



Entrepreneurship in Colombia: A Critical Perspective of the University-Business-State Triad

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Summary

University entrepreneurship in Colombia has become a key tool for diversifying the economy and generating social inclusion. However, the real relationship between Higher Education Institutions (HEIs), entrepreneurs and the State presents structural flaws that slow down the long-term growth of projects. This reflection article analyzes the evolution of the phenomenon based on statistical data and identifies both the historical errors in public policies and curricula, as well as the regulatory successes that maintain the business environment. Through a critical perspective, the difficulties of the Entrepreneurship Centers, the role of the family environment and the scope of state financing are examined. The findings show that the current system incentivizes the creation of subsistence microenterprises rather than technology-based enterprises (TBEs). Finally, a reorganization proposal based on a collaborative governance model is proposed.

Keywords: Entrepreneurship in Colombia, University-Business-State Triad, Technology-Based Entrepreneurship (TBE), Public Policy, Colombia.

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1. Introduction

Over the past two decades, Colombia has built a robust legal framework with the aim of promoting the culture of entrepreneurship. Laws such as 1014 of 2006 and 2069 of 2020 reflect an explicit effort by the government to speed up the creation of companies and make the commercial environment more flexible. In this scenario, Higher Education Institutions (HEIs) assumed a leading role, as they went from concentrating only on traditional teaching and basic research to incorporating a "third mission" aimed at transferring knowledge directly to the economic and social development of their regions (Crissien, 2006; Tassara, 2021).

Despite these regulatory advances and changes in curricula, business results remain unfavorable. Available data indicate that between 45% and 52% of the ventures that are born in academic classrooms fail before completing the first five years of operation (Cancino & Coronado, 2020). This high mortality rate shows methodological flaws in the forms of teaching and opens the debate on the true effectiveness of institutional support. Therefore, the objective of this article is to critically examine the evolution of university entrepreneurship in Colombia, contrast operational weaknesses with successful experiences, and propose clear strategies to design sustainable innovation systems.

2. Methodology

This study was carried out under a qualitative and analytical approach, through a systematic literature review (RSL) of a documentary nature suitable for a reflection article (Galvis-Lista & González-Zabala, 2014; Roncancio González et al.,). The search focused on 25 scientific articles published in highly selective databases such as Scopus, Web of Science, SciELO and Redalyc. In this way, an analytical sample of 40 documentary sources that directly study the interactions between universities, new entrepreneurs and government agencies in the Colombian context was selected.

For the processing of the information, cross-analysis matrices were used to evaluate the statistical data, the stages of development of the business environment, the errors in the planning of current strategies, and the institutional practices that have worked (Balza-Franco & Cardona-Arbelaez, 2016). The results derived from this cross-referencing of information are presented in an argumentative way throughout the manuscript, serving as a basis for the critical discussion of the national ecosystem. This analysis was born from the development of the Entrepreneurship Seminar taught by the University of Granada, Spain.¹

3. Evolution and Statistical Data of Entrepreneurship in Colombia

According to Escorcía, J, Schmutzler, J, López, M., Pereira, F., Osorio, F., Martínez, A., Soler, J., Gómez, L., Parra, L. (2024) in his work: Dynamics of business activity in Colombia 2023-2024, to understand global entrepreneurship, it is impossible not to mention The Global Entrepreneurship Monitor GEM, which began in the late nineties and today is the largest research network in its area under the support of the Global Entrepreneurship Research Association (GERA), a non-profit organization led by representatives of national teams, the two founding institutions and institutional sponsors.

What exactly does GEM do? Basically, he puts a magnifying glass on the world map to see who is entrepreneurship and why. His analysis goes beyond cold numbers; it studies everything from the profile of the individual to market conditions. Thanks to its historical base of two decades, today it offers a very clear picture of the entrepreneurial system, serving as a guide for institutions to improve the quality of the business fabric in their countries.

The environment of entrepreneurship in Colombia presents an important contradiction that defines its current structure. On the one hand, the international reports of the Global Entrepreneurship Monitor (GEM) place the country in the first places in Latin America in terms of the Early Entrepreneurial Activity Rate. On the other hand, this high volume of new business does not translate into sustainable economic growth or greater sophistication of the industrial apparatus (Duarte & Ruiz, 2019).

Historically, the Colombian ecosystem has gone through three clear periods. The first corresponds to the regulatory foundation between 2006 and 2012, initiated with Law 1014 of 2006, which established the obligation to teach entrepreneurship subjects in schools and universities (Ministry of Commerce, Industry and Tourism MinCIT, 2020). In this regard, Tarapuez et al. (2013) explain that this compulsory nature generated a rapid expansion of subjects in higher education institutions, but without a homogeneous pedagogical base that would guarantee the technical quality of the resulting projects. The second period is characterized by the institutionalization and creation of networks between 2012 and 2020, a stage marked by the appearance of iNNpulsa Colombia (2023) and the strengthening of SENA's Emprender Fund as the main sources of technical and economic assistance from the State. Finally, the third period covers from 2020 to the present and focuses on the reactivation and business simplification regulated by Law 2069 of 2020, whose purpose is to reduce tax burdens for small companies and facilitate their participation in public procurement processes.

¹ Seminar that is part of the compulsory curriculum and as one of the requirements to opt for the title of Doctor of the University of Granada, Spain.

However, statistics show that students' real interest in entrepreneurship decreases as they advance in their university careers (Hémbuz & Sánchez, 2020). Although at the beginning of undergraduate studies the intention is high due to the expectations of autonomy, the dynamics of the labor market and the perception of low self-efficacy reflected in structural equation models make university students prefer to look for a salaried job upon graduation (Osorio & Londoño, 2015). As a direct consequence of this phenomenon, less than 5% of the initiatives developed within HEIs correspond to Technology-Based Enterprises (TBE), while the vast majority belong to the traditional services sector or activities of low economic value (Castellanos et al., 2018).

From the macroeconomic perspective, the moments of greatest business creation in the country coincide with times of crisis or labor recession. This means that more than 60% of new businesses are born out of necessity or lack of employment, which explains why they tend to dissolve quickly when labor market conditions improve (Marulanda et al., 2019). In contrast, the few student projects that manage to consolidate over time show a direct relationship with the previous development of socio-emotional skills and strong self-confidence on the part of their founders.

Thus, Ospina et al., (2022), state that socio-emotional skills are defined as a set of essential skills that allow people to understand and communicate their feelings, develop empathy, and choose the right paths in their daily lives. Beyond personal balance, this repertoire of skills is vital to building healthy bonds with others and resiliently managing difficulties that may arise.

4. Critical Ecosystem Diagnosis: What has been incorrectly executed

The literature analyzed exposes serious problems of articulation between the three nodes of the University-Business-State triad, which limit the effectiveness of institutional efforts.

4.1. Disconnection in the curricula and theoretical approach of HEIs

Colombian universities usually teach entrepreneurship from a purely theoretical point of view and under classic planning schemes. Students are required to write extensive and inflexible business plans that do not adjust to the speed of today's markets, leaving aside the use of agile methodologies for rapid validation in the field. This methodological error causes students to design services or products based solely on their individual technical capabilities, without verifying whether the real market has an unmet demand (Bucardo et al., 2015).

For the Latin American Council of Management Schools CLADEA (2020), the current panorama of research in entrepreneurial education allows us to distinguish various approaches, their validation methods and, of course, the critical positions against these models. In the Colombian context, it is possible to identify three main currents:

The first is the *theoretical aspect*, focused on the traditional business plan; an exhaustive analysis tool that requires a considerable investment of time. In contrast, a *practical trend* is emerging that prioritizes agility over long-term planning. Methodologies such as Osterwalder's Business Model Canvas or Steve Blank's Lean Launchpad stand out, aimed at rapid validation in the market. These methods have gained ground not only in university classrooms, but also in acceleration platforms such as Apps.co or Wayra.

Finally, we find the *applied conceptual models*, which are based on an ontological basis on the creative business process. An unavoidable reference is Professor Rodrigo Varela (ICESI), who proposes a scheme based on the duality of competencies: those of knowledge, focused on technical management, and the personal ones, which encompass the attitudes and values necessary for business resilience. In this sense, business education in the region continues to focus on the management of existing companies, which limits the creative capacity necessary to give rise to new competitive businesses.

Likewise, entrepreneurship subjects tend to be trapped exclusively within the faculties of administration or economics (Contreras Cueva et al., 2020). This segmentation isolates students from areas such as health, arts or engineering, preventing them from acquiring essential tools to market their own degree projects. In terms of scientific development, research laboratories work separately from entrepreneurship offices

(Benavides et al., 2021). Thus, patents and university inventions are rarely transformed into spin-offs, because internal intellectual property regulations are too strict and discourage principal investigators (Ramírez & García, 2010).

4.2. Centralism and administrative obstacles of the State

Economic incentives and acceleration programs operated by the government are not distributed equitably throughout the national territory. More than 65% of seed capital funds and specialized mentor networks are concentrated in Bogotá, Antioquia, and Valle del Cauca (Casas et al, 2021). By applying the same rules of the game for the entire country, the State ignores that an entrepreneur in a rural or peripheral area does not have the same access routes, digital connectivity or volume of customers as one located in the main capitals.

On the other hand, procedures before control entities and constant changes in tax reforms raise operating costs and financially suffocate companies in their initial phases (TMF Group, 2024). However, it is a discouraging reality that the biggest barriers to business creation come from the external context. Elements such as the tax burden, restricted access to credit, excessive bureaucracy and institutional instability, together with factors such as corruption or the social perception of business success, make up a hostile ecosystem for the new entrepreneur (Bjornskov and Foss, 2008). Against this backdrop, those who manage to consolidate their projects not only have resilience in the face of adversity, but are also driven by a system of personal values that allows them to navigate an unfavorable environment (Holland & Shepherd, 2013).

In the end, by focusing on entrepreneurship as an emergency plan to reduce short-term unemployment rates, public resources are diluted in subsistence businesses that do not have the capacity to export or generate new qualified jobs (Maca, D, 2020).

4.3. Operational limitations in University Entrepreneurship Centres

At the institutional level, many universities created their University Entrepreneurship Centers (CEU) only to comply with the quality conditions required by the Ministry of National Education in accreditation processes (Fontalvo & Cienfuegos, 2020)). Due to this formal motivation, about 60% of these offices operate with minimal budgets and have a single coordinator in charge, who usually lacks practical experience in the corporate sector or in the creation of their own companies (León et al., 2024)). The direct consequence is that the advice provided is superficial and fails to prepare student projects to raise private venture capital (Stradi, 2024).

5. Achievements and Good Practices: The Successes of the System

Despite the above-mentioned structural problems, there have been significant developments that show positive developments and serve as a basis for the reconfiguration of the country's business environment.

5.1. Changes in laws and new legal figures

A regulatory step of great relevance was the issuance of Law 1838 of 2017, known as the Spin-offs Law. This regulation eliminated the historical prohibitions so that professors and scientists at public universities could create technology-based companies, be partners in them, and receive profits for their inventions without having disciplinary or legal problems due to conflict of interest with the State (Amorós et al., 2021).

Similarly, the creation of the Business Single Window (VUE) facilitated the formalization of business by unifying and digitizing commercial registration procedures, drastically reducing institutional waiting times. Another notable success was the introduction of Benefit and Collective Interest Companies (BIC). This legal figure allows new entrepreneurs to register their projects under explicit triple impact commitments, which opens the doors to international investment funds that prioritize sustainability and corporate social responsibility (Gómez & Mitchell, 2020).

5.2. Joint work in the regions and adapted curricula

The University-Business-State Committees (CUEE) have established themselves as a highly effective regional communication channel (Camacho & Rodríguez,). In these working groups, university directors,

business associations, and local government delegates coordinate academic research with the productive demands of each department. On this point, Méndez-Picazo et al. (2021) highlight that regional environments that successfully intertwine their educational institutions with the private sector show a measurable increase in their innovation rates and a better adaptation to international economic changes.

In parallel, inter-institutional networks have facilitated the exchange of methodologies and mentor banks between different institutions in the country (Mora et al., 2019). It is also worth highlighting the experiences in vulnerable areas, such as those of the University of La Guajira, where curricula were modified to integrate them with local traditions, giving rise to cooperative business models focused on cultural tourism, artisanal development, and sustainable social entrepreneurship (Gutiérrez & Amador, 2021; Ripoll, 2023).

6. The Structuring Role of Higher Education Institutions and Their Challenges

Higher Education Institutions occupy a central position in the structure of the contemporary economic model. Their main function is no longer limited to the transmission and storage of theories, but encompasses the direct responsibility of acting as agents of economic transformation in their regions. In the Colombian context, universities have the urgent task of transforming the results of their laboratory research into commercial solutions applicable to the needs of the local business sector.

Despite having the scientific infrastructure and qualified human capital, the immediate challenge for HEIs is to overcome the lack of internal integration. Incubation centers cannot continue to operate in isolation from technical faculties or research groups classified by the Ministry of Sciences. According to Rincón (2024), universities in emerging economies need to develop dynamic capacities that encompass absorption, innovation, learning, and adaptation, therefore, they should not be seen as separate functions, but as a systemic gear. This cohesion is what enables complex organizations, including higher education institutions, to anticipate and react successfully to the demands of volatile environments. In the end, the key to a competitive advantage that lasts over time lies in the ability to reconfigure resources and foster a culture of constant learning and innovation. Which means that they must learn to quickly identify the useful knowledge they generate internally and connect it in an agile way with the real demands of external companies.

Therefore, the strategic challenge for higher education in Colombia focuses on three specific aspects aimed at its reorganization:

- Redesign intellectual property regulations so that the distribution of financial benefits is attractive to both the individual researcher and the institution.
- Break down the internal bureaucratic barriers that delay the signing of technology transfer agreements with the productive sector.
- Professionalize entrepreneurship offices, ceasing to see them as an administrative requirement and turning them into true project accelerators with qualified personnel and stable budgets.

7. General Challenges and Challenges of the Entrepreneurship Ecosystem

To consolidate a truly competitive environment, the different actors in the ecosystem must assume specific tasks in the short and medium term that allow them to overcome the lag in international standards.

In the first place, Higher Education Institutions must definitively break the isolation of their faculties. It is necessary to design transversal laboratories where engineering, design and business students work together solving real problems in the local productive sector. University incubators must be professionalized by hiring directors who have direct experience in the market, assigning them stable budgets and autonomy for decision-making. Likewise, universities that operate under virtual or distance modalities have the challenge of adapting their platforms to offer asynchronous business advice and simulations with the same quality standards in any municipality in the country.

Second, the State and public policies must redirect their efforts and prioritize the financing of technology-based projects and green economies with export potential, overcoming the traditional idea of using entrepreneurship only as a temporary palliative for unemployment. To achieve this, it is essential to decentralize the resources of the Emprender Fund and iNNpulsa, transferring technical capacities to the peripheral regions of the country. In the same way, it is necessary to structure a differentiated tax regime that reduces or postpones the collection of income taxes and withholdings for new university companies during their first three years of operation. Finally, environmental and health authorities should simplify and reduce the fees for registrations needed to market organic food or products developed in academies.

Third, entrepreneurs and their socio-family environment face profound psychological and relational challenges. Students who decide to become entrepreneurs need to strengthen their ability to adapt to frustration and learn to see commercial failure as part of their professional training. However, success does not depend only on the individual effort of the student. Various studies show that the economic and emotional support of the family is the most important variable for a young business to survive in times of economic instability. For this reason, universities must actively involve parents and relatives in the incubation phases, building a support network that prevents emotional exhaustion of the founder (Romero-Parra et al.,).

8. Conclusions

- The Paradox of the Environment: Colombia has a high volume of people who want to start and open businesses, but the system has institutional deficiencies to make them grow. Most university projects are stuck in traditional services or livelihood activities, with little involvement in science and technology.
- Coordination Failures: Universities have taught business management in a rigid and theoretical way, neglecting field practice and isolating their research centers from entrepreneurship offices. In turn, the State applies centralist policies and homogeneous tax frameworks that reduce liquidity from nascent microenterprises.
- Organizational Advances: There are valuable tools that energize the ecosystem, such as the Spin-offs Law for public researchers, the Business Single Window, the sustainability commitments of the BIC Companies and the regional dialogue structured in the CUEE.
- Transformation Required: To improve the outlook, universities must implement cross-cutting methodologies that include soft skills development, mental health care, and family support. For its part, the State must distribute its funds in a decentralized manner, simplify health and environmental procedures, and establish a preferential tax scheme that protects the life cycle of new entrepreneurs in the country.

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