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THE ENTREPRENEURIAL ECOSYSTEM AND THE INFORMALITY OF BIOTECHNOLOGY SECTOR STARTUPS IN THE ALTO MAGDALENA REGION: AN ANALYSIS FROM THE PUBLIC POLICIES OF THE CHAMBER OF COMMERCE

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ABSTRACT

This study presents an analysis of the entrepreneurial ecosystem and the informality of ventures in the Alto Magdalena region, incorporating the perspective of the Chamber of Commerce as part of regional public policy guidelines for entrepreneurs and business owners in the biotechnology sector. The methodology applied in this research follows a mixed approach to gain a comprehensive view of the phenomenon; it involves surveys, semi-structured interviews, and document analysis with 185 entrepreneurs from the region, allowing for information triangulation and a deeper understanding of informality dynamics and institutional intervention mechanisms. This study reaffirms the importance of an integrated strategy from the regional entrepreneurial ecosystem to address informality in ventures. Promoting formalization requires not only reducing costs and simplifying procedures but also providing ongoing and accessible education for entrepreneurs in the popular economy. It highlights public policies and the role of the Chamber of Commerce and other stakeholders, impacting more than 75% of entrepreneurs to enable their access to new growth opportunities.

Keywords: Entrepreneurship, Informality, Popular economy, Economic subsistence, Informal trade.

RESUMEN

Este estudio presenta un análisis del ecosistema emprendedor y la informalidad de los emprendimientos en la región del Alto Magdalena, en el cual se incluye la perspectiva de la Cámara de Comercio, como parte de los lineamientos de la política pública regional para los

emprendedores y empresarios sector de la biotecnología. La metodología aplicada en esta investigación se comprende por un enfoque mixto, para obtener una visión integral del fenómeno; utilizando aplicación de encuestas, entrevistas semiestructuradas y análisis documental de 185 emprendedores de la región, permitiendo así triangulación de la información y profundización de las dinámicas de la informalidad y los mecanismos de intervención institucional. Este estudio reafirma la importancia de una estrategia integral desde el ecosistema emprendedor regional, para abordar la informalidad en los emprendimientos, promover la formalización requiere no solo la reducción de costos y la simplificación de trámites, sino también una educación continua y accesible para los emprendedores de la economía popular. destaca las políticas públicas y el papel de la Cámara de Comercio y demás actores, impactando a más del 75% de los emprendedores para que puedan superar acceder a nuevas oportunidades de crecimiento.

Palabras clave: Emprendimiento, Informalidad, Economía popular, Subsistencia económica, Comercio informal.

1. INTRODUCTION.

The Alto Magdalena region, located in the heart of Colombia, is characterized by remarkable economic and cultural diversity. This area is home to numerous ventures that, although dynamic and resilient, face significant challenges due to informality. According to the National Planning Department (DNP), labor informality in Colombia affects more than 60% of the economically active population, being especially acute in rural and less urbanized regions such as Alto Magdalena (DNP, 2020). The high rate of informality limits access to social benefits and hinders the sustainable growth of local businesses.

In the Alto Magdalena Region, the informal economy is a reality for many entrepreneurs who, due to various barriers, choose to operate outside official regulations. These barriers include lack of access to financing, excessive bureaucracy, and limited knowledge of the benefits of formalization. The Chamber of Commerce plays a crucial role in this context, offering programs and services aimed at educating entrepreneurs about the importance of formalization, as well as providing technical and financial support to facilitate this process. Through its initiatives, the Chamber seeks not only to increase the number of formalized businesses but also to strengthen the entrepreneurial fabric of the region.

Informality in Alto Magdalena's ventures not only implies a lack of official registration and regulation but also exclusion from the benefits offered by formal institutions, such as the Chamber of Commerce. Recent studies indicate that informality can hinder access to financing, training, and essential business networks for business development (Gutiérrez, 2019). This issue, rooted in factors such as lack of business education and distrust in institutions, perpetuates a cycle of economic precariousness that affects both entrepreneurs and the regional economy in general.

The phenomenon of informality is complex and significantly affects the area's economic and social development. This study analyzes informality from the institutional perspective of the Chamber of Commerce, exploring how the policies and actions of this entity can influence business formalization and improve economic conditions for local entrepreneurs. Informality, characterized by the lack of registration and compliance with legal regulations, presents considerable challenges for both business owners and authorities who aim to encourage a more organized and competitive environment.

The Chamber of Commerce plays a crucial role in formalizing ventures by offering services and resources that encourage business legalization and growth. Through initiatives such as business management training, legal advisory, and financing access programs, the Chamber of Commerce seeks to integrate informal entrepreneurs into the formal economy (Chamber of Commerce of Bogotá, 2021). However, the reach and effectiveness of these initiatives depend on the Chamber's ability to adapt its services to the specific needs of local entrepreneurs and overcome existing cultural and structural barriers.

This research aims to analyze informality in the ventures of the Alto Magdalena region from the perspective of the institutional framework provided by the Chamber of Commerce. The main causes of informality, the impact of formalization initiatives, and entrepreneurs' perceptions of institutional support will be explored. By understanding these aspects, the study aims to provide practical recommendations to improve the effectiveness of formalization strategies and strengthen the region's economic development. The methodology will include interviews with entrepreneurs and representatives of the Chamber of Commerce, as well as the analysis of secondary data from previous reports and studies (Ramírez & Pérez, 2022).

This article also examines the strategies implemented by the Chamber of Commerce to address informality in Alto Magdalena, highlighting successful cases and areas that require more attention. Collaboration with other government and private institutions is essential to create an enabling environment for business formalization. Additionally, the potential benefits of formalization are discussed, such as access to larger markets, the possibility of receiving financial and technical support, and improved competitiveness. In conclusion, it is argued that greater formalization can lead to more sustainable and equitable economic development in the region.

2. CONCEPTUAL FRAMEWORK.

Alto Magdalena, with an economy based on agriculture, commerce, and tourism, has undergone a significant evolution in its business dynamics. Historically, this region has faced challenges related to labor informality, a situation worsened by the limited presence of formal institutions and the lack of adequate infrastructure (Montoya & Sánchez, 2018). Informality has not only impacted productivity and economic development but also created a vulnerable environment for local entrepreneurs.

Efforts to formalize businesses in Alto Magdalena have been varied but often insufficient due to the complexity of the socioeconomic environment and cultural resistance to formalization (Gómez & Valderrama, 2020). Informality persists as a response to bureaucratic barriers and the costs associated with legalizing businesses. According to data from DANE, over 70% of businesses in this region operate informally, limiting their access to larger markets and social and tax benefits (DANE, 2021).

The Chamber of Commerce has implemented various strategies to address informality, including training programs, business management advice, and awareness campaigns on the benefits of formalization (Chamber of Commerce of Neiva, 2019). These initiatives aim to bridge the knowledge gap and facilitate the business registration process. However, the effectiveness of these programs has been variable, and significant challenges remain to achieve full integration of entrepreneurs into the formal economy.

The study of informality in entrepreneurship can be approached from various theoretical perspectives. The dual labor market theory, for example, suggests that the economy is divided into two sectors: one formal, with protected and regulated employment, and another informal, characterized by a lack of protection and regulation (Tokman, 1978). This duality is especially relevant in the context of Alto Magdalena, where informality reflects deep economic and social segmentation.

Informality has significant implications at both micro and macroeconomic levels. At the micro level, it affects the ability of businesses to grow and access formal resources, while at the macro level, it contributes to tax evasion and economic instability (Perry et al., 2007). In the context of Alto Magdalena, these effects are evident in the fragility of ventures and the difficulty in implementing sustainable economic development policies. Therefore, a comprehensive understanding of informality and institutional dynamics is essential for designing effective interventions.

3. MATERIALS Y METHODS.

The research methodology to analyze informality in the ventures of the Alto Magdalena Region from the perspective of the Chamber of Commerce’s Institutional Framework is structured in several phases.

This research employs a mixed approach, combining qualitative and quantitative methods to obtain a comprehensive view of the phenomenon. Data collection was conducted through surveys (185 administered), semi-structured interviews (33 conducted), and document analysis, allowing for information triangulation and an in-depth understanding of informality dynamics and institutional intervention mechanisms.

Figure 1
Stages of the Research Project

STAGE	STAGE	STAGE	STAGE	STAGE
01	02	03	04	05
Análisis Documental	Aplicación Encuestas	Desarrollo Entrevistas	Análisis de Cualitativo y Cuantitativo	Perspectiva Institucional

Source: Own Elaboration; 2023.

In the first phase, a document analysis will be conducted to establish a solid theoretical and contextual foundation on informality in the region and the role of the Chamber of Commerce. The second phase involved collecting quantitative data through structured surveys directed at entrepreneurs in the region. A questionnaire was designed that included questions about the socioeconomic profile of the entrepreneurs, the characteristics of their businesses, obstacles to formalization, and their knowledge and perception of the services offered by the Chamber of Commerce. In the third phase, semi-structured interviews will be conducted with key stakeholders, including Chamber of Commerce officials, both formal and informal entrepreneurs, and representatives from other local institutions.

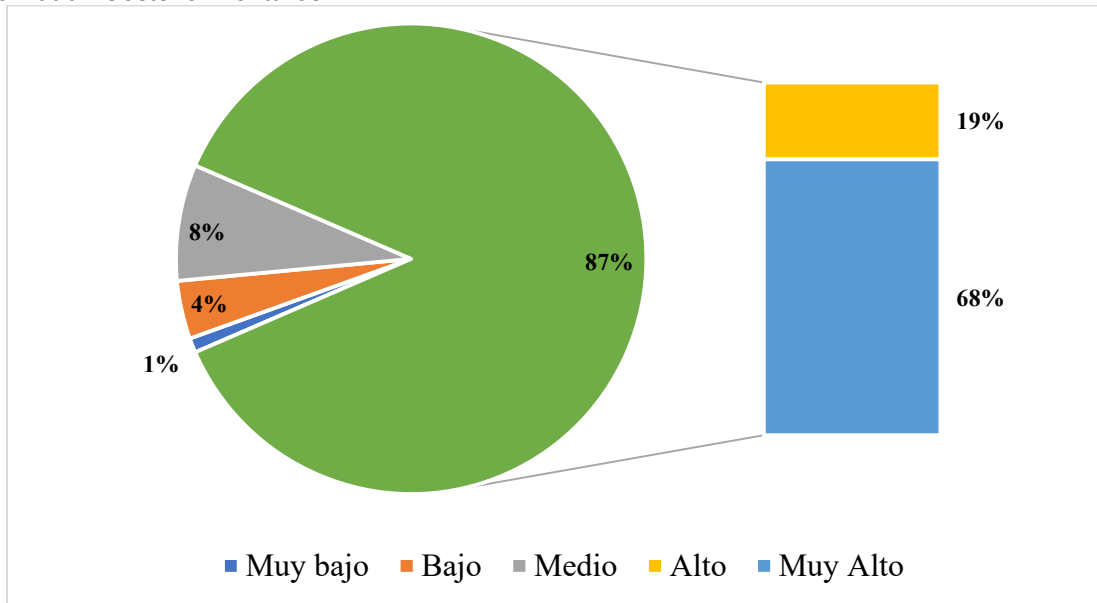
The fourth phase will focus on analyzing the collected data. Quantitative data from the surveys will be analyzed using descriptive and inferential statistical techniques to identify patterns and significant relationships between variables. Qualitative data from the interviews will be analyzed through content analysis, thematic coding, and triangulation techniques to identify emerging categories and themes that explain the dynamics of informality and the impact of the Chamber of Commerce's interventions.

In the fifth phase, the results of the qualitative and quantitative analyses will be integrated to develop a comprehensive diagnosis of the situation of informality in Alto Magdalena's ventures. Finally, the last phase will consist of formulating recommendations based on the research findings.

4. RESULTS AND DISCUSSION

Research on informality in the ventures of the Alto Magdalena Region from the perspective of the Chamber of Commerce’s Institutional Framework reveals several critical dimensions that affect the formalization of local businesses. First, it was identified that a significant proportion of entrepreneurs operate informally due to structural barriers such as high costs and the complexity of formalization processes.

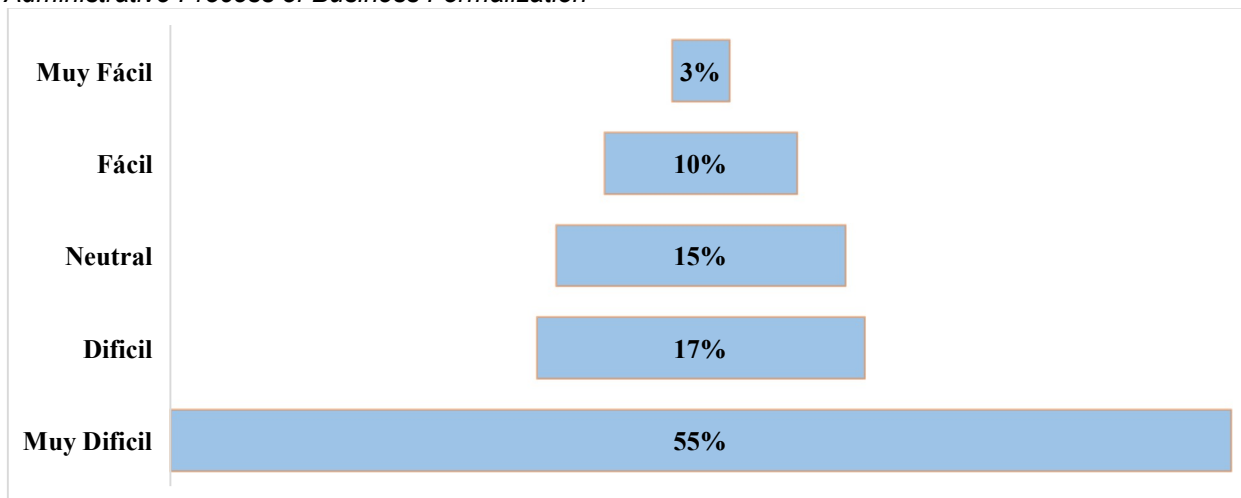
Figure 2
Formalization Costs for Ventures



Source: Own Elaboration; 2023.

Quantitative data shows that 68% of respondents consider the costs associated with formalization (taxes, registration fees, etc.) to be excessive, while 55% identify bureaucracy as a significant obstacle.

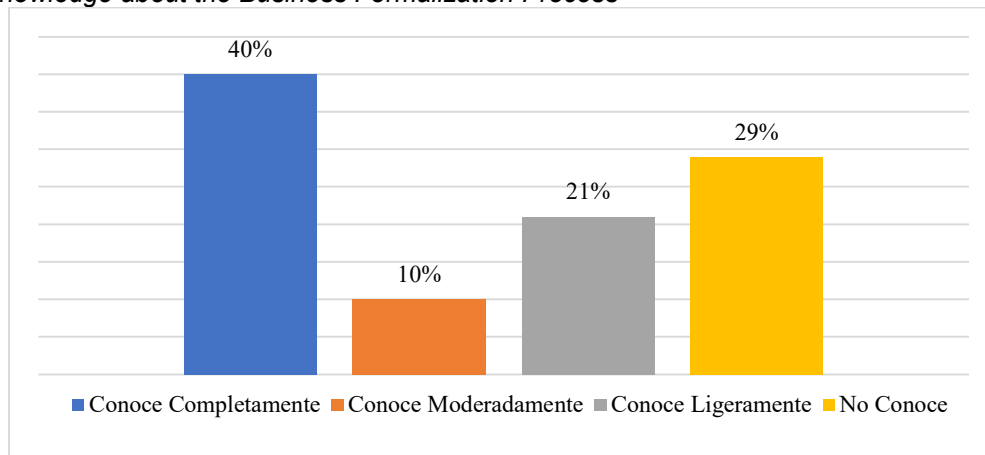
Figure 3
Administrative Process of Business Formalization



Source: Own Elaboration; 2023.

Additionally, the lack of knowledge and access to information is another crucial factor contributing to informality. Semi-structured interviews reveal that many entrepreneurs are unaware of the benefits and procedures for formalizing their businesses. Only 40% of respondents stated that they are well-informed about the formalization procedures and the services offered by the Chamber of Commerce. This lack of knowledge is particularly pronounced in rural areas, where the reach of informational and educational programs is limited.

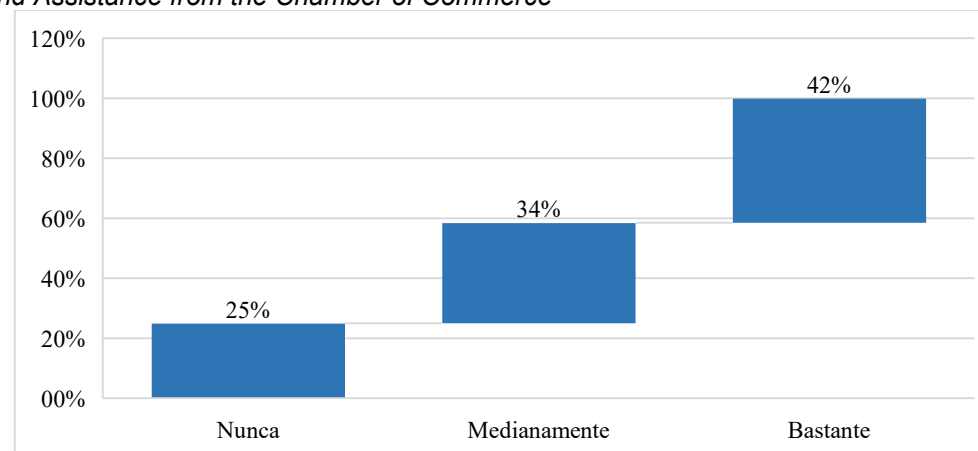
Figure 4
Level of Knowledge about the Business Formalization Process



Source: Own Elaboration; 2023.

On the other hand, the results also highlight the positive perception of support from the Chamber of Commerce among those who have formalized their businesses.

Figure 5
Support and Assistance from the Chamber of Commerce



Source: Own Elaboration; 2023.

Seventy-five percent of formal entrepreneurs surveyed report having received some type of assistance from the Chamber of Commerce, whether in the form of training, legal advice, or access to business networks. This support is seen as a decisive factor for the sustainability and growth of their businesses. However, it is also noted that the coverage and reach of these services are still insufficient to encompass the entire entrepreneurial population of the region.

Interviews with Chamber of Commerce officials indicate an awareness of these challenges and a willingness to improve and expand support programs for formalization. Officials note that although training and awareness programs have been implemented, these need to be more accessible and tailored to local realities. Simplifying administrative procedures and reducing the costs associated with formalization were also identified as strategic priorities to encourage more entrepreneurs to regularize their businesses.

Finally, qualitative and quantitative analyses suggest that the interventions of the Chamber of Commerce have a positive impact but require greater coordination with other public and private

entities. Collaboration with educational institutions, local governments, and civil society organizations can enhance formalization efforts and create a more favorable environment for entrepreneurs. The research suggests that a comprehensive and collaborative strategy is essential to effectively address informality in the ventures of Alto Magdalena, thereby promoting more inclusive and sustainable economic development in the region.

5. CONCLUSIONS.

First, informality in entrepreneurship is a persistent reality in the region, primarily driven by economic and bureaucratic barriers that hinder the formalization of businesses. This phenomenon is framed within the popular economy, where entrepreneurs, often with limited resources, choose to operate informally as an economic survival strategy. The research reveals that a significant proportion of entrepreneurs in Alto Magdalena operate informally due to structural barriers, such as high costs and the complexity of formalization processes. Quantitative data shows that 68% of respondents consider formalization costs excessive, and 55% identify bureaucracy as a major obstacle (Gómez & Valderrama, 2020). This underscores the need to simplify administrative procedures and reduce associated costs.

Second, the lack of access to information and adequate training is a critical factor that perpetuates informal trade. Entrepreneurs are often unaware of the benefits of formalization and the procedures necessary to achieve it. This highlights the need for more inclusive and accessible programs from the Chamber of Commerce aimed at educating and assisting entrepreneurs in their formalization process. Greater dissemination and adaptation of these programs to the local realities of the popular economy could help reduce informality. Only 40% of respondents stated they were well-informed about the formalization procedures and services offered by the Chamber of Commerce. This situation is more pronounced in rural areas, where the penetration of informational and educational programs is limited (Montoya & Sánchez, 2018).

Third, entrepreneurs who have managed to formalize their businesses perceive the support received from the Chamber of Commerce positively. However, the coverage of these services is limited, and many informal entrepreneurs still lack access to the necessary assistance. The effectiveness of training programs, legal advice, and business networks is evident, but their reach needs to be expanded to include a greater number of entrepreneurs. This requires a more proactive and adaptive strategy from the Chamber of Commerce. Despite the barriers, the results highlight the positive perception of support from the Chamber of Commerce among formalized businesses. Seventy-five percent of formal entrepreneurs surveyed reported having received assistance in the form of training, legal advice, or access to business networks (Chamber of Commerce of Neiva, 2019). However, the coverage of these services remains insufficient to encompass the entire entrepreneurial population of the region.

Fourth, the perception of Chamber of Commerce officials regarding challenges and opportunities is crucial for understanding the gap between the supply and demand for institutional support. Simplifying procedures and reducing formalization costs are steps in the right direction to decrease informality. Furthermore, greater coordination with other public and private entities is essential to create a more favorable environment for entrepreneurship. Inter-institutional collaboration can enhance formalization efforts and promote more inclusive economic development. Analyses suggest that interventions by the Chamber of Commerce, while positive, require greater coordination with other public and private entities. Collaboration with educational institutions, local governments, and civil society organizations can enhance formalization efforts and create a more favorable environment for entrepreneurs (Ramírez & Pérez, 2022).

Fifth, business formalization benefits not only entrepreneurs but also has a positive impact on the regional economy. Reducing informality contributes to increased tax revenue, better access to financing, and growth opportunities for businesses. This, in turn, improves economic survival conditions for entrepreneurs and their families, creating a virtuous cycle of economic and social development in the Alto Magdalena region. Finally, the research suggests that a comprehensive

and collaborative strategy is essential to effectively address informality in entrepreneurship in Alto Magdalena. This will promote more inclusive and sustainable economic development in the region, improving living conditions and growth opportunities for local entrepreneurs (Perry et al., 2007).

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