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# ASSOCIATIVITY AND MARKETING: KEY FACTORS FOR BUSINESS COMPETITIVENESS CASE STUDY COLOMBIA

ASOCIATIVIDAD Y MARKETING: FACTORES CLAVE PARA LA COMPETITIVIDAD EMPRESARIAL - ESTUDIO DE CASO COLOMBIA

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## Resumen

Este estudio presenta los resultados de una evaluación realizada a empresas que operan en el sector turístico, analizadas en el contexto del impacto causado por la pandemia de Covid-19. El objetivo de esta investigación es establecer la relación entre las políticas y prácticas de gestión relacionadas con los procesos asociativos de diferentes unidades empresariales. El estudio emplea la herramienta MIGSA, que ayuda a identificar, entre otros factores, cómo se interrelacionan variables como la asociatividad y el marketing. Los hallazgos revelan un comportamiento heterogéneo entre las empresas, particularmente en su interés por desarrollar nuevas prácticas para promover el crecimiento empresarial. Esto resalta la necesidad continua de aprendizaje y la generación de actividades relacionadas con la investigación, la innovación y el desarrollo.

**Palabras clave:** Asociatividad, Competitividad, Covid-19, América Latina.

## Abstract

This study presents the results of an evaluation conducted on companies operating in the tourism sector, analyzed in the context of the impact caused by the Covid-19 pandemic. The objective of this research is to establish the relationship between policies and management practices related to the

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associative processes of different business units. The study employs the MIGSA tool, which helps to identify, among other factors, how variables such as associativity and marketing are interrelated. The findings reveal a heterogeneous behavior among companies, particularly in their interest in developing new practices to promote business growth. This highlights the ongoing need for continuous learning and the generation of activities related to research, innovation, and development.

**Keywords:** associativity, competitiveness, Covid-19, Latin America

## 1. Introduction

Globalization has led to significant changes in the way businesses are established, enabling the development of activities that facilitate business growth (Giddens, 2018). This phenomenon is also accompanied by processes driven by emerging technological trends, which in turn generate cultural, social, economic, environmental, and other transformations (Reyes et al., 2018).

Therefore, it is essential for companies to implement strategies such as mergers, alliances, networks, production chains, cooperatives, associations, and other modalities that enable them to adapt, articulate, and interact at both macro and micro levels. These strategies facilitate the generation of synergies for the development of sustainable linkages over time, which is crucial for maintaining competitiveness and achieving efficient growth (Avendaño, 2014).

Therefore, it is necessary for companies to carry out strategies such as mergers, alliances, networks, production chains, cooperatives, associations and other modalities that allow them to adapt, articulate and interact at macro and micro levels, allowing them to generate synergies for the development of sustainable linkages over time, in order to be competitive and grow efficiently over time (Avendaño et al, 2014).

It is important to emphasize that humanity has faced various pandemics that significantly impact the economy, health systems, beliefs, and perceptions of the surrounding reality (León, Rincón, & Duque, 2020). These challenges compel individuals, influenced by their environment and the factors affecting their daily lives, to adapt their decision-making mechanisms. These mechanisms are shaped by cultural contexts and operate based on the principles that collectively inform their rationality (Weigand, 2006).

Similarly, Santa Álvarez, Hernández Bernal, and Pabón Pérez (2019) note that, in response to the effects of globalization, various alternatives have been developed to enhance SMEs in Colombia. One notable strategy involves fostering associativity, which effectively strengthens different sectors of the economy.



Authors such as Ibáñez et al. (2015), Quillahuamán and Carasas (2018), and Mosquera et al. (2021) argue that one effective tactic to enhance competitiveness is sectoral collaboration, supported by the associativity of organizations. This approach generates benefits such as the development of suppliers, improved responsiveness to overall demand, and consequently enhanced productivity, all of which facilitate access to international markets.

Mira (2018) highlights that human beings are inherently associative and require both cooperation and competition among their peers to emerge, improve, progress, develop, and transcend.

The study by Carbajal, Tovar, and Zimmerman (2017) presents a model of associativity within the production chain of micro, small, and medium-sized enterprises (MSMEs) in the citrus agribusiness sector in northern Veracruz, Mexico. The research establishes the significance of direct actors, services, environmental factors, and government policies that influence associativity within this production chain. It demonstrates that such collaboration fosters greater cooperation and synergies among the companies involved, ultimately leading to mutual benefits. Additionally, the study emphasizes the critical role of government policies that support associativity.

Another model designed to promote the associativity of SMEs is presented by Sánchez-García et al (2020). This model advocates for the integration of systemic methods, including partial least squares modeling and the viable system model, as alternatives to enhance complementarity and improve responsiveness and adaptability within the tourism sector.

Likewise, Alarcón-Villamil, Gómez-Caicedo & Stellian (2016) have been able to carry out studies in SMEs based on the Sustainable Management and Associativity Indicators Model, which contemplates aspects that evaluate business practices and their focus on processes that are aimed at improving the competitiveness of companies.

Thus, associativity plays a crucial role in the growth of companies, serving as a tool that enables them to swiftly develop strategies to adapt to market challenges, strengthen their presence in domestic markets, and enhance their competitiveness in international markets.

The objective of this research is to establish the relationship between management policies and practices related to associative processes among different business units, focusing on a case study of SMEs engaged in tourism activities in Bogotá, specifically in the areas of accommodation and lodging services, gastronomy, and travel agencies.

The study involved the participation of 102 companies in the city of Bogotá that carry out tourism activities and have been operating for more than 5 years. The evaluation of the SMEs was based on the use of the Model of Indicators of Sustainable Management and Associativity MIGSA, which allows to evaluate and quantitatively measure the degree of progress in the implementation of management policies and practices in the companies.

## 2. Partnership and Competitiveness

Currently, numerous studies emphasize the importance of establishing business practices and metrics that enhance the competitive development of companies. As a result, various investigations have been conducted on factors that promote effective resource utilization. Gallarza et al. (2013) focus their research on the symmetry in business relationships, while Mwesumo and Halpern (2016), examine conflicts between organizations and the value chain, which can create business opportunities.

Valaei et al. (2017), identify a significant issue among tourism SMEs: organizational inconsistency, which negatively affects their learning capabilities and overall performance. Through structural equation modeling, the authors demonstrate that aspects such as explanatory learning strategies and creativity can contribute to innovation processes that allow SMEs to remain competitive in the market.

Similarly, Aboelmagd (2018) evaluates sustainability in the manufacturing practices of SMEs, highlighting the importance of examining relationships and impacts among specific components, such as the environment and organizational structures. The main findings indicate that stakeholders represent a critical component of the environment, exerting significant influence over the management capabilities of SMEs. Authors like Ali et al. (2017) and Zhang and Cao (2018) recognize that both the management style implemented in SMEs and the development of adaptive capabilities are factors that stimulate innovation. Their studies report that this innovation capacity occurs internally, focusing on strengthening decision-making processes, succession planning, and, to a lesser extent, employee development.

Jardón and Martos (2012), argue that due to their organizational characteristics and management capabilities, SMEs should adopt inter-organizational or collective efforts to enhance efficiency and profitability in a highly standardized market characterized by aggressive competition. The findings suggest that for such collectivity to become a reality, management, coordination, and performance mechanisms must be aligned. Proper configuration and relationships among these components enable service sector SMEs to improve process quality and foster customer loyalty, as noted by Fararah and AISwidi (2013).

In this context, Wu et al. (2014) emphasize that given the turbulent environment in which these companies operate, it is nearly impossible for them to compete and sustain their market presence without engaging in supply chains or collaborative, goal-oriented clusters. The cited studies further highlight that forming beneficial interrelationships relies on trust, commitment, reciprocity, and power. Additionally, the results indicate that relationships among these components are advantageous for organizations, as they facilitate collaboration and information transfer.

Associativity is defined as “a mechanism of cooperation between small and medium-sized enterprises, where each participant, while maintaining its legal independence and management autonomy, voluntarily decides to engage in a joint effort with others in pursuit of a common goal” (Mendizábal, 2012). Under this framework, associativity is characterized as a free and voluntary decision. However, Rifo, a professor at the Universidad del Bío Bío in Chile, posits that the concept of associativity extends beyond a mere sum of wills; it encompasses synergy in market activities, solidarity in the face of competition, and the exchange of experiences and knowledge, along with the strengthening of support networks. Only through this comprehensive approach does associativity become, according to Rifo, the foundation of entrepreneurship, as it alleviates fear and facilitates the sharing of individual skills (Cáceres, 2017; Alba, Arévalo & Rojas, 2018).

The Andean Community of Nations defines associativity as a cooperative method wherein each member maintains administrative independence and strategic competence, while collectively sharing the objective of creating better conditions to participate in increasingly competitive markets (CAN General Secretariat, 2013). Santa Álvarez, Hernández Bernal, and Pabón Pérez (2019), note that associativity benefits the country as a whole by equipping companies with the skills necessary to confront market challenges and achieve common objectives, thereby promoting sustainable development in various regions.

An important concept related to associativity is competitiveness, which has been addressed by authors such as Altenburg et al. (1998), they assess competitiveness through production factors such as land, capital, natural resources, and labor. Ricardo's well-known theory of comparative advantage, still relevant today, was an early attempt to understand how nations compete. However, several economists later recognized that production-related factors alone could not fully explain competitiveness. Throughout the 20th century, various renowned economists contributed to a deeper understanding of this concept. Schumpeter (1951) highlighted the crucial role of entrepreneurship as a driver of development, a theory that was later applied to management by Drucker (1993). Solow (1957), a Nobel Prize-winning economist from MIT, examined the growth factors that fueled the U.S. economy from 1948 to 1982.

### 3. Methodology

The research was conducted to establish the relationship between policies and management practices related

to associative processes among various business units engaged in tourism activities in Bogotá, specifically in accommodation and lodging services, gastronomy, and travel agencies. The study involved the participation of 102 companies operating in Bogotá's tourism sector, all of which have been in business for over five years. Information was collected using the MIGSA Model of Indicators for Sustainable Management and Associativity, which facilitates the evaluation and quantitative measurement of the degree of progress in implementing management policies and practices within these companies.

The MIGSA model facilitates organizational diagnosis based on two dimensions, nine properties, 31 indicators, and 112 measurement indices, which collectively provide a comprehensive overview of the company's internal management aimed at promoting productivity and competitiveness through both internal and external elements or actions (Alarcón-Villamil, Gómez-Caicedo, & Stellan, 2016; Riveros, Corrales, & Bohórquez, 2015; Danna-Buitrago, Alarcón-Villamil, & Gómez-Caicedo, 2014). The properties are designed to distinguish the functional areas of the company and to integrate as many stakeholders as possible for the analysis. This study focuses on the analysis of one dimension of the model, specifically associativity, which comprises 21 evaluation indices corresponding to an equal number of company management initiatives.

In the methodological aspects of this factorial-type research, principal component analysis (PCA) was employed

The statistical software STATA 15 was utilized for data management. PCA is a multivariate technique aimed at identifying the presence or absence of linear combinations among variables—specifically, the MIGSA measurement indices—so that the maximum amount of variation between them can be explained. The goal of PCA is to simplify or combine correlated variables in a manner that allows for the total variance to be adequately explained.

It is important to note that the use of Principal Component Analysis (PCA) is particularly beneficial for the analysis conducted, given its nature and the characteristics of the units of analysis. However, in studies involving a larger number of variables, heterogeneous units of analysis, or different economic sectors, as well as in cases where there are missing values in the observations, the reliability and relevance of PCA can be significantly compromised.

For the application of PCA, the following steps were undertaken: first, the definition of the problem; second, the preparation of the correlation matrix to assess the suitability of PCA, which involved conducting Bartlett's test and estimating the Kaiser-Meyer-Olkin (KMO) measure; third, the factor analysis method was chosen, specifically PCA; fourth, the number of factors was determined through the estimation of eigenvalues and a sedimentation graph; fifth, the factors were rotated; and finally, the factors were interpreted.

## 4. Results and analysis

For the analysis and presentation of results, the companies were numbered from 1 to 102, with each number representing a distinct business unit among the 102 studied. Given that the study aims to establish the relationship between management policies and practices related to the associative processes of these companies to define competitive profiles, the analysis and description of results focus exclusively on the 21 indices measuring the property referred to as “Perceptions and Practices of Associativity” within the MIGSA framework. The evaluated indices are presented in Table 1.

Table 1. Coding of property measurement indices Perceptions and practices of MIGSA associativity

Index	Label
VAEE	Associative links - Meeting Spaces
VAC	Partnerships - Capacity building for process improvement
VACNT	Associative links - Knowledge of new technologies
VACC	Associative links - Trust
VARC	Associative links - Cooperation relations
GSR	Sectoral representation - Trade unions
CSR	Sectoral representation - State
RSIP	Sectoral representation - Own initiative
RSAE	Sectoral representation - Learning
MIAE	International Markets - Accompanying Entities
MIGA	International Markets - Partnership Management
MICN	International Markets - Compliance
MICA	International Markets - Training
CEBK	Sharing Experiences - Benchmarking
MPIA	Productive Maximisation - Environmental Impact
MPTL	Productive Maximisation - Clean Technology
MPIAA	Productive Maximisation - Forward Integration
MPS	Productive Maximisation - Backward Integration
LEIP	Productive Maximisation - Environmental seals
LEPG	Meeting Places - Own Initiative
LEPP	Meeting Places - Proposed by Trade Unions
	Meeting Places - Proposed by Public Sector

Source: Own elaboration



Table 2 shows the correlation between the results of each pair of measurement indices compared. For the analysis, we used a statistical significance limit of 0.05, a level at which it could be established that only the correlation between the MPA and CEBK indices does not offer a good degree of shared or explained variability, given that the  $r^2= 0.032$  statistic.

Table 2. Pearson’s correlation matrix between the 21 measurement indices

	VCEP	VCE	VCEVT	VCEC	VCEZ	KEA	KEB	RELIP	RSAE	RIAE	RIEA	MOON	MECA	CEBK	
VCEP	1.0000							RELIP	1.0000						
VCE	0.5595 0.0000	1.0000						RIAE	0.6295 0.0000	1.0000					
VCEVT	0.5487 0.0000	0.5355 0.0000	1.0000					RIEA	0.5920 0.0000	0.5908 0.0000	1.0000				
VCEC	0.5547 0.0000	0.5762 0.0000	0.5789 0.0000	1.0000				RIEAS	0.5658 0.0000	0.5905 0.0000	0.6271 0.0000	1.0000			
VCEZ	0.5727 0.0000	0.5602 0.0000	0.5009 0.0000	0.5025 0.0000	1.0000			RIEAS	0.5669 0.0000	0.5217 0.0000	0.5478 0.0000	0.5751 0.0000	1.0000		
RSG	0.5530 0.0000	0.5273 0.0000	0.6255 0.0000	0.6255 0.0000	0.6246 0.0000	1.0000		RIEAS	0.6090 0.0000	0.6177 0.0000	0.5828 0.0000	0.5925 0.0000	0.6288 0.0000	1.0000	
RSI	0.5172 0.0000	0.5595 0.0000	0.4467 0.0000	0.4091 0.0000	0.4088 0.0000	0.6854 0.0000	1.0000	CEBK	0.5835 0.0000	0.5553 0.0000	0.5653 0.0000	0.5181 0.0024	0.5287 0.0025	0.5218 0.0000	
RSZP	0.5171 0.0000	0.4533 0.0000	0.5739 0.0000	0.5662 0.0000	0.4525 0.0000	0.6133 0.0000	0.6257 0.0000	RIEAS	0.5836 0.0015	0.5821 0.0077	0.5899 0.0055	0.5575 0.0000	0.5311 0.0000	0.5296 0.0000	0.5791 0.2713
RSAL	0.5225 0.0000	0.5246 0.0000	0.4944 0.0000	0.5040 0.0000	0.5470 0.0000	0.6218 0.0000	0.5280 0.0000	RIEAS	0.5892 0.0000	0.5877 0.0001	0.5708 0.0011	0.5988 0.0023	0.5338 0.0000	0.5807 0.0001	0.5750 0.2651
RIAE	0.5170 0.0000	0.5228 0.0000	0.4753 0.0000	0.4483 0.0000	0.4658 0.0000	0.5275 0.0000	0.5077 0.0000	RIEAS	0.5868 0.0000	0.5814 0.0000	0.5802 0.0011	0.5827 0.0000	0.5299 0.0000	0.5982 0.0000	0.5882 0.2687
RIEA	0.5040 0.0000	0.5848 0.0000	0.4732 0.0000	0.4072 0.0000	0.4464 0.0000	0.5725 0.0000	0.5223 0.0000	RIEAS	0.5982 0.0022	0.5838 0.0019	0.5828 0.0000	0.5979 0.0024	0.5278 0.0000	0.5285 0.0000	0.5775 0.2692
MOON	0.5344 0.0000	0.5572 0.0000	0.3683 0.0000	0.4253 0.0000	0.4025 0.0000	0.4805 0.0000	0.5322 0.0000	RELIP	0.5829 0.0000	0.5808 0.0000	0.5879 0.0000	0.5828 0.0000	0.5324 0.0000	0.5982 0.0000	0.5981 0.2680
MECA	0.5094 0.0000	0.5490 0.0000	0.5428 0.0000	0.5491 0.0000	0.5342 0.0000	0.6232 0.0000	0.5500 0.0000	RELIP	0.5829 0.0000	0.5807 0.0000	0.5828 0.0000	0.5979 0.0000	0.5315 0.0000	0.5217 0.0000	0.5879 0.2680
CEBK	0.5515 0.0000	0.5208 0.0000	0.3463 0.0000	0.3390 0.0000	0.3345 0.0013	0.4449 0.0000	0.4865 0.0000	RELIP	0.5831 0.0000	0.5802 0.0000	0.5828 0.0000	0.5979 0.0000	0.5315 0.0000	0.5217 0.0000	0.5879 0.2680
RIEAS	0.4884 0.0000	0.4472 0.0000	0.3055 0.0000	0.3255 0.0000	0.3708 0.0000	0.3322 0.0007	0.3035 0.0001	RIEAS	0.5831 0.0000	0.5802 0.0000	0.5828 0.0000	0.5979 0.0000	0.5315 0.0000	0.5217 0.0000	0.5879 0.2680
RIEAS	0.3654 0.0000	0.5267 0.0000	0.3488 0.0000	0.2959 0.0025	0.3575 0.0000	0.2468 0.0004	0.4479 0.0000	RIEAS	0.5831 0.0000	0.5802 0.0000	0.5828 0.0000	0.5979 0.0000	0.5315 0.0000	0.5217 0.0000	0.5879 0.2680
RIEAS	0.4625 0.0000	0.4386 0.0000	0.4188 0.0000	0.4189 0.0000	0.2361 0.0013	0.4162 0.0000	0.2971 0.0000	RIEAS	0.5831 0.0000	0.5802 0.0000	0.5828 0.0000	0.5979 0.0000	0.5315 0.0000	0.5217 0.0000	0.5879 0.2680
RIEAS	0.4090 0.0000	0.5225 0.0000	0.2162 0.0000	0.2955 0.0020	0.4258 0.0000	0.2967 0.0000	0.2822 0.0001	RIEAS	0.5831 0.0000	0.5802 0.0000	0.5828 0.0000	0.5979 0.0000	0.5315 0.0000	0.5217 0.0000	0.5879 0.2680
RELIP	0.5792 0.0000	0.5842 0.0000	0.5672 0.0000	0.5088 0.0000	0.4627 0.0000	0.5839 0.0000	0.5185 0.0000	RELIP	0.5831 0.0000	0.5802 0.0000	0.5828 0.0000	0.5979 0.0000	0.5315 0.0000	0.5217 0.0000	0.5879 0.2680
RELIP	0.6223 0.0000	0.6295 0.0000	0.4868 0.0000	0.6097 0.0000	0.4583 0.0000	0.6215 0.0000	0.5629 0.0000	RELIP	0.5831 0.0000	0.5802 0.0000	0.5828 0.0000	0.5979 0.0000	0.5315 0.0000	0.5217 0.0000	0.5879 0.2680
RELIP	0.5849 0.0000	0.5467 0.0000	0.4166 0.0000	0.5085 0.0000	0.2615 0.0000	0.4549 0.0000	0.5884 0.0000	RELIP	0.5831 0.0000	0.5802 0.0000	0.5828 0.0000	0.5979 0.0000	0.5315 0.0000	0.5217 0.0000	0.5879 0.2680

Source: Own elaboration

From the table it can be established that the measurement indices of the property Perceptions and Associativity Practices show correlations different from zero, which implies that there is an association or linear relationship between them. However, in order to define the relevance or not of the PCA, it was necessary to test the Barlett’s sphericity test and estimate the KMO.



### 4.1 Barlett’s test of sphericity test for the sample

```

Bartlett test of sphericity

Chi-square      =      1377.643
Degrees of freedom =      210
p-value         =      0.000
H0: variables are not intercorrelated

Kaiser-Meyer-Olkin Measure of Sampling Adequacy
KMO             =      0.918
    
```

Source: Own elaboration

From the test performed it can be determined that since the p-value is 0.000 and is less than the significance level, the null hypothesis,  $H_0 = \text{“variables are not intercorrelated”}$ , is rejected, implying that there is intercorrelation between the variables. Furthermore, the Kaiser-Meyer-Olkin KMO estimate was 0.918, which shows the suitability of the analyzed data for factor analysis and implies that the PCA is relevant to reduce the variables.

Subsequently, based on the estimation of the factors, the assessment of the fit and the use of the latent root criterion - which states that any individual factor must account for the variance of at least a single variable - eigenvalues greater than 1 were considered and the PCA was found to be adequate.

Table 3 lists the eigenvalues for each component, which are considered principal components and are related to the 21 measurement indices studied.

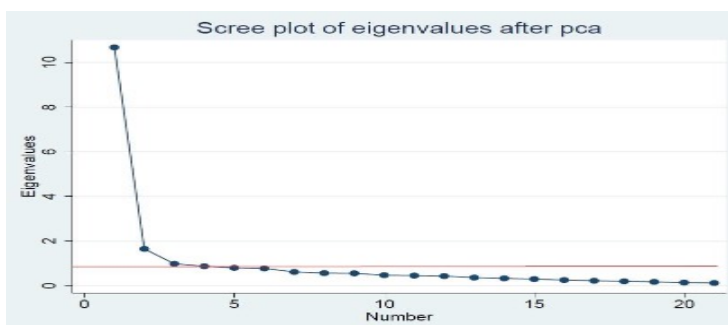
Table 3. Eigen values for each component related to the 21 measurement indices

Principal components/correlation				Number of obs	=	99
				Number of comp.	=	21
				Trace	=	21
Rotation: (unrotated = principal)				Rho	=	1.0000
Component	Eigenvalue	Difference	Proportion	Cumulative		
Comp1	10.6772	9.02568	0.5084	0.5084		
Comp2	1.65152	.666286	0.0786	0.5871		
Comp3	.985232	.112648	0.0469	0.6340		
Comp4	.872585	.070079	0.0416	0.6755		
Comp5	.802506	.023818	0.0382	0.7138		
Comp6	.778688	.159381	0.0371	0.7508		
Comp7	.619307	.052707	0.0295	0.7803		
Comp8	.5666	.00906978	0.0270	0.8073		
Comp9	.55753	.0838937	0.0265	0.8339		
Comp10	.473637	.0175807	0.0226	0.8564		
Comp11	.456056	.0225224	0.0217	0.8781		
Comp12	.433533	.0669871	0.0206	0.8988		
Comp13	.366546	.0346838	0.0175	0.9162		
Comp14	.331863	.0316466	0.0158	0.9320		
Comp15	.300216	.0432582	0.0143	0.9463		
Comp16	.256958	.0323516	0.0122	0.9586		
Comp17	.224606	.0223151	0.0107	0.9693		
Comp18	.202291	.0272896	0.0096	0.9789		
Comp19	.175001	.0309741	0.0083	0.9872		
Comp20	.144027	.0199245	0.0069	0.9941		
Comp21	.124103	.	0.0059	1.0000		

Source: Own elaboration

Table 3 allows us to identify that the factors called comp 1, comp 2 and comp 3 resulting from the application of the PCA explain 63.4% of the variability of the indicators. However, to define the number of components, the criterion of eigenvalue above 1 is used. Since it was not possible to clearly define the number of factors, the sedimentation graph - Figure 1 - is used.

Figure 1. Sedimentation graph



Source: Own elaboration

From the sedimentation plot and the use of the eigenvalue criterion above 1, it is possible to define the use of 2 factors within the analysis.

To simplify the factor structure, orthogonal Varimax rotation was used to minimize the number of variables with high saturation. Table 4 shows the factor loadings in an orthogonal way.

Table 4. Orthogonal factor loadings -Varimax- of the 21 indices measuring the MIGSA property Perceptions and Practices of Associativity.

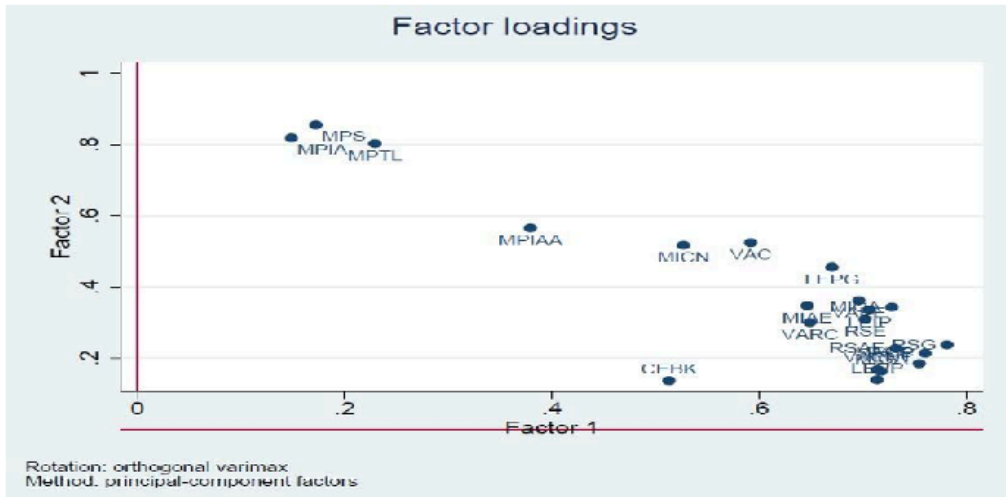
Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
VAGF	0.6964	0.3615	0.3844
VAC	0.5921	0.5245	0.3744
VACNT	0.7145	0.1680	0.4613
VACC	0.7547	0.1852	0.3961
VARC	0.6491	0.3001	0.4880
RSG	0.7814	0.2379	0.3328
RSI	0.7825	0.3087	0.4113
RSIP	0.7604	0.2143	0.3759
RSAE	0.7322	0.2278	0.4120
MIAE	0.6465	0.3471	0.4615
MIGA	0.7179	0.1634	0.4580
MICN	0.5270	0.5173	0.4547
MICA	0.7283	0.3431	0.3519
CEBK	0.5130	0.1370	0.7181
MPIA	0.1488	0.8181	0.3085
MPTL	0.2295	0.8023	0.3037
MPIAA	0.3793	0.5658	0.5361
MPS	0.1723	0.8548	0.2396
LEIP	0.7064	0.3355	0.3885
LEPG	0.6704	0.4554	0.3432
LEPP	0.7139	0.1396	0.4708

Source: Own elaboration

For the interpretation of the factors from Table 4, use is made of the criterion of practical significance of the factor loadings. From this perspective, loadings greater than 0.5 are considered statistically significant and allow us to identify whether a factor explains an index or variable of analysis. From this, the factor loadings are plotted to identify where each factor is concentrating most of the data -measurement indices- (Figure 2).

Figure 2. Factor loadings



Source: Own elaboration

Based on the rotated factor loadings, the distribution of the measurement indices of the studied MIGSA property was established in two groups called Factor 1 and Factor 2 - Table 5.

Table 5. Distribution of measurement indices from rotated factor loadings

Factor	Measurement index	Label
<b>Factor 1</b>	VAEE	Associative links - Meeting Spaces
	VAC	Partnerships - Process improvement training
	VACNT	Associative links - Knowledge of new technologies
	VACC	Associative links - Trust
	VARC	Associative links - Cooperation relations
	GSR	Sectoral representation - Trade unions
	CSR	Sectoral representation - State
	RSIP	Sectoral representation - Own initiative
	RSAE	Sectoral representation - Learning
	MIAE	International Markets - Accompanying Entities
	MIGA	International Markets - Partnership Management
	MICN	International Markets - Compliance
	MICA	International Markets - Training
	CEBK	Sharing Experiences - Benchmarking
	LEIP	Meeting Places - Own Initiative
	LEPG	Meeting Places - Proposed by Trade Unions
	LEPP	Meeting Places - Proposed by Public Sector

Factor	Measurement index	Label
Factor 2	MPIA MPTL MPIAA MPS	Productive Maximisation - Environmental Impact Productive Maximisation - Clean Technology Productive Maximisation - Forward Integration Backward Integration Productive Maximisation - Environmental seals

Source: Own elaboration

Then, Factor 1 is highly correlated with the measurement indices VAAE, VAC, VACNT, VACC, VARC, RSG, RSE, RSIP, RSAE, MIAE, MIGA, MICN, MICA, CEBK, LEIP, LEPG and LEPP. The common characteristic of this group has to do with the interest in internal and external initiatives and practices for the relationship and interaction with public and private companies,

Factor 2 is correlated with the measurement indices MPIA, MPTL, MPIAA and MPS, interest in internal and external initiatives and practices related to internal resource management processes.

From this perspective, in accordance with the PCA carried out with the 102 companies that develop

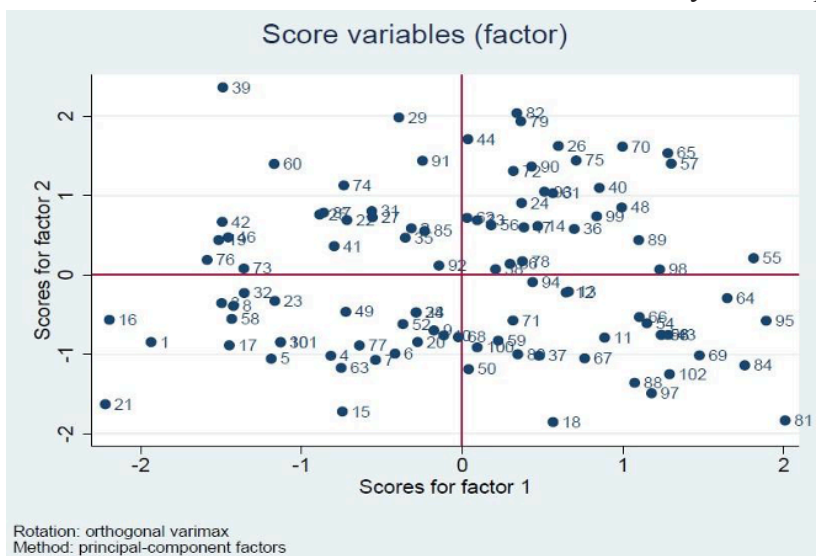
tourism activities and have been operating in the city of Bogotá for more than 5 years, the following profile of associativity was established:

Axis 1 (Factor 1): Partnership through internal and external initiatives and practices for engagement and interaction with third parties.

Axis 2 (Factor 2): Partnership through internal and external initiatives and practices for productive maximization in internal processes.

To improve the analysis, the estimation of factor scores is carried out to identify more easily the location of the sample data and the existence or not of outliers. Figure 3 presents the estimates of the factor scores of the companies in the plane formed by the defined axes.

Figure 3. Location of the factor score estimates of the analyzed companies



Source: Own elaboration



Based on Figure 3 and the definition of the Factor 1 and Factor 2 axes, 4 quadrants are established. The first quadrant is characterized by the concern for advancing internal and external associative initiatives for relations with third parties and maximizing production in internal processes. Companies 44, 82, 79, 26, 70, 65, 57, 57, 90, 72, 40, 48, 89, 98, 55, 99, 24, 36, 14, 78, 56, among others, are in this quadrant.

A second quadrant is characterized by a lack of concern for advancing internal and external associative initiatives for relations with third parties and maximizing production in internal processes. This quadrant includes companies 21, 16, 1, 17, 5, 15, 4, 63, 7, 6, 6, 77, 58, 23, 32, 49, 101, 52, 2, 8, 20, 9, 68, among others.

A third quadrant is characterized by a concern for advancing internal and external associative initiatives for relations with third parties, but little concern for advancing internal and external initiatives and practices for maximizing production in internal processes. Companies 81, 84, 95, 64, 69, 102, 88, 97, 11, 18, 66, 67, 54, 37, 50, 100, 59, 71, 12, 13, 94, among others, are located in this quadrant.

A fourth quadrant is characterized by a lack of concern for advancing internal and external associative initiatives for relations with third parties, but concern for advancing internal and external initiatives and practices for maximizing production in internal processes. Companies 29, 39, 60, 91, 92, 74, 41, 42, 76, 73, 22, 27, 31, 25, 87, 85, 35, among others, are located in this quadrant.

## 5. Conclusions

The study, and in particular the PCA Principal Component Analysis allowed to establish the existence of the relationship between the policies and management practices of the companies, as well as to identify aspects that summarize the variability of the business activities of the 102 companies, which are characterized by the concern to advance internal and external initiatives for the relationship with third parties and the productive maximization in the internal processes and which contribute to their associative processes.

Furthermore, from the analysis carried out and the location of the companies studied, it could be determined that the companies studied show heterogeneous behavior in their concern for advancing internal and external initiatives of associativity for the relationship with third parties and the maximization of production in internal processes, given that no marked similarities were found between groups of companies in activities such as accommodation and lodging services, gastronomy and travel agencies.

However, in this sense, it is important to mention that the companies located in the first quadrant, characterized by the concern for advancing internal and external initiatives of associativity for the relationship with third parties and the maximization of production in internal processes, are companies that develop different economic activities and only share the fact that they are large business units with intensive capital needs.

For this reason, similar comparative studies with large and medium-sized companies in different geographical locations and economic sectors in Colombia can be considered as a future research process.

From the study, it can be recommended to business units that carry out activities in the tourism sector that they promote internal and external management policies and practices to promote trust and the generation of joint work ties. This relationship of trust can be improved through the joint generation of spaces and work tables to promote learning and active participation in representation scenarios.

## Author contributions

The authors participated in the construction of the theoretical framework that supports the research; as well as in the collection, data processing and analysis of the information that supports the development of the article. Therefore, they agree with what is stated in this document.

## Conflict of interest

The authors declare no potential conflict of interests.

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