Communities of practice in tourism SMES of the department of Caldas – Colombia

Comunidades De Práctica En Las PYMES Del Sector Turístico Del Departamento De Caldas

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Artículo de investigación científica y tecnológica

Abstract— **Within the framework of knowledge management, it is necessary to develop intellectual capital, for which variables such as communities of practice must be considered, given their importance for the development of organizations. The research results presented in this article are intended to establish the state of development of communities of practice related to intellectual capital in SMEs in the tourism sector of the Department of Caldas, Colombia, for which it was used a descriptive and correlational analysis with an evaluation model adapted to specific communities, it was possible to evaluate 87% of the SMEs. The main findings show the consolidation of communities of practice of SMEs operators in the tourism sector in the department of Caldas, and highlight the leadership and teamwork of these.**

Index Terms—**Communities of practice, correlation analysis, intellectual capital, knowledge management, tourism.**

Resumen— **En el marco de la gestión del conocimiento, se hace necesario desarrollar el capital intelectual, para lo cual se deben considerar variables como las comunidades de práctica, dada su importancia para el desarrollo de las organizaciones. Los resultados de la investigación presentados en este artículo pretenden establecer el estado de desarrollo de las comunidades de práctica relacionadas con el capital intelectual en las PYMES del sector turístico del Departamento de Caldas, Colombia, para lo cual se utilizó un análisis descriptivo y correlacional con un modelo de evaluación adaptado a comunidades específicas, siendo posible evaluar al 87% de las PYMES. Los principales hallazgos muestran la consolidación de las comunidades de práctica de los operadores de PYMES del sector turístico en el departamento de Caldas, y destacan el liderazgo y el trabajo en equipo de estos.**

Palabras clave— **Análisis de correlación, capital intelectual, comunidades de práctica, gestión del conocimiento, turismo.**

I. INTRODUCTION

Today's organizations are faced with permanent changes and exogenous variables that demand a permanent adaptation, which according [1] is essential for their survival, for which they consider knowledge as a key element. In this sense, several authors declare the importance of knowledge management (KM), as is the case of [2], who establishes that KM seeks to maximize the value of an organization, helping its staff to innovate and adapt to change, taking into account the location and adaptation of knowledge, deploying it and making it available to the places where it contributes to the creation of value and carrying out the transformations and adaptations necessary to obtain the maximum possible advantage of the knowledge built and appropriate by the organization. The adaptation of the new and available knowledge has as purpose, to prepare the reservoirs or deposits of knowledge that assure the transference and application in the daily activities of the company.

In this sense, [3] explains that any KM system must be able to evolve with its knowledge and adapt to changes both in the structure of what is stored and in its classification. They complement [4], who explain that the Internet makes available everything necessary to store or deposit knowledge, and to generate and build learning communities, through several tools capable of favoring communication, the shared construction of knowledge and the exchange of information, from the point of view of communities of practice. In this sense, knowledge management and intellectual capital (IC) generate

organizational dynamics that make it possible to continuously improve services, products, and processes. The results presented in this article, clearly define the relationship between the communities of practice and the IC, from a collaborative framework that permanently helps the growth of SMEs in tourism in the department of Caldas - Colombia.

II. METODOLOGY

To the kind of scope, the results are part of qualitative research, as well as a type of confirmatory and correlational study, from the construction of the model and its validation in the SMEs of the touristic sector of Caldas' Department, which is composed of four dimensions of KM and IC. The scale of measurement was Likert, with a range of 1 to 5, where: a disagreement or not carried out (1), partially carried out (2), carried out in time intervals (3), carried out regularly (4), and carried out completely (5).

[5], explain the first three dimensions; in the infrastructure dimension the following categories are considered:

KM life cycle: understood as a continuous process that makes it possible for knowledge to be transversal to each one of the organizational processes. Digital technologies: understood as fundamental tools for KM that are used pervasively in organizations and therefore qualify as a natural means for the knowledge flow. Organizational culture: understood as the set of habits, rituals, regulations, and ways of acting of an organization that serves as a facilitator of the relationship between staff and organizational knowledge, and determines that knowledge belongs to the organization and remains under individuals and groups control.

The knowledge-intensive dimension includes the following categories:

Strategic processes: are those that support the organizational strategy, which involves the management of the entity, in terms of decision making that affect the other processes of the organization. Core processes: are those that combine and transform resources to obtain the product or provide the service according to the customer's requirements. Support processes: are those that provide people and the physical and financial resources required for the remaining processes, and according to the requirements of their internal customers.

In terms of the communities of practice dimension, the categories considered are as follows:

Personal competencies: refer to the set of knowledge, attitudes, skills, and concerns of people in an organization that makes it competitive, since they cannot be easily replicated. Social relations: are those that are generated and built from the values of cooperation and organizational interaction, and that is necessary to share and apply knowledge.

This article's authors added the following categories to the evaluation model about IC:

Structure: understood as the support of SMEs related to the basic characteristics of the employees who work in them. Outcomes: are those related to customer and stakeholder orientation.

The economic sector of this study in which the model presented was applied and contrasted corresponds to SMEs in the touristic sector of the Caldas department (Colombia). To obtain the data, we proceeded to review the number of SMEs, which were identified as touristic operators, which allowed us to identify a population of 70 companies, of which 61 gave an affirmative response to participation in the study (n=87.14% of the population). To validate the model, the relational and underlying structures were identified and a multivariate normality analysis was carried out, to recognize the data present normal structures (C.R.$\leq$2.0), followed by a Cronbach alpha analysis, which served to measure the reliability of the measurement scale. The criterion followed was to consider a high degree of correlation ($\rho\geq$.7) and reliability ($\alpha\geq$.7). Subsequently, an exploratory factorial analysis was used to evaluate the existence of a common variance that explains the underlying existence of each of the dimensions and that these, when integrated, corresponded to the domain to be constituted.

III. STATE OF ART

A. Knowledge Management

KM is presented as a discipline whose objective is to develop knowledge in the acquisition, storage, transformation, distribution, and use phases, to achieve competitive advantages [6-7]. The uses and reasons for the use of KM are varied, starting from generating changes and sustainable results, optimizing resources, taking advantage of existing knowledge, learning permanently, stimulating creativity and innovation, until reaching what was proposed by [8]: Provide organizational training and learning, provide workspaces, manage intellectual property, increase profits for the organization, improve user satisfaction, and highlight the leadership of organizations in their sector.

From an approach based on the company's internal resources, as the basis for achieving a competitive advantage. [9] Explain that from a knowledge-based approach, knowledge in an organization becomes the most profitable capital. Other aspects related to KM are quality, environment, culture, interaction, cooperation, and learning. All of these promote appropriate conditions for generating innovation processes [10]. KM is the continuous process that ensures the development and application of all kinds of relevant and appropriate knowledge in a company, to increase its problem-solving capacity and contribute to the sustainability of its competitive advantages [11]. [12] State that an important aspect of the business theory is that the source of competitive advantage lies in the knowledge application, rather than knowledge itself. These authors identify three primary mechanisms for the integration of knowledge from the managerial, organizational routines and autonomous work teams [13].

According to [14], is the knowledge that can be converted into value. This definition is very broad and covers inventions, ideas, general knowledge, designs, software, data processing, and papers, and is not limited to technology, innovations, patents, trademarks and trade secrets, among others. IC has two main components: human resources and structural capital (including intellectual assets). Human resources are not interchangeable and cannot be owned by shareholders, intellectual assets are and can be. It comprises six categories, one category with three human components, namely, the competence, attitude and intellectual agility of the staff and another category that are their relationships, their organization and their capacity for renewal and development [15]. [16], explains that the IC is an effective instrument to manage and develop the company. It also serves as a useful indicator when comparing the company with other companies and stimulates renewal and development. IC can provide a completely new model for valuing the organization; it refers to an organization's hidden resources that are not fully captured by accounting reports, which traditionally recognize intellectual property, such as patents and trademarks, as intangible assets [17-18].

Similarly, [19], they explain that KM includes assets in relation to employees' knowledge and experience, the client's trust in the company and its products, brands, franchises, information systems, administrative procedures, patents and the efficiency of the company's business processes [20]. KM is widely recognized as the critical source of true and sustainable competitive competition, in which knowledge is the foundation and, therefore, is at the heart of the organization [21].

B. Communities of practice

From the results of research carried out by [5], the communities of practice CoPs are social groups formed to develop specialized knowledge, distributing learning based on shared reasoning about practical experiences. As a defined group of people who establish informal relationships to share jobs and responsibilities in a common context, there are different structures of collaborative groups in organizations: special interest groups, and communities of competence and communities of practice [22]. These structures are centers of excellence that manage time, the line of authority and leadership, distribution of power, focus of activities with common visions and goals, and management of cooperation. Special interest groups have more specific objectives than CoPs and their functioning is established for a fixed period. While communities of competence take advantage of their collective state to manage knowledge focused on their skills, abilities, capacities, and knowledge [23-24]. [25] Argue that the benefits that can be gained from good collaboration may include: increased benefits through knowledge sharing between companies or units of companies; reduced costs through sharing best practices; improved decision-making and innovation through an exchange of ideas and knowledge, and better able to achieve objectives.

About learning, a learning organization is one in which people, at both individual and collective levels, can produce results in line with what they believe in and for which they are stimulated. [26-27] identified five disciplines in the organization of learning: systemic thinking, mental models, personal mastery, group learning, and the common goal. For relational capital, these environments empower relationships with external actors, set and agree with norms of internal behavior and with external actors, generate mutual trust and make possible the management of relationships with interest groups [28]. For structural capital, they contribute to the management of the intellectual property and the generation of explicit knowledge. For [29- 30- 31], CoPs are self-organized groups that depend on voluntary and reciprocal participation. The CoP leader encourages member development and helps develop practices broadening the knowledge base by recording lessons learned, best practices, developing tools and methods, and organizing learning events.

[32- 33] state that there has been a growing recognition of the importance of CoPs in areas such as education, engineering, management, health, among others. These are seen as a new organizational structure, where members are in interaction, production, exchange, and adaptation of resources and knowledge necessary to meet their needs. Regarding techniques COP´s, according to [34], within this framework and supported by IT, an increasingly complex network of knowledge relations is being developed inside and outside organizational borders, and a series of tools and collaborative practices on the internet called social networks and Web 2.0 are beginning to stand out. Although KM can indeed be done without great use of technological tools, this intensive use of new collaborative tools is one of the opportunities that KM has. The availability of new technologies (collaborative platforms, databases, social networks, georeferencing, mobile applications), in addition to having profound cultural changes, will allow strengthening, accelerate and complement km programs. The techniques and tools to support more specific communities of practice are corporate chats, wikis, forums, knowledge databases, virtual libraries, instructional videos on demand and Customer Relationship Management (CRM, customer relationship management platforms).

[35] conclude that an organization should follow who knows what, to make the most of undocumented knowledge. An elaborate solution to this problem is the management of competencies or management skills. According to [36], for an organization to be competitive, it must establish a series of core competencies that cannot be easily imitated. [37] Define CoPs as one of the key variables that determine the KM of organizations. Competencies are related to the concept of human action and include several elements: (1) the work situation is the origin of the requirement for the action that puts the competence, (2) the necessary attributes of the person (knowledge, skills, attitudes and other elements) in order to be able to act in the work situation, (3) the response that is the action itself and (4) the consequences or results, which are the results of the action and which determine whether the standard performance has been met. [38] define competencies as a specialized system of knowledge, skills, and abilities that enables an organization, team or individual to act and react by completing explicit and familiar as well as new work tasks.

C. *Evaluation model*

[5], developed a KM evaluation model, from the general systems theory, which is characterized by its holistic and integrating perspective and from a process management perspective, which was validated in the SMEs tourism operators of the Caldas Department of Colombia and it was possible to define a basic taxonomy as follows: we start from four dimensions, with their respective categories, as they are: This model can be seen in fig. 1, which contains the categories of organizational culture, information and communication technologies, IT and the knowledge life cycle; CoPs, which contains the categories of personal competencies and social relations; intensive use of knowledge, which includes the categories of mission processes, strategic processes and support processes; and the organizational dimension, which includes the categories of structure and results of SMEs.
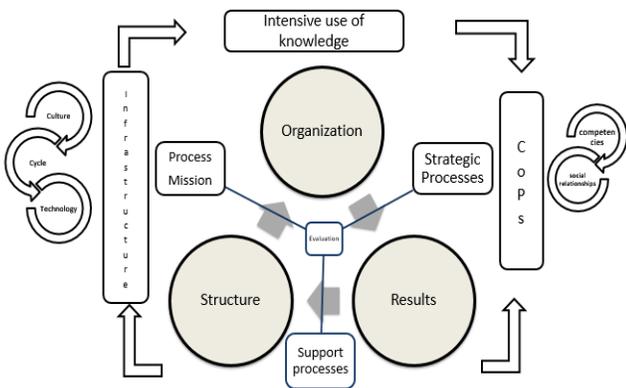

Fig. 1. Evaluation model

The model was applied to SMEs in the tourism sector of the Department of Caldas, is characterized by:

There are totals of 424 tourist service providers in the department of Caldas, of which 67% are gastronomic establishments and bars, 21% accommodation and lodging establishments, 5% transport companies, 5% tourist guides and the remaining 2% travel agencies and tourism. 73% are registered with the Chamber of Commerce of Manizales for Caldas and only 22% have the National Tourism Registry - RNT. These data and especially the second, are an issue that the government should promote and tourism service providers should understand the importance of having such a registry. This serves as a mechanism of identification and, having it, is synonymous with legality, security, and quality in their services. Respecting and following sectorial technical norms are essential if the tourism sector is to be a world-class sector.

84% of tourism service providers do not speak a second language, which is quite a high and worrying figure, especially in the context of globalization, free trade agreements and the declaration of the Cultural Landscape Coffee -PCC as cultural heritage of humanity by UNESCO. There are weaknesses in the technical standards of infrastructure, management and customer service that tourism service providers must meet to enter the quality standards at national and international levels.

IV. RESULTS

We start from the findings found and the impact they can have on IC and KM, so that on average respondents have 10 years of experience, an academic background in a technological academic program, and an age between 30 and 40, which assumes that there are important foundations for effective KM. Within this framework, the results of the analysis of communities of practice related to competencies (leadership (LEADER) and creative potential (CREAPOT) were analyzed) and social relations (a communication (COMU) and teamwork (TEAM) were analyzed), can be observed in fig. 2:
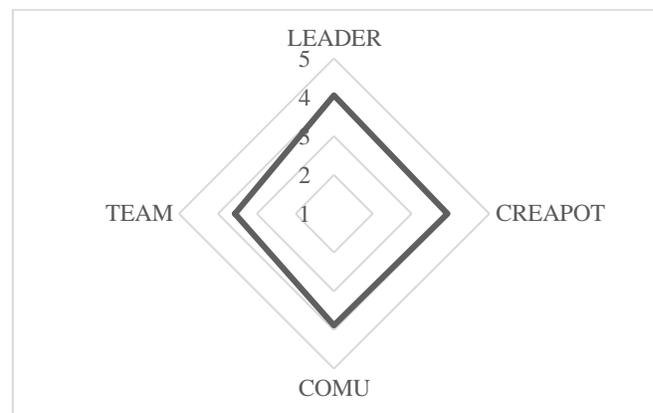

Fig. 2. Communities of Practice

According to the rating scale, the variables evaluated leadership (LEADER), creative potential (CREAPOT), communication (COMU) and teamwork (TEAM), gave a rating of 4.0, that is to say, done regularly, which could be explained by the work that these companies are doing in the framework of an impulse given by the national government so that the country's tourism sector becomes one of the fundamental axes of regional development, including the signing of the peace treaty recently signed with the armed groups. In this sense, the skills of the people who work in these companies and social relations are increasingly consolidated as a permanent exercise in quality and customer service. Nevertheless, progress must continue to be made given the needs of clients and a growing market that requires more and better services.

These results are in line with those found by: [39], who explains the importance of skills and communication in CoPs; [40], who consider teamwork as part and key of social learning based on the application of a community approach, which generates benefits of application of thinking in communities of practice, developing skills transferable to others; [41], who in their study show how CoPs can facilitate the creation, exchange, and

dissemination of information, which has a positive impact on an organization's strategy, operations, and bottom line, staff can improve their ability to acquire and use knowledge and social skills; [42], who in their study conclude that CoPs are strategically relevant to the company, and should be guided to develop knowledge linked to the core competencies of the company, to help provide appropriate solutions to different organizational challenges. It also requires a supportive context that allows community members to regularly participate in a knowledge-sharing process.

In turn [43], they concluded that leaders should support efforts to stimulate mutual commitment, joint venture and above all a shared repertoire, helping to determine team goals, norms, organize roles, stimulate a reflective critical attitude, develop an attitude of mutual trust, promote ownership, promote perceived interdependence, and stimulate a collective memory, as well as make possible community building with the objective of discussing, evaluating, and sharing efforts; In addition to the findings of [44], who concluded that experience, performance expectation, effort, and social skills significantly influence the CoPs; they found that having a balanced personalization strategy to manage knowledge linked to the organization's strategy through the CoPs can play an important role in the company's strategy.

However, it is important to analyse their relationship (leadership (LEADER), creative potential (CREA POT), communication (COMU) and teamwork (TEAM)) with the results of the CI customer orientation (ORI), customer loyalty (LOY), agreements signed with other organisation (AGREE) and corporate social responsibility (CSR), in these companies, as can be seen in table I.:

TABLE I.
CORRELATION ANALYSIS

LEADER	1							
CREAPOT	0.78**	1						
COMU	0.65**	0.77**	1					
TEAM	0.65**	0.71**	0.67**	1				
ORY	0.60**	0.51**	0.49**	0.62**	1			
LOY	0.63**	0.64**	0.69**	0.55**	0.56**	1		
AGREE	0.55**	0.59**	0.52**	0.58**	0.54**	0.62**	1	
CRS	0.24**	0.43**	0.51**	0.18	0.21	0.32*	0.32**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The results of the correlation assessment show that there is a significant correlation between the CoPs and the IC, which means that the effect of the communities of practice is being real and pragmatic as it manifests itself in the development of the IC.

The results presented could be achieved thanks to the support of the companies evaluated and a significant part of the community of the municipalities approached, even over the limitations of

financial resources, time and difficulties in mobilizing the roads of the department of Caldas.

It is also expected that the results of the research will allow the presentation of new proposals regarding transformative tourism for SMEs in the tourism sector, as well as the development of platforms and training on the use of IT for these companies.

V. CONCLUSIONS

The results of the analysis presented on the dynamics of the CoPs concerning the IC, are clear and show the permanent exercise that has been doing the SMEs operators of the tourism sector of the Department of Caldas Colombia, since the findings are positive, despite the lack of formalization of these communities. This also shows what people are doing from their individual and group context to achieve the objectives of these companies and that training, experience, and age are variables that in one way or another contribute to that purpose.

And it is that as for the formalization of the CoPs, the only fact that the valued companies are SMEs, and in this case a greater percentage of small organizations, characterized by their creation dynamics, related to the needs of the inhabitants of the different municipalities of the Department of Caldas, which saw an important opportunity to take advantage of the tourist resources of their region, makes it possible to determine that their processes are not formalized, nor normalized and much less have international standards of standardization, which shows the opportunity to have a formalization of these communities.

In addition, it is clear that the development of these communities comes from the cultural advance of these companies and the communities to which they belong, which stand out in this region for their ability to provide a service and support to any person or company that needs it, made possible, and as a characteristic of the inhabitants of these localities, This is reflected in the possibility that the members of these companies, which may have different university education, carry out joint initiatives and share their knowledge and experiences, which generates trust and makes possible the creation of shared scenarios, which makes it possible to increase social capital.

Now, considering the above, but also understanding that the training of people who are part of these companies becomes an added value in the management of these companies, because it combines the fact of being part of these communities and the academic development they possess, which makes it possible to focus on an important vision of business and customer service and within the framework of the CoPs, promote the formation of technical and business networks that strengthen communities from the sharing of theoretical and practical knowledge, as well as experiences, problems and solution strategies, and processes to define ideas and profiles of collaborative projects in specific cases.

Likewise, it is important to consider the work experience as a factor that allows a greater cohesion of the CoPs, since it is

recognized as a potential that must be taken advantage of taking into account the conditions and context of its manifestation, in this case, the local communities, that allow and need construction and implementation of experiences, as well as reflections and knowledge derived from it. Within this framework, the results generated as a result of the experience are attributable to individuals and communities, since they respond to individual and group interactions from places, times and situations specific to each case for their application in other contexts, which implies recognizing the conditions that make such experiences possible and can sustain them, as well as the possibility that individuals may belong to diverse communities, which helps in the redefinition of meanings and reinterpretation of learning.

In this sense, other authors have been researching on the subject and have found results that align with the results presented, such as the case of [45], who found that CoPs emerge in a diversity of sectors of the economy for, among other objectives, the acquisition of knowledge and innovation; [46], who found that companies benefit from the participation of individuals in CoPs because they can access an external source of knowledge that is directly related to the commitment of the organization; CoPs must evolve in an organizational context in which members enjoy total freedom with networking between their respective units, so that the exchange of knowledge among the members of an organization must take place at a chosen pace and CoPs must be guided to develop practices, which essentially requires strong leadership aimed at customer satisfaction and the reduction of costs and time; [29]. [47] Found a pattern of leadership in leveraging communities that are committed to knowledge transfer in CoPs, of technical authority and [48], who found that CoPs lead to better knowledge sharing.

These results also express how the communities manifest their participation, mutual commitment, as well as establishing a defined order from the rules and norms that are established for the achievement of the objectives that are defined. This conjugated with the importance of learning, which, although it may be theoretical, starts more from the experiences lived in each one of the positions of the people that compose the CoPs and their interactions.

Undoubtedly the development of the CoPs, aid to knowledge management, since these promote cooperation, participation, exchange, reflection, transfer and creation of knowledge, from the conformation and consolidation of networks of actors that make possible the socialization of knowledge, taking advantage of external contacts and networks for the acquisition and incorporation of new concepts and ideas that help strengthen organizations, from the agreement and consensus of the community.

From the lived experience of the authors, it is clear that in the organizational environment one of the characteristics observed in the reality of GC is directly related to knowledge sharing and this is a difficulty, which can be reduced or eliminated when working in teams from the CoPs, which allow, with good leadership, not only to share but also to transfer knowledge for the fulfillment of tasks, activities, procedures, processes, and objectives of SMEs.

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