

Creativity and innovation management for the optimization of competitive performance in the baking industry

Gestión de la creatividad y la innovación para la optimización del desempeño competitivo en la industria panificadora

Gerenciando a criatividade e a inovação para otimizar o desempenho competitivo na indústria de panificação

Andrea Johana Ramón Torres¹
 Laura Teresa Tuta Ramírez²
 Edwin Omar Jaimes Rico³

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¹ Master's Student in Administration, Department of Administration, Faculty of Economic and Business Sciences, Universidad de Pamplona, Pamplona, Colombia.

Email: andrea.ramon@unipamplona.edu.co

ORCID: <https://orcid.org/0009-0002-8226-3885>

² Full-Time Career Professor, Business Administration Program, Faculty of Economic and Business Sciences, Universidad de Pamplona, Pamplona, Colombia.

ORCID: <https://orcid.org/0000-0003-0938-1340>

³ Full-Time Faculty Member, Business Administration Program, Faculty of Economic and Business Sciences, Universidad de Pamplona, Pamplona, Colombia.

ORCID: <https://orcid.org/0000-0003-3865-5208>



Abstract

Introduction: This article is derived from the research project entitled "Creativity as a Competitive Advantage in the Baking Industry of Pamplona, Norte de Santander," conducted at the University of Pamplona in 2025.

Problem: Despite the importance of the baking sector to the local and regional economy, these organizations face limitations in the use of technological resources and the implementation of innovative strategies. This situation restricts their ability to compete effectively in an increasingly dynamic and demanding market.

Objective: To analyze creativity as a driver of competitiveness in the food manufacturing industry.

Methodology: The study was conducted using a quantitative approach and a descriptive, non-experimental design. The population consisted of a census of 70 participants, including owners, managers, and employees from the 10 registered bakeries in the city. Data were collected using the self-developed CA-COM questionnaire, which was validated through a pilot study. The instrument employed a Likert-type scale to assess creativity and competitiveness factors. Data were analyzed using descriptive statistical techniques.

Results: The findings revealed that creativity is developed at a high level within the baking industry, while competitiveness reached a very high level of performance. However, the technology-related factor showed a moderate level, highlighting a gap in the sector's innovation capacity.

Conclusion: Organizations within the baking industry perceive creativity as a key resource for enhancing competitiveness, increasing revenues, and strengthening their strategic position in the local market.

Keywords: Organizational creativity, business competitiveness, innovation in SMEs, baking industry.

Resumen

Introducción: Este artículo se deriva del proyecto de investigación titulado "La creatividad como ventaja competitiva en la industria panificadora de Pamplona, Norte de Santander", desarrollado en la Universidad de Pamplona en 2025.

Problema: A pesar de la importancia del sector panificador para la economía local y regional, estas organizaciones enfrentan limitaciones en el uso de recursos tecnológicos y en la implementación de estrategias innovadoras. Esta situación restringe su capacidad para competir eficazmente en un mercado cada vez más dinámico y exigente.

Objetivo: Analizar la creatividad como factor impulsor de la competitividad en la industria manufacturera de alimentos.

Metodología: La investigación se desarrolló bajo un enfoque cuantitativo y un diseño descriptivo de carácter no experimental. La población estuvo conformada por un censo de 70 participantes, entre propietarios, gerentes y colaboradores de las 10 panaderías registradas en la ciudad. La información se recolectó mediante el cuestionario CA-COM, diseñado por los investigadores y validado a través de una prueba piloto. El instrumento utilizó una escala tipo Likert para evaluar factores de creatividad y competitividad. Los datos fueron analizados mediante técnicas de estadística descriptiva.

Resultados: Los hallazgos evidenciaron que la creatividad se desarrolla en un nivel alto dentro de la industria panificadora, mientras que la competitividad alcanzó un desempeño muy alto. Sin embargo, el factor relacionado con la tecnología presentó un nivel moderado, lo que evidencia una brecha en la capacidad de innovación del sector.

Conclusión: Las organizaciones de la industria panificadora perciben la creatividad como un recurso fundamental para mejorar su competitividad, incrementar sus ingresos y fortalecer su posicionamiento estratégico en el mercado local.

Palabras clave: Creatividad organizacional, competitividad empresarial, innovación en las pymes, industria panificadora.

Resumo

Introdução: Este artigo deriva do projeto de pesquisa intitulado "Criatividade como Vantagem Competitiva na Indústria de Panificação de Pamplona, Norte de Santander", desenvolvido na Universidade de Pamplona em 2025.

Problema: Apesar da importância do setor de panificação para a economia local e regional, essas organizações enfrentam limitações no uso de recursos tecnológicos e na implementação de estratégias inovadoras. Essa situação restringe sua capacidade de competir efetivamente em um mercado cada vez mais dinâmico e exigente.

Objetivo: Analisar a criatividade como fator impulsionador da competitividade na indústria de panificação.

Metodologia: A pesquisa foi conduzida utilizando uma abordagem quantitativa e um delineamento descritivo, não experimental. A população foi composta por um censo de 70 participantes, incluindo proprietários, gerentes e funcionários das 10 padarias registradas na cidade. Os dados foram coletados por meio do questionário CA-COM, elaborado pelos pesquisadores e validado por meio de um teste piloto. O instrumento utilizou uma escala do tipo Likert para avaliar os fatores de criatividade e competitividade. Os dados foram analisados utilizando técnicas estatísticas descritivas.

Resultados: Os resultados mostraram que a criatividade é altamente desenvolvida na indústria de panificação, enquanto a competitividade atingiu um nível de desempenho muito alto. No entanto, o fator relacionado à tecnologia apresentou um nível moderado, revelando uma lacuna na capacidade de inovação do setor.

Conclusão: As organizações da indústria de panificação percebem a criatividade como um recurso fundamental para melhorar sua competitividade, aumentar sua receita e fortalecer seu posicionamento estratégico no mercado local.

Palavras-chave: Criatividade organizacional, competitividade empresarial, inovação em PMEs, indústria de panificação.

1. INTRODUCTION

Contemporary economies are characterized by constant change, requiring organizations to strengthen their capacity to compete in increasingly dynamic environments. In this context, factors such as knowledge, innovation, and creativity play a fundamental role in enhancing the competitiveness of both regions and nations. As Agulló [1] argues, given the transformations that continuously affect organizations, it is essential to recognize that strategies formulated in the past may no longer be adequate or effective in the future due to fluctuations in the business environment. Furthermore, the accelerating pace of change must also be considered. Consequently, it is necessary to promote an evolution in organizational thinking that enables the development of new approaches, allowing firms to adapt to and anticipate these changes.

Competitiveness maintains a direct and positive relationship with long-term economic growth [2]. According to the International Institute for Management Development (IMD) [3], a country is considered competitive when it effectively

manages its resources and capabilities, thereby increasing business productivity and improving the quality of life of its citizens. Similarly, the European Union [4] defines competitiveness, at both regional and national levels, as the capacity to sustainably generate higher levels of growth and employment.

Competitiveness influences economic growth and employment while also playing a key role in the development of cultural and creative sectors. In this regard, Melo and López, as cited by UNESCO [5], emphasize that in peripheral countries with regions at different stages of development, it is essential to strengthen cultural production sectors so that they can adapt to technological changes, using them as a strategy to enhance competitiveness and ensure the sustainability of the cultural expressions unique to each region.

From this perspective, organizations worldwide must formulate strategies that promote activities grounded in creativity research, as creativity is widely recognized as a driver of innovation, technological change, and competitive advantage in business development [5]. Consequently, the continuous transformation of contemporary economies requires firms to strengthen their competitive capacity through knowledge, innovation, and creativity.

In line with this perspective, recent trends in the adoption of Information and Communication Technologies (ICTs) demonstrate that digital transformation has become a decisive factor for both creativity and competitiveness. The incorporation of digital tools optimizes processes, improves operational efficiency, and creates opportunities for innovation in products, services, and business models within local and regional markets.

Today, creativity is considered a key element in fostering innovation within organizations. Barrón, as cited by Guilera [6], defines creativity as the tendency to generate unique and original ideas, whereas López [7] describes it as the ability to create novel combinations from existing elements. In the business context, creativity can therefore be understood as an individual and organizational capability that can be enhanced to generate new opportunities for improving competitiveness.

Creativity not only contributes to the generation of new ideas and products but also strengthens business competitiveness. Muller, as cited by Castañón [8], defines competitiveness as the effective capacity to achieve and maintain a profitable position in the market. Likewise, Castañón [8] states that business competitiveness depends on the efficient production of goods and services that satisfy the quality standards demanded by the market.

Within this context, small and medium-sized enterprises (SMEs) represent an important segment of the economy. Saavedra [9], as cited by Ramírez and Ampudia [10],

proposes a methodology for evaluating the competitiveness of Latin American SMEs based on the competitiveness map developed by the Inter-American Development Bank (IDB) [11]. Nevertheless, certain SME sectors, including the bakery industry, face challenges in sustaining their operations due to the lack of innovative and creative strategies that would allow them to differentiate themselves in the market and maintain competitiveness.

According to the theorists discussed thus far, creativity can stimulate competitive growth in organizations regardless of their size or nature, enabling them to operate more effectively within the business environment. Bakeries are no exception. According to Euromonitor International [12], the bakery industry generated sales of 4.71 trillion Colombian pesos in 2020, representing an increase of 8.9% compared with the 4.32 trillion pesos recorded five years earlier [13].

Currently, bakery businesses in Colombia face increasing competition from large-scale retail companies. Consequently, the National Association of Bakery and Complementary Food Industries (ANIPAN) [14] highlights the need to improve product offerings by incorporating innovative products that meet the expectations of consumers seeking healthier alternatives, exploring new consumption occasions, and selecting raw materials that provide an optimal balance between quality and cost [13]. Therefore, it is essential for bakeries to implement initiatives that foster creativity in product development, enabling them to compete effectively in local, regional, and national markets while strengthening their market position.

In the department of Norte de Santander, particularly in the city of Pamplona, bakeries are commonly managed under a family-based business tradition. These establishments produce traditional products such as cema bread, water bread, natas, milk bread, cheese bread, corn bread, roll bread, San Antonio bread, mojiçón, sweet breads, and colaciones. Historically, these businesses have operated within a conservative market characterized by deeply rooted consumer traditions. However, economic studies and sector statistics indicate a gradual increase in product diversification. Furthermore, a traditional marketing strategy known as “vendaje,” which consists of offering a larger quantity of bread for a fixed purchase amount, continues to be used as a mechanism to stimulate sales [15].

Guerrero [16] notes that bakeries in the city of Pamplona are oriented toward business sustainability; however, they tend to focus primarily on profitability rather than on the various development opportunities available within the local bakery industry. Furthermore, management practices have been identified as neither fully efficient nor effective, since potential market studies are not conducted to assess consumer demand regarding the variety of products offered.

According to Diario La Opinión [17], bakeries are currently experiencing a sustainability crisis, evidenced by the growing number of family-run businesses that, despite their extensive experience in the sector, lack large-scale production infrastructure. This limitation results in a less diversified product portfolio compared to larger companies, which distinguish themselves through creativity, innovation, technological adoption, process modernization, and a strong customer-oriented approach supported by effective promotional strategies. In contrast, small enterprises often prioritize business survival, relegating growth, market recognition, positioning, and competitiveness to secondary objectives [18].

These challenges are further exacerbated by prevailing management practices within the sector, which are characterized by limited training and professional development opportunities for production personnel, as well as deficiencies in managerial leadership skills. The low valuation of employee participation and the restricted openness to creative ideas—largely due to the persistence of traditional product lines—limit innovation potential. Furthermore, inadequate organizational coordination and the possible absence of standardized procedures for raw material management reduce the ability of these businesses to respond effectively to the increasing pace of market demand. A similar situation was reported by Aponte and Flórez [19] in an initial assessment of a company within the sector. Following the implementation of improvement strategies such as the 5S methodology, ABC analysis, Kardex systems, management indicators, and operational manuals, the organization achieved significant performance improvements.

Therefore, surviving and maintaining a competitive position in today's markets requires the development of new skills and capabilities. In this regard, the present research provides strategic guidelines and a theoretical analysis of how creativity contributes to strengthening business competitiveness. The results are particularly relevant for organizations in the bakery sector, as they may support the development of strategic advantages that enhance organizational potential and contribute to long-term sustainability.

Based on the foregoing, it is essential to address the competitive demands imposed by the market and to evaluate the conditions present within the organizational environment of bakeries. Likewise, organizations need to embrace a new creative paradigm that prioritizes capabilities enabling the incorporation of products, knowledge, and innovations that foster growth and development.

From a practical perspective, this study seeks to encourage entrepreneurs to adopt a strategic approach focused on the generation of productive and organizational practices that can be adapted to their specific contexts. Such an approach may

facilitate the development of creative and innovative strategies aimed at improving production processes, strengthening competitive positioning within the bakery market, and generating added value. In this sense, creativity may become a critical success factor for the competitiveness of the bakery industry in Pamplona, contributing to the growth, development, sustainability, and formalization of these microenterprises.

In summary, the bakery sector under analysis appears to exhibit a moderate level in the application and development of creativity and competitiveness. This situation underscores the relevance of the present study, which seeks to propose strategic guidelines aimed at strengthening creativity as a key driver for enhancing competitiveness in the bakeries of the municipality of Pamplona, Norte de Santander.

1.1 Literature Review or Research Background

A review of the state of the art and relevant theoretical contributions was conducted prior to the development of this research, ensuring the inclusion of recent sources to support and update the methodological approach adopted. From an international perspective, the publication *Taller de diseño: Creatividad y proceso creativo* by López [7], from the University of Zaragoza, Spain, is considered particularly relevant because it provides theoretical foundations that support the study of the creativity variable. Specifically, it contributes to the conceptualization of the dimensions and indicators associated with creativity through a comprehensive review of authors and theoretical propositions, facilitating a broader understanding of the topic across different contexts and areas of application.

Similarly, the doctoral dissertation *Umbrales de la creatividad: Construcción social de conocimiento creativo en algunas micro-pequeñas organizaciones productivas (MiPymes)*, presented by Herrera S. [20] at the National University of Colombia, was reviewed. This work is framed within the fields of organizational epistemology, management hermeneutics, and entrepreneurial thinking in productive organizations. The dissertation conceptualizes creativity as a situated quality emerging from the configuration and co-production of knowledge through the negotiation of identities among different actors within socio-creative networks. It also provides a critical and reflective perspective on how organizational actors construct and communicate their realities through co-produced discourses.

At the macroeconomic level, the work of Herrera [21], entitled *Correlation between Competitiveness and Innovation: An Empirical Validation of the Theory*, was also examined. The study seeks to validate the relationship between innovation and competitiveness, while analyzing the determinants of Porter's competitive advantages

and emphasizing the critical role of innovation in the creation and sustainability of such advantages.

Likewise, the study by Velásquez [22], entitled Analysis of Competitiveness in the Financial Sector of the City of Manizales, Colombia, was reviewed due to its contribution to the understanding of competitiveness as a multidimensional construct. The research analyzed competitive characteristics within the financial sector using Porter's Five Forces framework. The findings indicated that the threat of new entrants has limited influence due to government regulations and existing protective measures. Regarding the bargaining power of buyers, the study identified pressure to develop specialized and segmented service portfolios supported by technological platforms. Furthermore, suppliers exerting the greatest influence on operational performance and profitability were found to be those providing technology, infrastructure, and human resource management services.

Correspondingly, recent literature highlights that the incorporation of Information and Communication Technologies (ICTs) into organizational management contributes significantly to enhancing competitiveness across different productive sectors through the integration of digital processes in marketing, innovation, and internal management. This technological perspective strengthens business creativity by enabling new forms of interaction with customers and markets, while fostering differentiation strategies based on digital solutions.

Additionally, the article entitled Factors of Business Competitiveness in the Commercial Sector, published in the Revista Electrónica de Ciencia y Tecnología of the Instituto Universitario de Tecnología de Maracaibo, by Ramírez and Ampudia [10], was reviewed. The study aimed to describe the factors influencing business competitiveness within the commercial sectors of Mexico and Colombia. Its findings provide valuable theoretical and conceptual contributions, emphasizing the challenges organizations face as new tangible and intangible innovations emerge.

Finally, a local contribution relevant to the present research is the study conducted by Guerrero Jaimes [16], entitled Financial Sustainability for Companies in the Bakery Sector of Pamplona, Norte de Santander, Colombia. This quantitative, cross-sectional, and non-experimental study surveyed ten bakeries located in the municipality. The findings revealed that most companies fail to incorporate key business opportunity factors associated with financial sustainability, particularly within the social and environmental dimensions. These results highlight the importance of developing strategic guidelines that promote both creativity and competitiveness in the bakery sector of Pamplona, while simultaneously strengthening its long-term sustainability.

2. MATERIALS AND METHODS

Research Approach

This study is framed within the positivist paradigm and adopts a quantitative research approach. According to Hernández, Fernández, and Baptista [23], quantitative research is characterized by the collection of data for hypothesis testing through numerical measurement and statistical analysis, with the purpose of identifying behavioral patterns and validating theoretical propositions. Accordingly, statistical techniques and procedures were applied to the response levels obtained from the study population, based on previously established indicators used to measure the variables of creativity and competitiveness.

Research Design

According to Hernández et al. [23], this study follows a non-experimental research design, since the variables under investigation were not deliberately manipulated and the phenomena were observed in their natural context prior to analysis. The authors further explain that non-experimental research does not involve the creation of artificial situations; instead, existing conditions are observed without intentional intervention by the researcher.

In this regard, the present study adopts a non-experimental design because it is not possible to directly manipulate the variables under analysis—namely creativity and competitiveness within the bakery sector of the municipality of Pamplona, Norte de Santander—or their respective dimensions. Consequently, the study seeks to identify and corroborate relationships among variables through indirect observation and statistical analysis.

Sample

The study population consisted of owners, managers, and employees from the ten registered bakeries located in the city of Pamplona. Given the manageable size of the population, all participants were included in the study. The composition of the sample considered for this research is presented below.

BAKERIES	ADMINISTRATIVE STAFF	EMPLOYEES	TOTAL
Panadería Chávez y Cía. Ltda	02	10	12
El Trigo de Oro	01	08	09
Panadería Araque	01	07	08
Panadería y Bizcochería La Pamplonesa	01	04	05
Panadería Caritas	01	08	09
Panadería y Pastelería La Casa de Las Tortas S.A.S.	01	04	05
Panadería y Bizcochería Bumanguesa en Pamplona	01	04	05
MIA DELIZZIA	01	02	03
Panadería y Bizcochería La Mejor	01	04	05
Panadería San Agustín	01	08	09
Total			70

Source: Prepared by the author(s) (2022)

Data Collection Instrument

For this research, data were collected through a structured questionnaire administered to all participants included in the study. The instrument, entitled CA-COM, was specifically designed for this research and validated through content validity assessment and a pilot test.

The questionnaire was developed to measure the study variables according to their respective dimensions. For the variable Creativity, the dimensions Creativity Requirements (Improvisation, Intuition, and Invention) and Creativity Indicators (Originality, Flexibility, Fluency, and Elaboration) were considered. For the variable Competitiveness, the dimensions Competitiveness Factors (Technology, Productive Flexibility, Quality, and Rivalry) and Distinctive Competencies of Competitiveness (Organizational Competencies, Human Talent, Infrastructure, Innovation, Customer Service, and Marketing) were included.

The instrument consisted of fifty-one (51) items measured using a five-point Likert-type scale, allowing respondents to express their level of agreement with each statement.

3. RESULTS

The results are presented according to the dimensions and indicators evaluated in the study. The analysis summarizes the information obtained from the corresponding statistical tables and contrasts the findings with the theoretical positions previously

discussed in the literature review. In addition, the results are interpreted considering both the theoretical contributions of the referenced authors and the observations made during the research process.

The following section presents the analysis and discussion of the findings obtained.

Creativity Requirements.

Table 2.

DIMENSION	CREATIVITY REQUIREMENTS								
Indicator	Improvisation			Intuition			Invention		
Items	1	2	3	4	5	6	7	8	9
Indicator Mean	4,54			4,30			3,59		
Scale Category	Very High			Very High			High		
Dimension Mean	4,14								
Scale Category	High			Scale Placement Range			3,40 ≤ X ≤ 4.20		

The behavior of the Creativity Requirements dimension is evidenced through its indicators: Improvisation, Intuition, and Invention. The Improvisation indicator shows a mean of 4.54, which is interpreted as very high according to the proposed scale categorizations. Regarding the Intuition indicator, the responses were quite similar, with a mean of 4.30, also categorized as very high based on the proposed scale. On the other hand, the Invention indicator yielded a mean of 3.59, which is classified as high according to the established scale for companies in this sector. For the overall dimension, the mean obtained was 4.14, categorized as high. These results confirm that the Creativity Requirements dimension is highly present in bakeries in the city of Pamplona.

Creativity Indicators

Table 3.

DIMENSION	CREATIVITY INDICATORS											
Indicator	Originality			Flexibility			Fluency			Elaboration		
Items	10	11	12	13	14	15	16	17	18	19	20	21
Indicator Mean	4,73			4,32			3,31			4,52		
Scale Category	Very High			Very High			Moderate			Very High		
Dimension Mean	4,22											
Scale Category	Very High			Scale Placement Range			4,21 ≤ X ≤ 5.00					

The table presents the behavior of the Creativity Indicators dimension through its indicators: Originality, Flexibility, Fluency, and Elaboration. First, the Originality indicator showed a mean of 4.73, which, according to the proposed scale, is categorized as very high. Regarding the Flexibility indicator, it yielded a mean of 4.32, also interpreted as very high. This demonstrates strong alignment with the findings of López [7], who states that this indicator “is related to mental agility, opposing rigidity, immobility, the inability to modify behaviors, attitudes, or viewpoints, and the inability to offer alternatives, vary routes, or adjust the undertaken method.”

Similarly, the Fluency indicator is evidenced with a mean of 3.31, which is interpreted as moderate. This indicates low alignment with the premise that “many solutions are likely to be lost in the subconscious, not formulated, or not given the opportunity to demonstrate their value; therefore, it is necessary to quickly generate many proposals” [7].

Finally, the Elaboration indicator yielded a mean of 4.52, which is interpreted as very high within the sector under study. Regarding the overall mean for the *Creativity Indicators* dimension, it was 4.22, which falls into the very high category according to the proposed scale. This suggests that this dimension is highly present in bakeries in the city of Pamplona.

FACTORS OF COMPETITIVENESS

Table 4.

DIMENSION	FACTORS OF COMPETITIVENESS											
Indicator	Technology			Productive Flexibility			Quality			Rivalry		
Items	22	23	24	25	26	27	28	29	30	31	32	33
Indicator Mean	2,92			4,57			4,36			4,26		
Scale Category	Moderate			Very High			Very High			Very High		
Dimension Mean	4,03											
Scale Category	High			Scale Placement Range			3,40 ≤ X ≤ 4.20					

The table shows the behavior of the competitiveness dimension through its respective indicators: technology, productive flexibility, quality, and rivalry. Initially, the technology indicator yielded a mean score of 2.92, which is categorized as moderately present within the companies of this sector. With regard to the productive flexibility indicator, it is evident that this demonstrated stronger performance compared to the previous indicator, as it obtained a mean score of 4.57, which, according to the proposed scale, is categorized as very high.

Subsequently, the quality indicator was identified, which showed a mean score of 4.36, categorizing it as very high. Continuing with the analysis, the rivalry indicator yielded a mean score of 4.26; this is likewise categorized as very high according to the proposed scale. Based on the foregoing, the overall performance of the competitiveness factors dimension was 4.03, indicating that it is highly present within the bakery sector in Pamplona. Furthermore, according to Porter [25], cited by Velásquez [23], these competencies constitute "the foundation for value creation at the organizational level." In this regard, it is essential for organizations to strengthen these indicators in order to sustain and enhance their competitiveness in the market, while ensuring high quality standards.

DISTINCTIVE COMPETENCIES OF COMPETITIVENESS

Table 5.

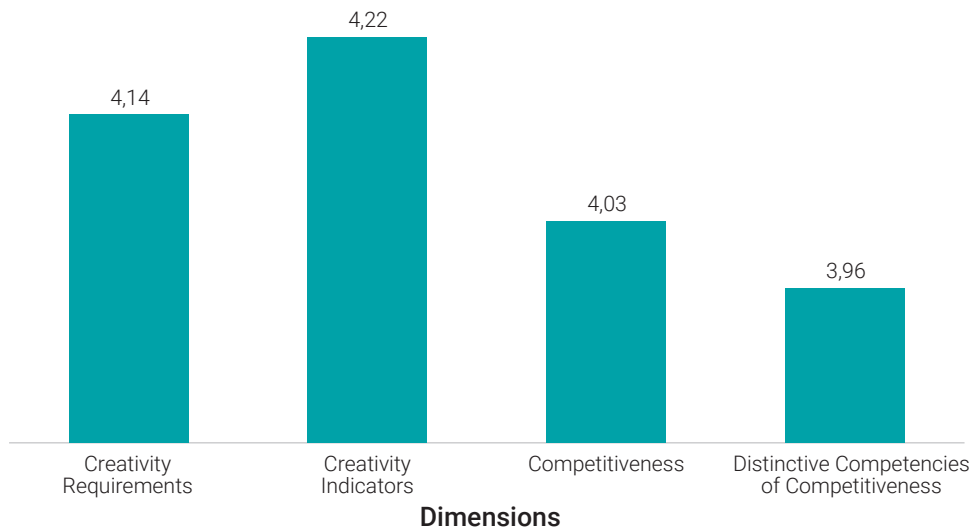
DIMENSIÓN	DISTINCTIVE COMPETENCIES OF COMPETITIVENESS																	
Indicator	Organizational			Human Resources			Infrastructure			Innovation				Customer Service			Marketing	
Items	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Indicator Mean	3,60			4,52			4,12			3,69				4,95			2,89	
Scale Category	High			Very High			High			High				Very High			Moderate	
Dimension Mean	3,96																	
Scale Category	High			Scale Placement Range			3,40 ≤ X ≤ 4.20											

The table shows the behavior of the *Distinctive Competencies of Competitiveness* dimension through its respective indicators: Organizational, Human Talent, Infrastructure, Innovation, Customer Service, and Marketing. First, the Organizational indicator presented a mean score of 3.60, which is categorized as highly present within the bakeries in Pamplona. Next, the Human Talent indicator yielded a mean score of 4.52, categorizing it as very high in the companies of this sector. Subsequently, the Infrastructure indicator obtained a score of 4.12, and is therefore categorized as highly present.

Additionally, the Innovation indicator received a score of 3.69, categorizing it as highly present. Continuing with the analysis, the Customer Service indicator obtained a mean of 4.95, placing it in the very high category. It is noteworthy that this was the highest-rated indicator throughout the study. On the other hand, the Marketing indicator yielded a mean score of 2.89, which falls within the moderately present range for bakeries in this sector.

Regarding the overall mean of the *Distinctive Competencies of Competitiveness* dimension, it was 3.96, which places it in the highly present category. This indicates that all bakeries in Pamplona appear to consider each of the distinctive competencies analyzed, with the aim of enhancing their competitiveness in the market.

VARIABLE PRESENCE



Graphic 1.

As shown in the figure, the dimensions comprising the variables Creativity and Competitiveness are presented: Creativity Requirements, Creativity Indicators, Competitiveness Factors, and Distinctive Competencies of Competitiveness. These results were obtained through descriptive statistical analysis, which yielded mean scores of 4.14, 4.22, 4.03, and 3.96, respectively, corresponding to 82.8%, 84.4%, 80.6%, and 79.2%. According to the proposed assessment scale, three of these dimensions are classified as highly present, while one falls within the category of very high presence among bakeries in Pamplona.

4. DISCUSSION AND CONCLUSIONS

The creativity requirements within the bakery sector of Pamplona, Norte de Santander, were identified and found to be highly developed according to the statistical results obtained. Furthermore, managers and employees actively apply these requirements when establishing the objectives pursued by their organizations.

The findings indicate that improvisation, intuition, and invention play a fundamental role in fostering creativity within these businesses. In other words, there is a strong commitment among companies in the sector to maintain, strengthen, and monitor these requirements in order to achieve organizational goals efficiently and effectively. Likewise, these businesses implement mechanisms aimed at offering

products and services that satisfy customer needs, thereby promoting customer loyalty and long-term relationships. Consequently, these creativity requirements are leveraged to achieve organizational objectives, generate added value, and strengthen strategic positioning within a highly competitive market.

The results obtained for this dimension are consistent with the theoretical framework reviewed in this study, as the cited authors emphasize the importance of effectively managing these requirements to develop products and services that meet customer expectations. Although slight variations were observed among the mean scores of the indicators, all of them exhibited a high level of presence within the activities of companies in the sector.

Regarding the creativity indicators evaluated in the bakery sector of Pamplona, Norte de Santander, the results revealed a high overall presence. However, the Fluency indicator was rated at a moderate level compared to the other indicators assessed.

Similarly, Originality, Flexibility, and Elaboration were perceived as fundamental indicators for evaluating creativity within these organizations. This demonstrates that bakeries make effective use of these capabilities to enter new markets while simultaneously increasing their competitiveness. Such practices enable these businesses to offer products that meet high-quality standards while maintaining creativity and innovation. Furthermore, bakeries consider the implementation of these indicators relevant for assessing their competitive position within the market.

The competitiveness factors within the bakery sector of Pamplona, Norte de Santander, were also identified, revealing an overall very high level of performance. Nevertheless, the Technology factor received a moderate rating. This finding suggests that only a limited number of companies possess the technological resources necessary to achieve significant expansion. Most businesses focus primarily on satisfying the demands of their existing local clientele, despite the existence of potential markets that could be targeted to attract new customers.

It is important to note that the remaining competitiveness factors exhibited a very high level of presence. This demonstrates a strong commitment among these businesses to producing goods that meet demanding quality standards while ensuring efficient and effective production processes. In this regard, the strategic adoption of Information and Communication Technologies (ICTs) represents a significant opportunity for the sector, as their integration can strengthen both creativity and competitiveness. Digital tools applied to production processes, customer relationship management, and marketing activities can improve operational efficiency while promoting innovation and long-term sustainability. These findings are consistent with the proposition of López and Ospina, who argue that improvements in operational

processes require managerial commitment, personnel training, and context-specific implementation strategies [25].

Finally, the distinctive competencies of competitiveness within the bakery sector of Pamplona, Norte de Santander, were analyzed. These competencies encompass the various internal functional areas of the organizations. Overall, the results revealed a high level of presence across these areas, indicating satisfactory performance. However, the Marketing indicator obtained a lower mean score than expected, suggesting that bakeries in Pamplona invest limited resources in advertising and promotional campaigns. This finding indicates a preference for traditional marketing approaches, likely because large-scale promotional campaigns require significant financial investments to reach a substantial proportion of potential customers.

Consequently, creativity as a driver of competitiveness is highly present in the activities carried out by companies within the bakery sector of Pamplona, Norte de Santander. The findings demonstrate that bakeries need to continue integrating creativity into their operations in order to strengthen their competitive position and increase profitability.

In conclusion, companies within this sector perceive creativity as a key competitive advantage that enables them to enhance their market competitiveness, increase revenues, and secure a stronger strategic position within their respective markets. These findings are consistent with the results reported by Caicedo, who highlighted the importance of incorporating new technologies into business management systems as a means of fostering innovation and ensuring competitiveness. This suggests that, within the bakery industry, creativity supported by ICTs can become an effective strategy for responding to dynamic and highly competitive market conditions [26].

Nevertheless, it is important to recognize that some organizations may exhibit resistance to the adoption of digital technologies. Such barriers can hinder the implementation of innovation-oriented strategies and limit the integration of the proposed approaches (Jiménez et al. [27]).

In the context of micro and small enterprises, the development of innovative strategies through digital media can generate sustainable competitive advantages, particularly in crisis scenarios such as those experienced during the COVID-19 pandemic. Within the Colombian gastronomy sector, effective social media management has been shown to strengthen brand positioning, diversify sales channels, and maintain customer engagement even under operational restrictions [25]. Similar trends have been observed in academic and business environments across other Latin American countries, where entrepreneurship has been promoted through the integration of

innovation, business training, and collaboration with the productive sector, thereby contributing to both economic and social development [26].

References

- [1] C. Agulló, “Cambios significativos en el mundo empresarial,” *Revista Economía Industrial*, vol. 8, s.f.
- [2] V. Medeiros, L. Gonçalves, and E. Camargos, “La competitividad y sus factores determinantes: Un análisis sistémico para países en desarrollo,” *Revista de la CEPAL*, no. 129, pp. 7–21, 2019.
- [3] IMD (Institute for Management Development), *World Competitiveness Yearbook*. Lausanne, Switzerland: IMD, 2012.
- [4] Unión Europea, *Desarrollo sostenible en Europa para un mundo mejor: Estrategia de la Unión Europea para un desarrollo sostenible*. Bruselas, Bélgica: Comisión Europea, 2001. [Online]. Available: <https://eur-lex.europa.eu/legal-content/ES/TXT/PDF/?uri=CELEX%3A52001DC0264>
- [5] UNESCO, *Políticas para la creatividad: Guía para el desarrollo de las industrias culturales y creativas*. Buenos Aires, Argentina: UNESCO, 2010.
- [6] L. Guilera, *Anatomía de la creatividad*. Valencia-Barcelona, España: Marge Books, 2020.
- [7] I. López Forniés, *Taller de diseño: Creatividad y proceso creativo*. Zaragoza, España: Pressas de la Universidad de Zaragoza, 2020.
- [8] R. Castañón, *La política industrial como eje conductor de la competitividad en las PyME*. México: Fondo de Cultura Económica, 2018.
- [9] D. Saavedra, “Una propuesta para la determinación de la competitividad en la PyME latinoamericana,” *Pensamiento & Gestión*, no. 33, pp. 93–124, 2012.
- [10] J. Ramírez and M. Ampudia, “Factores de competitividad empresarial en el sector comercial,” *RECITIUTM: Revista Electrónica de Ciencia y Tecnología del Instituto Universitario de Tecnología de Maracaibo*, 2018.
- [11] Banco Interamericano de Desarrollo, *Mapa de competitividad del BID*. Washington, DC, USA: BID, 2008.

- [12] Euromonitor International, citado en Diario La República, “Consumo per cápita de pan en Colombia es de 23 kilos al año,” May 8, 2022.
- [13] Diario La República, “Consumo per cápita de pan en Colombia es de 23 kilos al año,” May 8, 2022.
- [14] ANIPAN, Consumo per cápita de pan en Colombia es de 23 kilos al año. Cali, Colombia: ANIPAN, 2022.
- [15] A. Cruz and O. García, Recopilación de la costumbre mercantil en las panaderías del municipio de Pamplona, que han manejado el vendaje como estrategia promocional y comercial dentro del ambiente de mercadeo. Pamplona, Colombia: Universidad Nacional Abierta y a Distancia, 2005.
- [16] R. Guerrero, “Sostenibilidad financiera para las empresas del sector panificador de Pamplona, Norte de Santander, Colombia,” Dictamen Libre, pp. 33–47, 2021.
- [17] Diario La Opinión, Creatividad en el sector panadero. Pamplona, Colombia, 2019.
- [18] S. López Mora, J. A. Blanco Silva, and N. Contreras Arroyo, Innovación y creatividad en las empresas del subsector panadero de Bucaramanga y su área metropolitana, 2020.
- [19] M. A. Aponte de la Cruz and B. O. Flores Pérez, “Propuesta de mejora en las áreas de producción y logística para reducir costos en una empresa del sector panadero,” 2022.
- [20] J. P. Herrera, Correlación entre competitividad e innovación: Una validación empírica de la teoría. Bogotá, Colombia: Universidad Nacional de Colombia, 2019.
- [21] S. Herrera, Umbrales de la creatividad: Construcción social de conocimiento creativo en algunas micro-pequeñas organizaciones productivas (MiPymes). Bogotá, Colombia: Universidad Nacional de Colombia, 2019.
- [22] D. Velásquez, Análisis de la competitividad del sector financiero de la ciudad de Manizales. Bogotá, Colombia: Universidad Nacional de Colombia, 2018.
- [23] R. Hernández Sampieri, C. Fernández Collado, and P. Baptista Lucio, Metodología de la investigación, 6th ed. México: McGraw-Hill Education, 2014.
- [24] M. E. Porter, The Competitive Advantage of Nations. New York, NY, USA: Free Press, 2021.

- [25] L. A. Jiménez Rodríguez, R. Gamboa Suárez, and J. M. García Mogollón, "Anti-networking and digital technology animosity as a challenge in postmodern organization," *Ingeniería Solidaria*, vol. 20, no. 3, pp. 1–14, 2025, doi: <https://doi.org/10.16925/2357-6014.2024.03.06>.
- [26] S. A. Caicedo Tapias, "Sinergia de tecnologías de la industria 4.0 en el sistema de gestión de seguridad operacional para su integración en la gestión empresarial," *Ingeniería Solidaria*, vol. 21, no. 1, pp. 1–23, 2025, doi: <https://doi.org/10.16925/2357-6014.2025.01.02>.
- [27] C. A. López Bello and L. A. Ospina Jiménez, "Diseño de una metodología integral para la implementación de manufactura esbelta en el contexto colombiano," *Ingeniería Solidaria*, vol. 17, no. 3, pp. 1–30, 2021, doi: <https://doi.org/10.16925/2357-6014.2021.03.10>.
- [28] Y. K. Parra Acosta, C. A. Almanza, and D. F. Astudillo Valverde, "Análisis de estrategia en redes sociales para el sector de los restaurantes colombianos en tiempos de crisis por la pandemia COVID-19," *FACE: Revista de la Facultad de Ciencias Económicas y Empresariales*, vol. 21, no. 2, pp. 84–98, 2021, doi: <https://doi.org/10.24054/face.v21i2.1106>.
- [29] G. J. Benavides Martínez and E. Larios-Gómez, "Emprendimiento universitario en Monterrey, Nuevo León, México," *FACE: Revista de la Facultad de Ciencias Económicas y Empresariales*, vol. 21, no. 3, pp. 102–114, 2021, doi: <https://doi.org/10.24054/face.v21i3.1139>.