrepreneurial ecosystem in the university setting. These five components are universities, industry, government, the media, and the socio-ecological sector, with the aim of fostering collaborations that drive innovation and sustainable entrepreneurship in the academic sphere (Budak et al., 2009).

The 5-axis model analyzed in this study is based on a review and direct extension of the triple helix model presented by Etzkowitz and Leydesdorff (2000). While the conventional model describes the interaction between the university, industry, and

government as the engine of innovation, the 5-axis model—based on the previous work of Navarro Del Toro (2023)—expands this vision by including two dimensions that are key to the Mexican context: the socio-ecological environment and digital culture. This expansion stems from the need to adapt the analysis of university entrepreneurship to the demands of the 21st century, recognizing that initiatives must be sustainable, socially responsible, and aligned with the digital transformation.

Axis 1: University: This axis encompasses the educational and research role of higher education institutions (HEIs), including the curricular design of entrepreneurship programs, practical training through active methodologies (project-based learning, design thinking, lean startup), academic support through mentoring and tutoring, and the generation of scientific and technological knowledge that can be transferred to the market. The literature documents that the most successful universities in fostering entrepreneurship integrate entrepreneurial content across all their academic programs, not just in business or engineering degrees, and offer multiple entry points for students from any discipline to develop entrepreneurial skills (Fayolle & Gailly, 2015).

Axis 2: Industry a: This axis represents the connection with the market and the productive sector, including collaboration in applied research, the provision of professional internships in entrepreneurial contexts, access to networks of business mentors, private investment in university projects, and the validation of prototypes with real clients. Effective linkage with industry is critical to closing the gap between academic knowledge and market demands, allowing students to understand competitive dynamics, identify business opportunities, and develop products or services with real commercial value (Perkmann et al., 2013).

Axis 3: Government: This axis encompasses public policies, tax incentives, funding for research and development (R&D), and entrepreneurship support schemes that facilitate the consolidation of emerging companies. In Mexico, various government programs such as the National Entrepreneur Fund (FNE), support from the National Council of Science and Technology (CONACYT), and state initiatives to promote entrepreneurship have contributed to strengthening the ecosystem, although challenges related to bureaucratic complexity, program discontinuity, and the concentration of resources in metropolitan regions persist.

Axis 4: Socio-Ecological Environment: This axis incorporates the consideration of environmental sustainability, social impact, and community responsibility in the design and evaluation of entrepreneurial initiatives. The growing awareness of the global challenges of climate change, social inequality, and environmental degradation has driven the emergence of social and sustainable entrepreneurship models that seek to generate economic value while contributing to the solution of social and environmental problems (Shepherd & Patzelt, 2011). In the Mexican context, this axis is particularly relevant given the potential of higher education institutions (HEIs) to train entrepreneurs who address local challenges related to poverty, access to basic services, conservation of natural resources, and preservation of cultural identities.

Axis 5: Digital Culture: This axis encompasses the development of an institutional entrepreneurial culture that values innovation, tolerates failure as a learning opportunity, and promotes interdisciplinary collaboration, as well as digital literacy and access to cutting-edge technological tools that enhance the capacity for innovation. Digital transformation has democratized access to critical resources for entrepreneurship (e-commerce platforms, design tools, cloud services, social media for marketing), allowing students

with limited resources to develop and scale innovative projects (Nambisan, 2017).

Integrating these five axes into a systemic model allows for a comprehensive diagnosis of the strengths and weaknesses of the university entrepreneurial ecosystem, identifying leverage points for strategic interventions that maximize the impact of available resources.

2.3. The 360 Approach: A Cross-Cutting Strategy for Entrepreneurial Education

The 360 Approach is conceived as a cross-cutting strategy to integrate entrepreneurial education throughout the university system, transcending the offering of isolated courses or optional programs to become a structural component of the educational experience for all students. This approach is based on the premise that entrepreneurship is not just a set of technical knowledge about creating businesses, but a mindset and a set of transversal skills (creativity, problem-solving, teamwork, communication, resilience) that are valuable regardless of whether the student decides to create their own company or work in existing organizations (Neck & Greene, 2011).

The 360 Approach is structured in five interdependent components:

Component 1: Curriculum Development: Integration of entrepreneurial content and methodologies into the curricula of all academic programs, not only as elective courses, but as transversal competencies developed throughout the educational journey. This includes the incorporation of active methodologies such as project-based learning, design thinking, and lean startup, which allow students to experience the entrepreneurial process in a practical and reflective way (Lackéus, 2015).

Component 2: Extracurricular Experiences: This component offers complementary activities such as workshops, bootcamps, hackathons, entrepreneurship competitions, and incubation and acceleration programs, enabling students to develop real-world projects in low-pressure, high-learning environments. These experiences are critical for bridging the gap between theoretical knowledge and practical skills, allowing students to experience failure, learn from their mistakes, and develop entrepreneurial resilience (Pittaway & Cope, 2007).

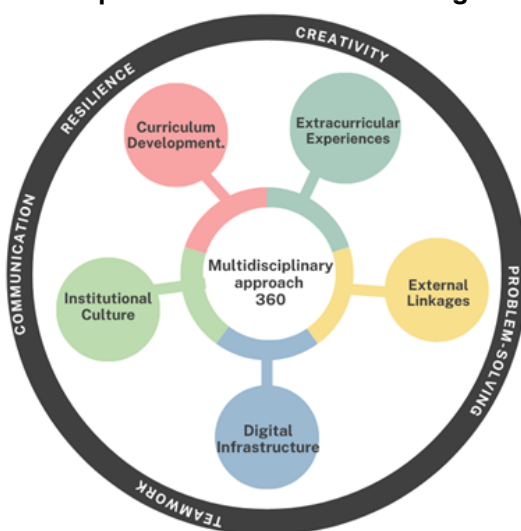
Component 3: External Linkages: Establishing strategic alliances with companies, investors, civil society organizations, and local governments to validate and finance student initiatives. Effective linkages allow students to access mentorship from experienced entrepreneurs, validate their ideas with real customers, obtain seed funding, and connect with support networks that facilitate the scaling of their projects (Perkmann et al., 2013).

Component 4: Digital Infrastructure: Provision of technological platforms, software tools, equipped co-working spaces, and access to specialized databases that enhance students' capacity for innovation. Digital infrastructure is particularly critical in the context of the digital economy, where many entrepreneurial opportunities are based on emerging technologies such as artificial intelligence, blockchain, the Internet of Things, and biotechnology (Nambisan, 2017).

Component 5: Institutional Culture: Promoting an entrepreneurial culture that values innovation, tolerates failure as a learning opportunity, rewards creativity, and fosters interdisciplinary collaboration. Institutional culture is manifested in policies that recognize entrepreneurial students and academics, curricular flexibility so that students can dedicate time to their projects, and institutional narratives that celebrate entrepreneurship as an integral part of the university's mission (Siegel & Wright, 2015).

Implementing the 360 Approach requires a long-term institutional commitment, academic and administrative leadership, investment in infrastructure and teacher training, and monitoring and evaluation mechanisms that allow strategies to be adjusted based on the results obtained.

Figure 1: Process Diagram for Analysis and Innovation based on the 360-degree Approach. The Pie Chart Allows for the Visual Identification of the Five Components used in the 360-Degree Model.



2.4. Soft Skills as Mediators of Entrepreneurial Success

The literature on entrepreneurship has consistently documented that the success of entrepreneurial initiatives depends not only on technical skills or specialized knowledge, but also on a set of soft or transversal skills that enable entrepreneurs to navigate uncertainty, manage teams, communicate effectively with diverse stakeholders, and adapt to changing contexts (Mitchelmore & Rowley, 2010). These skills act as mediators between entrepreneurial intention and the actual ability to create and scale innovative businesses.

Among the most critical soft skills for university entrepreneurship are:

Assertive Communication and Negotiation: The ability to express ideas clearly and persuasively, listen actively, build consensus, and negotiate mutually beneficial agreements with partners, clients, investors, and suppliers. Effective communication is fundamental for project pitches, team building, and stakeholder relationship management (Baron & Markman, 2003).

Leadership and Management of Interdisciplinary Teams: Ability to inspire and lead diverse teams, delegate responsibilities, manage conflicts, and create collaborative and productive work environments. Entrepreneurial leadership is characterized by the ability to articulate a shared vision, mobilize scarce resources, and maintain team motivation in the face of adversity (Gupta et al., 2004).

Complex Problem-solving and critical Thinking: The ability to analyze complex

situations, identify root causes, generate alternative solutions, evaluate options, and make informed decisions under conditions of uncertainty. Critical thinking allows entrepreneurs to question assumptions, identify cognitive biases, and design experiments to validate business hypotheses (Sarasvathy, 2001).

Adaptability to Change and Resilience in the Face of Failure: Flexibility to adjust strategies in response to market feedback, persistence in the face of obstacles, and the ability to learn from failures without losing motivation. Resilience is particularly critical in the entrepreneurial context, where failure is frequent and the ability to recover determines the probability of long-term success (Shepherd, 2003).

Applied Creativity and Innovation: The ability to generate original ideas, identify non-obvious opportunities, combine knowledge from diverse domains, and design novel solutions to existing problems. Entrepreneurial creativity is not limited to generating ideas, but also includes the ability to implement them and bring them to market (Amabile, 1997).

Professional Ethics and Social Responsibility: Commitment to ethical, transparent, and socially responsible business practices that generate value not only for shareholders but for all stakeholders and contribute to social and environmental well-being. Entrepreneurial ethics are fundamental to building trust, reputation, and legitimacy in the market (Hannafey, 2003).

Empirical evidence suggests that these soft skills can be developed through intentionally designed educational interventions that combine explicit instruction, deliberate practice, formative feedback, and metacognitive reflection (Rauch & Hulsink, 2015). Therefore, integrating soft skills development strategies into entrepreneurship education programs is a priority for higher education institutions seeking to maximize the impact of their efforts.

3. Methodology

3.1. Study Design

This research adopts a descriptive-cross-sectional design with a quantitative approach, aimed at characterizing the current state of the university entrepreneurship ecosystem at the University Center of Los Altos (CUAAltos) of the University of Guadalajara through the application of the 5 Axis Model and the 360 Approach. The study was carried out during the 2026A academic cycle (January-June 2026) and was structured in four phases: (1) design and validation of the E2CB instrument, (2) data collection through an online survey, (3) descriptive and comparative analysis of results, and (4) generation of visualizations and diagnostic matrices.

The selection of CUAAltos as a case study is justified by its track record in implementing university entrepreneurship programs, its location in a region with socioeconomic characteristics representative of rural and semi-urban Mexico, and its institutional commitment to educational innovation and collaboration with the productive sector. The findings of this study, while contextualized within CUAAltos, offer insights transferable to other Mexican higher education institutions facing similar challenges.

3.2. E2CB Instrument: Construction and Validation

The E2CB instrument (Survey on Entrepreneurial Ecosystem and Soft Skills) was specifically designed for this research with the objective of comprehensively evaluating three critical dimensions of university entrepreneurship: (1) the student perception of

the ecosystem in its five axes, (2) the level of development of key soft skills, and (3) the gap between entrepreneurial intention and real confidence to innovate.

The instrument construction process followed best practices in social science survey design, including: (a) a thorough literature review to identify relevant constructs and validated scales, (b) operationalization of the five axes of the model and the six selected soft skills, (c) writing items with clear and precise language, avoiding ambiguities and response biases, (d) content validation through expert judgment (three academics specializing in entrepreneurship and higher education), and (e) piloting with a sample of 20 students to assess comprehension, response time, and preliminary psychometric properties.

The final instrument is structured in four sections:

Section 1: Demographic Profile: This section includes four items that collect information about the institution, academic program, level of study (undergraduate/graduate), and prior participation in university entrepreneurship programs. This information allows for characterizing the sample and performing subgroup analyses.

Section 2: Perception of the Entrepreneurial Ecosystem (5-Axis Model): This section consists of five items, one for each axis of the model, asking students to rate the support received in each dimension on a 5-point Likert scale (1 = Very Poor, 5 = Excellent). The items were specifically worded to capture the key components of each axis:

- **University Focus:** “Theoretical training, academic mentoring, access to laboratories.”
- **Industry Focus:** “Connections with real companies, entrepreneurial professional practices, access to private capital.”
- **Government Focus:** “Information on scholarships, government support, and streamlining of trademark registration procedures.”
- **Socio-Ecological Environment axis:** “Focus on sustainability, social impact of projects, community responsibility.”
- **Culture/Digital axis:** “Promotion of a culture of risk, access to cutting-edge digital tools, digital literacy.”

Section 3: Self-Assessment of Soft Skills: Includes six items that ask students to rate their level of proficiency on a 5-point Likert scale (1 = None, 5 = Expert) in the following skills:

- Assertive communication and negotiation
- Leadership and management of interdisciplinary teams
- Complex problem solving and critical thinking
- Adaptability to change and resilience in the face of failure
- Applied Creativity and Innovation
- Professional ethics and social responsibility

Section 4: Entrepreneurial Intention and Confidence: It consists of three items that assess: (a) intention to start a business upon graduation (dichotomous Yes/No response), (b) confidence to develop a highly innovative product or service (dichotomous Yes/No response), and (c) perception that the university has provided the necessary tools to face the challenges of the real market (5-point Likert scale).

The complete instrument consists of 18 items and has an average response time of 8-10 minutes. Participant anonymity was guaranteed, and informed consent was obtained prior to administration, in compliance with ethical standards for research involving human subjects.

3.3. Sample and Collection Procedure

The sample consisted of 150 undergraduate and graduate students from the University Center of Los Altos (CUAAltos), selected using non-probability convenience sampling. Inclusion criteria were: (a) enrollment in an academic program at CUAAltos during the 2026A semester, (b) completion of at least 50% of the credits for their program, and (c) voluntary participation in the study. The sample distribution by academic program was: Engineering (45%), Social Sciences and Humanities (30%), Health Sciences (15%), and Economics and Business Administration (10%).

Data collection was conducted via an online survey implemented on the Google Forms platform, distributed through institutional emails and student social media groups. The collection period extended over four weeks (February-March 2026), with two reminders sent at weekly intervals to maximize the response rate. A total of 150 complete responses were obtained, representing a response rate of 18% of the total student population of CUAAltos ($N \approx 850$).

3.4. Data Analysis and Visualizations

The data were analyzed using descriptive statistics (means, standard deviations, frequencies, and percentages) with Python 3.9 and the pandas, numpy, matplotlib, and seaborn libraries. Average scores were calculated for each of the five ecosystem axes and for each of the six soft skills, allowing for the identification of strengths and areas for improvement.

To facilitate the interpretation and communication of the results, four key visualizations were generated:

1. **5-Axis Model Radar Chart:** Represents the average performance of the ecosystem on each of the five axes, allowing visual identification of the ecosystem's strengths and weaknesses profile.
2. **Soft Skills Bar Chart:** Shows the level of mastery perceived by students in each of the six skills assessed, facilitating comparison between skills.
3. **Intention-Confidence Gap Chart:** Contrasts the percentage of students with the intention to start a business, confidence to innovate, and perception of university tools, highlighting the paradox of the university entrepreneur.
4. **Maturity Matrix of the 360 Approach:** Represents the level of development of the five components of the 360 Approach in two institutional contexts (CUAAltos and a regional reference institution), using a maturity scale of 1 to 5.

These visualizations were designed following information design principles to maximize the clarity, accuracy, and communicability of the findings to academic audiences and decision-makers.

To ensure compliance with ethical research standards, this study obtained informed consent from each participant. Before using the E2CB instrument, students were informed of the study's objective and assured that their participation was entirely voluntary and would have no impact on their academic performance. In addition,

they were promised that their identities would remain anonymous and that their responses would be treated with the utmost confidentiality. The data were collected and analyzed in an aggregated manner and were used solely for the purposes of this academic research.

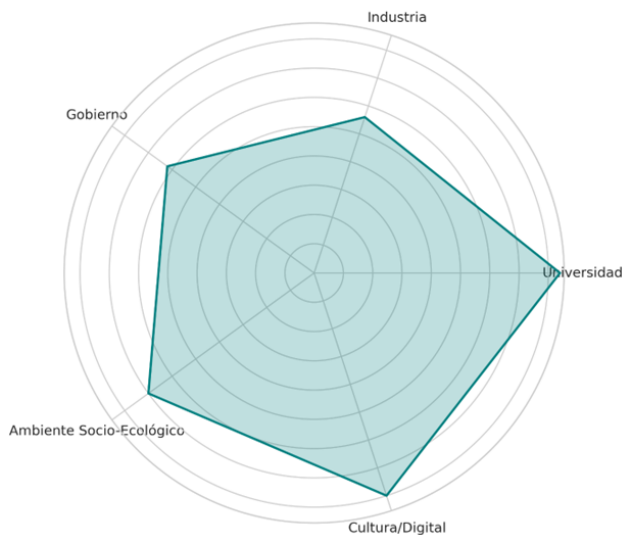
4. Results

4.1. Ecosystem Performance according to the 5-Axis Model

The analysis of student perceptions of the entrepreneurial ecosystem using the 5-Axis Model reveals a heterogeneous pattern of strengths and weaknesses that characterizes the current state of university entrepreneurship at CUALtos. Figure 1 presents the radar chart with the average scores obtained on each axis.

Figure 2: Average Performance of the Entrepreneurial Ecosystem at CUALtos According to the 5-Axis Model (N=150 students, scale 1-5). The Radar Chart Allows Visual Identification of the Strengths (University, Culture/Digital, Socio-Ecological Environment) and Critical Weaknesses (Industry, Government) of the Ecosystem.

Modelo de 5 Ejes: Desempeño Promedio del Ecosistema
(N=150 Estudiantes - CUALtos 2026)



The University Axis: received the highest rating ($M = 4.2$, $SD = 0.6$), reflecting a favorable perception among students regarding theoretical training, academic mentorship, and access to institutional infrastructure. This result is consistent with CUALtos' institutional efforts to integrate entrepreneurship content into curricula, offer incubation programs, and provide equipped spaces for project development. However, the relatively high standard deviation suggests variability in the student experience, possibly related to differences between academic programs or prior participation in entrepreneurial activities.

The Culture/Digital Axis: received the second highest rating ($M = 4.0$, $SD = 0.7$), indicating that students perceive an institutional environment that fosters an entrepreneurial culture and provides access to digital tools. This finding is particularly relevant in the context of the digital transformation accelerated by the COVID-19 pandemic, which spurred the adoption of technological platforms and online learning methodologies. Digital literacy and access to cutting-edge tools are critical assets for entrepreneurship in the digital economy.

The Socio-Ecological Environment Axis: received an intermediate-high rating ($M = 3.9$, $SD = 0.8$), reflecting a growing institutional awareness of the importance of sustainability, social impact, and community responsibility in the design of entrepreneurial initiatives. This result suggests that CUALtos has effectively integrated sustainability considerations into its entrepreneurship programs, aligning itself with global trends toward sustainable and socially purposeful business models.

In Contrast, the Industry Track: received a significantly lower rating ($M = 3.4$, $SD = 0.9$), highlighting a critical gap in its connection with the productive sector. Students perceive limitations in accessing professional internships in entrepreneurial contexts, connections with real companies, and private capital. This weakness is particularly concerning given that industry engagement is fundamental for validating business ideas, accessing mentorship from experienced entrepreneurs, and obtaining funding to scale projects.

The Government Axis: received the lowest rating ($M = 3.1$, $SD = 1.0$), reflecting a perception of insufficient government support in terms of information on scholarships, access to public assistance, and streamlined administrative procedures. The high standard deviation suggests that some students have managed to access government programs, while the majority are unaware of or face barriers to taking advantage of these resources. This gap represents a significant opportunity to improve the dissemination of information on public assistance and simplify access processes.

4.2. Soft Skills Assessment

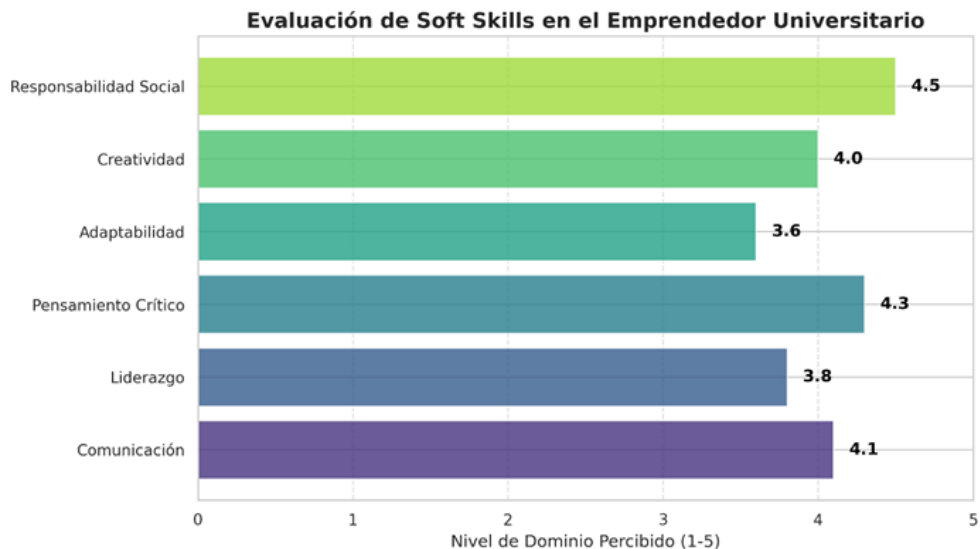
The analysis of the self-assessment of soft skills reveals a profile of strengths and areas for improvement that characterizes the development of transversal skills in CUALtos students. Figure 2 presents the bar chart with the average scores obtained in each skill.

Social Responsibility: received the highest rating ($M = 4.5$, $SD = 0.5$), reflecting a strong commitment from students to ethical, transparent, and socially responsible practices. This result is consistent with the institution's emphasis on holistic education and the development of civic values, and suggests that CUALtos students are prepared to design entrepreneurial initiatives that generate not only economic value but also social and environmental value.

Critical Thinking: received the second highest rating ($M = 4.3$, $SD = 0.6$), indicating that students perceive a solid level of ability to analyze complex situations, identify root causes, and make informed decisions. This competency is fundamental to entrepreneurship, where the ability to question assumptions, evaluate alternatives, and design experiments to validate hypotheses determines the likelihood of success.

Communication received a high rating ($M = 4.1$, $SD = 0.7$), reflecting that students perceive themselves as competent in expressing ideas clearly, negotiating effectively, and building consensus. This competency is critical for project pitches, team building, and stakeholder relationship management .

Figure 3: Perceived Level of Soft Skills Mastery in Students at CUAitos (N=150, scale 1-5). Social Responsibility and Critical Thinking Stand out as Strengths, while Adaptability and Leadership Require Reinforcement.



Creativity received an upper-middle rating ($M = 4.0$, $SD = 0.8$), suggesting that students perceive themselves as capable of generating original ideas and designing innovative solutions. However, the relatively high standard deviation indicates variability in this competency, possibly related to differences in exposure to innovation methodologies such as design thinking or lean startup.

Leadership received an intermediate rating ($M = 3.8$, $SD = 0.9$), highlighting an area for improvement in students' ability to inspire and lead teams, delegate responsibilities, and manage conflict. This gap is particularly relevant given that entrepreneurial leadership is essential for mobilizing resources, maintaining team motivation, and articulating a shared vision.

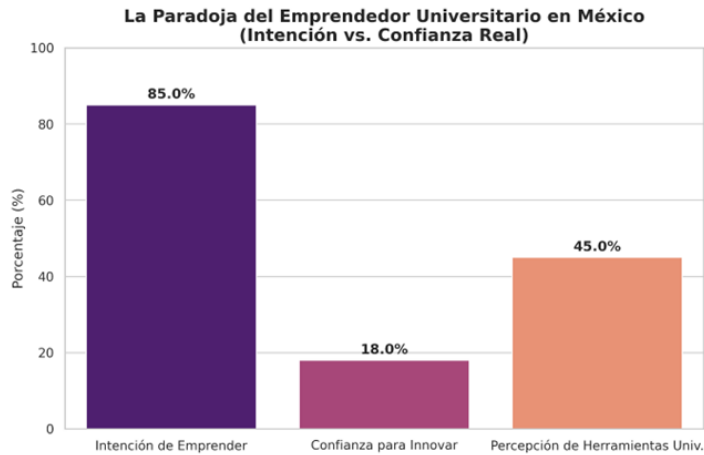
Adaptability received the lowest score ($M = 3.6$, $SD = 1.0$), reflecting a critical limitation in students' ability to adjust strategies in response to feedback, persevere in the face of obstacles, and learn from failures. This weakness is concerning given that resilience and flexibility are essential competencies for navigating the uncertainty inherent in the entrepreneurial process.

4.3. The Paradox of the University Entrepreneur: Intention vs. Confidence

The analysis of the gap between entrepreneurial intention and actual confidence to innovate reveals a critical paradox that characterizes the current state of university entrepreneurship in Mexico. Figure 3 presents a comparative graph of the three key indicators.

The results reveal that 85% of students express an intention to start their own business upon graduation, reflecting a high level of entrepreneurial aspiration. This finding is consistent with previous studies documenting a growing appreciation of entrepreneurship as a career option among young Mexicans, driven by factors such as the perception of autonomy, flexibility, and potential for social impact.

Figure 4: Gap between Entrepreneurial Intention, Confidence to Innovate, and Perception of University Tools among Students at CUALtos (N=150). The Paradox Reveals a Critical Disconnect between Aspiration and Operational Capacity.



However, only 18% of students report confidence in developing a highly innovative product or service, revealing a critical 67% gap between aspiration and perceived ability. This disconnect suggests that most students with entrepreneurial intentions lack the necessary confidence to bring innovative projects to fruition, possibly due to a lack of practical experience, access to mentorship, or exposure to success stories.

Additionally, only 45% of students perceive that the university has provided them with the necessary tools to face the challenges of the real market, reflecting a 40-percentage-point gap in entrepreneurial intention. This finding suggests that, despite institutional efforts to integrate entrepreneurship into university education, a significant proportion of students do not perceive these efforts as sufficient to prepare them for the real world.

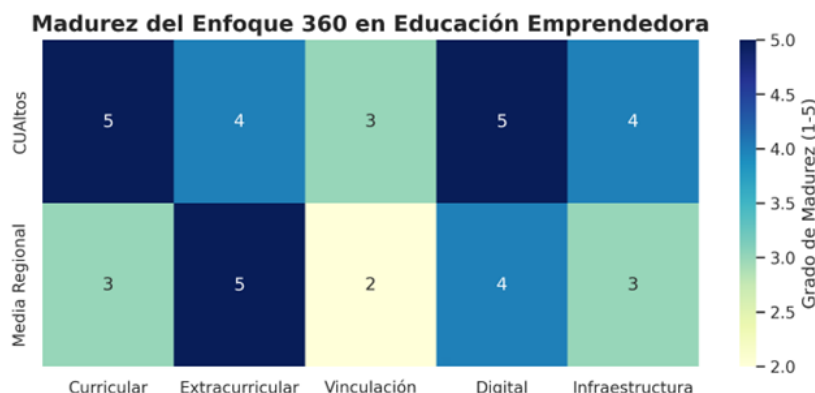
This paradox has critical implications for the design of entrepreneurship education programs. The results suggest that generating entrepreneurial intention through motivational speeches or exposure to success stories is insufficient; interventions must be designed that develop concrete operational skills, provide low-risk practical experiences, and build confidence through formative feedback and celebration of small achievements.

4.4. *Maturity of the 360 Approach in the Institution*

The analysis of the maturity of the 360 Approach at CUALtos, compared to a regional benchmark institution, reveals a distinct pattern of strengths and areas for improvement across the five components of the cross-cutting strategy. Figure 4 presents the maturity matrix with the scores obtained for each component.

Within the CUALtos context, the Curricular component achieved the highest level of maturity (level 5), reflecting a comprehensive integration of entrepreneurial content and methodologies into the curricula. This result is consistent with the institution's efforts to incorporate entrepreneurship courses, active learning methodologies, and integrative projects into all academic programs.

Figure 5: Maturity Matrix of the 360 Approach at CUALtos Compared to a Regional Reference Institution (scale 1-5). The Matrix shows Strengths in Curricular and Digital Components, but Weaknesses in External Linkage.



The Digital component also achieved a high level of maturity (level 5), indicating that CUALtos has successfully provided access to technological platforms, software tools, and equipped spaces that enhance students' capacity for innovation. This achievement is particularly relevant in the context of the digital transformation accelerated by the pandemic.

The extracurricular component achieved an upper-intermediate level of maturity (level 4), reflecting a robust offering of complementary activities such as workshops, competitions, and incubation programs. However, there is room to strengthen the connection between these activities and the formal curriculum, as well as to broaden student participation.

The Infrastructure component obtained an intermediate-high level of maturity (level 4), indicating that CUALtos has adequate physical spaces (laboratories, co-working spaces, incubator) but that there are opportunities to improve the equipment, connectivity and accessibility of these spaces.

The Linkage component obtained the lowest level of maturity (level 3), revealing a critical gap in the establishment of strategic alliances with companies, investors, and local governments. This weakness is consistent with the findings of the 5-axis model which identified the Industry and Government Pillars as the weakest areas of the ecosystem.

In contrast, the regional benchmark institution presents a different profile, with strengths in the Extracurricular (level 5) and Infrastructure (level 3) components, but weaknesses in the Curricular (level 3), Community Engagement (level 2), and Digital (level 5) components. This comparison suggests that different institutions can adopt differentiated strategies to implement the 360 Approach, prioritizing components based on their institutional strengths and territorial contexts.

5. Discussion

5.1. Structural Challenges of University Entrepreneurship in Mexico

The findings of this study demonstrate that university entrepreneurship in Mexico faces structural challenges that limit its capacity to transform entrepreneurial intentions

into viable and scalable initiatives. These challenges manifest themselves in three critical dimensions: (1) the gap between aspiration and operational capacity, (2) insufficient linkage with the productive sector, and (3) limited access to government support.

The gap between aspiration and operational capacity. The paradox identified in this study—85% entrepreneurial intention versus 18% confidence to innovate—is consistent with previous findings in the Mexican context that document a disconnect between the desire to be entrepreneurial and the actual capacity to do so. This gap stems from multiple factors: (a) a lack of practical experiences that allow students to safely experience the entrepreneurial process, (b) insufficient exposure to mentorship from experienced entrepreneurs who can model entrepreneurial skills and attitudes, (c) limited access to financial resources to develop prototypes and validate ideas, and (d) an institutional culture that, despite valuing entrepreneurship in rhetoric, does not provide concrete incentives for students to take entrepreneurial risks.

The international literature suggests that closing the gap in entrepreneurship education requires a shift toward models that foster hands-on experience. This includes developing competencies through practice, reflection, and feedback (Lackéus, 2015). This involves designing low-risk environments where students can experiment, fail, learn, and develop entrepreneurial resilience.

Insufficient Connection with the Productive Sector: The poor performance of the Industry Axis ($M = 3.4$) and the Linkage component of the 360 Approach (level 3) reveals a critical gap in the connection between the university and the productive sector. This disconnect limits students' ability to validate business ideas with real clients, access mentorship from experienced entrepreneurs, obtain private funding, and understand competitive market dynamics.

The literature documents that the most successful entrepreneurial ecosystems are characterized by dense networks of interaction between universities, industry, and government, which facilitate knowledge transfer, talent mobility, and the co-creation of value (Perkmann et al., 2013). In the Mexican context, several factors limit this connection: (a) mutual distrust between academics and entrepreneurs, stemming from differences in objectives, terminology, and time horizons; (b) a lack of institutional incentives for academics to dedicate time to outreach activities; (c) the limited capacity of small and medium-sized enterprises (SMEs) to absorb university knowledge and collaborate on innovation projects; and (d) regulatory frameworks that hinder the creation of university spin-offs and the commercialization of intellectual property.

Overcoming these obstacles requires systemic interventions that include: (a) the creation of technology transfer offices that facilitate the connection between researchers and companies, (b) the design of incentives for academics to participate in outreach activities without sacrificing their academic career, (c) training programs for SMEs in innovation management and collaboration with universities, and (d) regulatory reforms that simplify the creation of spin-offs and the commercialization of university technology.

Limited access to Government Support: The poor performance of the Government Axis reflects a perception of insufficient public support for university entrepreneurship, manifested in a lack of awareness of available programs, complex administrative procedures, and policy discontinuities. This gap is particularly concerning given that public funding is critical for the development of technology-based ventures, which require significant R&D investments before generating revenue.

The literature documents that countries with more robust entrepreneurial ecosystems have coherent, stable, and well-funded public policies that provide support at multiple stages of the entrepreneurial cycle: formation, idea validation, prototype development, scaling, and international expansion (Isenberg, 2011). In Mexico, despite the existence of programs such as the National Entrepreneur Fund and support from CONACYT, challenges persist related to the fragmentation of efforts, bureaucratic complexity, the concentration of resources in metropolitan regions, and program discontinuity resulting from changes in administration.

Improving access to government support requires: (a) simplification of administrative procedures through one-stop shops and digital platforms, (b) effective dissemination of information on available programs through university institutional channels, (c) design of specific programs for university entrepreneurship that recognize the particularities of this segment, and (d) inter-institutional coordination mechanisms that avoid duplication of efforts and maximize the impact of public resources.

5.2. Strategic Opportunities for Ecosystem Transformation

Despite the challenges identified, the findings of this study also reveal significant strategic opportunities to strengthen the university entrepreneurship ecosystem in Mexico. These opportunities are organized into five areas of intervention: (1) strengthening university incubators, (2) creating inter-institutional networks with industry, (3) simplifying access to public funding, (4) integrating challenge-based learning, and (5) developing mentorship programs.

Strengthening University Incubators: University incubators are critical infrastructure for providing students with spaces, resources, and support to develop their entrepreneurial projects. The high performance of the University Axis ($M = 4.2$) and the Curricular component of the 360 Approach (level 5) suggests that CUAItos has a solid foundation for strengthening its incubation programs. Specific opportunities include: (a) expanding the reach of incubation programs to serve more students from diverse academic programs, (b) specializing incubation services based on strategic sectors (technology, agribusiness, tourism, creative economy), (c) establishing partnerships with private accelerators to provide scaling services to projects graduating from the incubator, and (d) developing financial sustainability models that combine public and private resources with self-generated revenue.

Creating Inter-institutional Networks with Industry: Effective engagement with the productive sector requires building dense and sustainable collaborative networks that transcend specific projects and become institutionalized in permanent structures. Specific opportunities include: (a) creating business advisory boards for entrepreneurship programs, providing strategic guidance and market connections; (b) designing professional internship programs in entrepreneurial contexts, where students work in startups or innovation departments of established companies; (c) organizing networking events such as pitch competitions, demo days, and entrepreneurship fairs that connect students with investors and entrepreneurs; and (d) establishing business mentoring programs to support student entrepreneurs in developing their projects.

Simplifying access to Public Funds: Improving access to government support for student entrepreneurs requires interventions at two levels: (a) at the institutional level, through the creation of funding management offices that provide information, advice, and support in proposal development, and (b) at the public policy level, through the

design of specific calls for proposals for university entrepreneurship with simplified requirements and funding amounts appropriate to the needs of early-stage projects. Additionally, it is critical to establish coordination mechanisms among federal, state, and municipal programs to avoid duplication of efforts and facilitate entrepreneurs' access to multiple funding sources.

Integrating Real-world Challenge-based Learning: The gap between entrepreneurial intention and confidence can be bridged by integrating experiential learning methodologies that allow students to develop real-world projects in low-risk contexts. Specific opportunities include: (a) incorporating integrative projects into all academic programs, where students work in interdisciplinary teams to solve real-world problems posed by companies or communities; (b) adopting methodologies such as design thinking, lean startup, and challenge-based learning that emphasize experimentation, iteration, and learning from failures; (c) creating maker spaces and fab labs equipped with rapid prototyping technologies (3D printing, laser cutting, electronics) that allow students to bring their ideas to life; and (d) organizing intensive hackathons and bootcamps where students develop functional prototypes in short periods of time.

Development of Mentoring Programs: Mentoring is a critical component for closing the entrepreneurial confidence gap, providing students with access to the experience, networks, and emotional support of seasoned entrepreneurs. Specific opportunities include: (a) creating formal mentoring programs that connect entrepreneurial students with successful graduates, local businesspeople, and experts in specific areas (finance, marketing, technology, intellectual property), (b) designing group mentoring schemes where several students are paired with one mentor, maximizing the program's reach, (c) training mentors in entrepreneurial coaching methodologies that emphasize Socratic questioning for providing answers, and (d) establishing recognition and compensation mechanisms for mentors that incentivize their continued participation.

5.3. Implications for Educational Policy and Institutional Practice

The findings of this study have significant implications for the design of educational policies at the national level and for institutional practice in Mexican higher education institutions (HEIs). At the educational policy level, the results suggest the need to: (a) establish national standards for entrepreneurship education to guide the design of institutional programs and facilitate benchmarking, (b) create specific funds to strengthen entrepreneurship infrastructure in HEIs (incubators, maker spaces, digital platforms), (c) design incentives for HEIs to establish alliances with the productive sector and generate university spin-offs, and (d) promote the mobility of student entrepreneurs between institutions through exchange programs and collaborative networks.

At the institutional practice level, the results suggest that HEIs should: (a) adopt comprehensive conceptual frameworks such as the 5-Axis Model and the 360 Approach to diagnose and strengthen their entrepreneurial ecosystems, (b) invest in the development of soft skills by integrating active methodologies and practical experiences into the curriculum, (c) establish technology transfer and linkage offices that facilitate connection with the productive sector, (d) design recognition and reward systems that value the entrepreneurial activity of students and academics, and (e) implement monitoring and evaluation mechanisms that allow adjusting strategies based on the results obtained.

5.4. Limitations of the Study

This study has several limitations that should be considered when interpreting the findings. First, the sample was selected using non-probability convenience sampling, which limits the generalizability of the results to other Mexican higher education institutions. Second, the data are based on student self-reports, which may introduce social desirability or self-perception bias. Third, the cross-sectional design does not allow for establishing causal relationships between the variables studied. Fourth, the E2CB instrument, although designed following best practices, has not been psychometrically validated in large and diverse samples. Fifth, the study focuses on a single institutional case (CUAltos), which limits the ability to make systematic comparisons between institutions with different characteristics.

Future studies should: (a) apply the E2CB instrument to probabilistic and representative samples from multiple Mexican HEIs, (b) complement quantitative data with qualitative studies that delve into the experiences and perceptions of students, academics, and entrepreneurs, (c) adopt longitudinal designs that allow for the evaluation of the impact of specific interventions on the development of entrepreneurial skills and the creation of companies, and (d) conduct international comparative studies that allow for the identification of best practices and contextual factors that condition the success of university entrepreneurship.

6. Recommendations and Future Directions

Based on the findings of this study, the following recommendations are proposed to strengthen the university entrepreneurship ecosystem in Mexico:

For Higher Education Institutions

1. Adopt the 5-Axis Model and the 360 Approach as conceptual frameworks to diagnose and strengthen the institutional entrepreneurial ecosystem, carrying out periodic evaluations that allow the identification of gaps and opportunities for improvement.
2. Invest in strengthening the Industry Axis by creating liaison offices, establishing business advisory councils, and designing professional internship programs in entrepreneurial contexts.
3. Develop specific programs to close the entrepreneurial confidence gap, including soft skills development workshops, mentoring programs, and low-risk experimentation spaces.
4. Integrate experiential learning methodologies into all academic programs, not just business or engineering degrees, to democratize access to entrepreneurial education.
5. Establish recognition and reward systems for students and faculty that promote entrepreneurial activity, including academic credit and awards.

For the Governments (Federal, State and Municipal)

1. Simplify access to government support by creating one-stop shops, digital platforms and specific calls for university entrepreneurship with requirements adapted to the characteristics of this segment.
2. Establish specific funds to strengthen entrepreneurship infrastructure in higher education institutions, prioritizing institutions in regions with less developed entrepreneurial ecosystems.

3. Design tax and regulatory incentives that facilitate the creation of university spin-offs, the commercialization of intellectual property, and private investment in technology-based ventures.
4. Promote inter-institutional coordination among federal, state, and municipal programs to avoid duplication of efforts and maximize the impact of public resources.

For the Productive Sector

1. Establish strategic alliances with higher education institutions to co-design training programs, provide professional internships in entrepreneurial contexts, and participate in mentoring programs.
2. Invest in seed capital and venture capital funds specifically for university ventures, recognizing the innovation potential of this segment.
3. Participate in advisory boards for entrepreneurship programs, providing strategic guidance and market connections.
4. Open corporate innovation spaces where students can work on R&D projects, validate business ideas and access technological and financial resources.

Future Research Directions

1. Conduct longitudinal studies that evaluate the impact of specific interventions (incubation programs, mentoring, experiential learning) on the development of entrepreneurial skills and the creation of companies.
2. Develop and validate robust psychometric instruments to assess entrepreneurial skills, entrepreneurial intention, and ecosystem perception in Mexican university contexts.
3. Conduct comparative studies between higher education institutions with different characteristics (public vs. private, metropolitan vs. regional, large vs. small) to identify contextual factors that condition the success of university entrepreneurship.
4. To investigate the impact of university entrepreneurship on the economic and social development of the regions, evaluating indicators such as job creation, generation of added value, technology transfer and solution of social problems.
5. Explore financial sustainability models for university entrepreneurship programs that combine public and private resources and self-generated income.

7. Conclusions

This study analyzed the current state of the university entrepreneurship ecosystem in Mexico by applying the 5-Axis Model and the 360-Degree Approach at the University Center of Los Altos of the University of Guadalajara. The findings reveal a critical paradox that characterizes Mexican university entrepreneurship: while 85% of students express an intention to become entrepreneurs, only 18% report confidence in developing highly innovative products, demonstrating a 67% gap between aspiration and operational capacity.

The ecosystem analysis using the 5-Axis Model identifies significant strengths in the University ($M = 4.2$), Culture/Digital ($M = 4.0$), and Socio-Ecological Environment ($M = 3.9$) axes, reflecting institutional efforts to integrate entrepreneurship into university education, provide access to digital tools, and promote sustainability. However, critical gaps are identified in the Industry ($M = 3.4$) and Government ($M = 3.1$) axes, demonstrating insufficient engagement with the productive sector and limited access to government support.

The soft skills assessment reveals that students perceive strengths in Social Responsibility, Critical Thinking and Communication, but show areas for improvement in Adaptability and Leadership. These skills are critical for closing the entrepreneurial confidence gap and should be developed through experiential learning methodologies, mentoring programs, and low-risk experimentation spaces.

The maturity analysis of the 360 Approach reveals that CUAItos has achieved high levels of development in the Curricular and Digital (level 5) components, but shows weaknesses in the Linkage component (level 3), consistent with the findings of the 5-Axis Model. This gap represents a strategic opportunity to strengthen alliances with the productive sector through the creation of technology transfer offices, business advisory councils, and professional internship programs in entrepreneurial contexts.

The challenges identified in this study are structural and require systemic interventions that coordinate the efforts of higher education institutions, governments, and the productive sector. Strategic opportunities include strengthening university incubators, creating inter-institutional networks with industry, simplifying access to public funding, integrating real-world challenge-based learning, and developing mentorship programs.

The 5-Axis Model and the 360-Degree Approach offer an integrated framework for diagnosing and strengthening the university entrepreneurship ecosystem in Mexico, providing a conceptual architecture that allows for the identification of gaps, prioritization of interventions, and systematic evaluation of results. Applying these frameworks in other Mexican higher education institutions can contribute to building a more robust, inclusive, and competitive national entrepreneurial ecosystem, capable of transforming students' innovative potential into initiatives that generate economic, social, and environmental value.

In conclusion, university entrepreneurship in Mexico is at a critical juncture, with significant progress in curricular integration and digital infrastructure, but persistent challenges in connecting with the productive sector and accessing government support. Overcoming these challenges requires a long-term institutional commitment, academic and administrative leadership, investment in infrastructure and training, and the building of strategic alliances that transcend specific projects and become institutionalized in permanent structures. The future of university entrepreneurship in Mexico hinges on turning aspirations into practical skills. This requires bridging the gap between intention and confidence through data-driven interventions and sustainable ecosystems.

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