

Knowledge management in the organizational culture of tourism msms

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Abstract

Acquiring, applying, transmitting and safeguarding the business knowledge is initially considered by mature and newly created companies as a necessity which later can become a competitive advantage and being part of the organizational culture in the long term, which could be a determining factor for the growth and sustainable development of the enterprises whose leaders consider the implementation of this process important. The objective of this research is to evaluate the processes by which the owned and acquired knowledge is managed and safeguarded in MSMEs of the hotel industry and if it is part of their business culture. It was developed a descriptive research, with non-experimental transversal design, correlating the indicators obtained as part of the results, where it is highlighted that the knowledge management and the business culture are highly linked to each other in the participating businesses.

Knowledge management, organizational culture, tourism msms

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Introduction

In recent years, Mexico has not evolved at the same pace as other countries in the tourism sector and visitor arrivals have registered lower growth rates well below the potential of the country, thus limiting job creation and the development of the companies involved in this market. Therefore, the National Development Plan (PND, 2013-2018), as the guiding document of the economy, considers the tourism sector as one of the main sources of foreign exchange, after oil and remittances from dollars sent by Mexicans from abroad. The states of the country have incorporated in their respective economic plans strategies that allow to underpin this activity, as a source of employment and companies. In the case of Campeche, section VI of the public policy axes of the State Development Plan (PED, 2015-2021) proposes to increase the competitiveness and economic sustainability of the tourist activity with the effective participation of the state and federal authorities involved through the ordering and flow of investments. The state of Campeche is located in the area known as "Mayan Ruta" along with the states of Yucatan and Quintana Roo. In addition, the Fortified City has been recognized as a World Heritage Site since 1999 and the Mayan city of Calakmul and the tropical forest have the denomination of Mixed Heritage (cultural and natural) of Mexico since 2014, both granted by UNESCO. Visitors demand quality tourism services that preserve the Maya and colonial identity that distinguish southeast Mexico. Tourism has evolved positively in the economy of many countries although it depends on economic policy and crises derived from devaluations, changes in oil prices as well as globalization, therefore the hotel sector must increase its advantages competitive and empowering learning based on the needs of clients, thus fostering a continuous knowledge management avoiding a deterioration of what has been learned by organizations (Rodríguez, Oliva and Laguna, 2003).

For the aforementioned, the study proposes the following objectives: a) To determine the management practices of the MSMEs in the city of Campeche; b) To identify how MSMEs acquire the knowledge, apply and safeguard the knowledge of the tourism sector the city of Campeche and c) Identify how the organizational culture and the knowledge management in the MSMEs of the tourism sector of the city of Campeche.

Theoretical Framework

The National Institute of Statistics and Geography (INEGI, 2016) points out that Mexico faces a loss of competitiveness according to the international indexes for measuring tourism activity. In economic terms, this activity contributes to the country's gross domestic product by 2.1%, above the Other services sector and below the professional, scientific and technical services sector (2.2%), according to the statistical information generated in the 2014 and occupies 7% of the economically active population, at the end of the first quarter of 2016.

Organizational culture in tourism SMEs

The culture and its management has been the subject of analysis as a relevant factor to guarantee quality standards, this is possible when the organization orientates its culture towards a management based on the roles and professionalism of the collaborators; studies have also been developed to establish the relationship between the culture of intrapreneurship and innovation in companies, considering as a population companies in the tourism sector, these practices have a positive influence on innovation, production processes and management of MSMEs, considering that Collaboration through teamwork is the intra-entrepreneurship factor with the greatest impact that stimulates the synergy and creative capacity of collaborators at all levels (Goncalves, Goncalves and Narloch, 2006) and (Galvez, 2011).

Benavides and Quintana (2003), cited by Mul, Mercado and Ojeda (2013) consider that organizational culture is a factor that supports the stimulation of innovation and creativity and that supports decision making and performance.

According to studies by Tarore (2016), Kyriakidou and Gore (2005), there is a direct relationship between the values of the organizational culture shared by employees and the performance of SMEs. Wallingre (2005) establishes the need to implement an innovative organizational culture in hotel SMEs, but as in other sectors, the main limitation is the resistance to change of the owners or leaders of the organizations; therefore, a high degree of commitment and dedication to success in the implementation process must be agreed upon.

González, Zizaldra and Mercado (2015), consider that the role of MSMEs in the economy of a country establishes the importance of being organizationally sustainable and that this is manifested through the thinking of the leader of the organization.

As a fundamental element in sustainable tourism Ortiz and Camargo (2010) establish that values and beliefs as a whole serve as the basis for the construction of a new model of organizational culture and that can guarantee optimal levels of economic profitability in balance with the responsibility social and natural right, (Castellucci, 2009).

In order to characterize the organizational culture, Ortiz, Daza and Labarcés (2014) studied the physical conditions of work, cultural environment and organizational behavior as elements related to work performance, considering as premise that a good motivation is reflected in productivity.

On the other hand, Esparza and García (2011) evaluated the influence of tourism business culture on strategic management, finding that family SMEs with an ad hoc, clan and hierarchical culture perceive similar values, resort to analytical strategies and compete in the market differentiating both their products and their services and organizations with market culture have as their primary value the intensive work and apply defensive strategies and compete through specialization in a segment of the market.

Knowledge management in the tourism sector

According to Mannington (1999), Pérez (2008) and Dos Anjos, Flores, Gadoti and Domareski (2011), the attention given to the organization's knowledge management has been such that the value of the organization could be based on its capital intellectual and surpassing what it would have if we considered only the value of its tangible assets.

The management of this knowledge and the ability to use it to obtain a competitive advantage requires careful planning and understanding of the knowledge within the organization and its workers, therefore, design and implement strategies for generating knowledge is positive and significant, because it generates coherence between knowledge and technological innovation, (Donate and Guadamillas, 2008).

Starting from the concept of intangibility as an element related to the processes of creation of value within the organizations Simaro, Tonelli and Carús (2012), consider that the companies of the tourist sector must professionalize the knowledge management for a better sustainability and to improve the development of their companies.

Globalization, economics and new technologies are elements that have made knowledge management a differentiator between knowledge as a resource that gives the possibility of action in organizations and management that seeks to optimize the use of this resource which is integrated by two fundamental processes, the creation of knowledge and its transmission, which are not independent and are interrelated (Canals, 2003); (Alawi, Marzooqi, and Fraidoon, 2007). In addition, organizational trust, communication, systems and structure are cultural factors that contribute to knowledge management within organizations.

According to Goncalves, Sass, Rastrollo and Savi (2014), knowledge management intends that the organization act intelligently to ensure success by maximizing its resources and guaranteeing its renewal, as a whole, it strengthens the competitive advantage, not by itself, but is the result of the creation, transmission and application of knowledge in the company.

In this sense, Falquemberg (2012) considers that knowledge management is a strategy that improves competition by combining resources with capabilities where the conviction and commitment of management are fundamental to managing the intellectual capital of their organizations.

Pérez, Leal, Barceló and León (2013) formulated a study in northwest Mexico to diagnose knowledge management processes in the restaurant sector, finding that the companies under study have an adequate level of development in the processes of identification, acquisition, creation, transfer and application and, on the contrary, storage and valuation of knowledge are the areas in which they have least evolved, emphasizes the availability of entrepreneurs and staff to share their knowledge, and point out as main barriers resistance to change, low knowledge in the use of technologies and resistance to the documentation of good practices.

Leadership and its influence on culture and knowledge management

Pedraja and Rodríguez (2008), relate the style of leadership with the management of knowledge and the design and implementation of strategies, finding that there is a significant relationship between these variables where leadership explains in some way the processes of creation and application of knowledge in SMEs, establishing a causal relationship between leadership styles and knowledge management, as well as between knowledge management and strategy design. Abounding in the influence that leadership and organizational culture has on the effectiveness of SMEs, Rodríguez (2010) points out that transformational leadership has a significant impact on the innovation culture and the competitive culture, and it is precisely this style that affects the effectiveness

Applying the case method, Komppula (2014) studied the role of entrepreneurs of tourism organizations in a rural environment, finding that the commitment and collaboration they assume as leaders of these small enterprises is fundamental to being competitive and leading them to success.

In the same sense Haven-Tang and Jones (2012), abound in the benefits of transformational and effective leadership in rural tourism through the achievement of strategic partnerships with local small businesses, which allows to achieve positive results in the long term. Brás, Da Costa and Parda (2011) inquired about the level of well-being achieved in this type of company through a leadership that allows to establish the differences or coincidences of perception that have the staff and the leader on this concept.

With respect to sustainability, Semenovych (2014) studied how leadership can integrate this concept in tourism companies for their harmonious development in the community, under the concept of mobilization and linking factors such as structures, processes and people

According to Terrazas (2015), one can not do without the role of leadership, whether in societies, human groups or countries, analyzed the characteristics that a leader must have in order to exert a positive influence and transform the spheres where it develops. Velázquez (2005) proposes a style of leadership called empathic as an alternative to Mexican organizations to design work schemes and organizational structures around teams under high-performance leadership.

Zayas (2011), formulated a study to establish the link between performance, leadership and competencies in the tourism sector managers, finding that the acceptance as a quality of the leader of these organizations is intimately linked to professional technical capacity, communication, problem solving and commitment. Barreto and Azeglio (2013) analyzed entrepreneurs' recognition of the importance of human resources, but also the complexity of selection processes in a sector where the service is a differentiator within the market.

Methodology

Type and research design

Descriptive research, because it was measured and obtained information about the variables that participate in the problem subject to study integrated by the organizational culture and knowledge management practices.

The design is non-experimental cross-sectional since data were collected in a single moment in its natural context, through questionnaires administered to the leading managers of MSMEs in the hotel sector, with the purpose of describing variables and analyzing their incidence. The method used for the collection of quantitative information is through fieldwork and the technique used is the survey (Hernández, Fernández and Baptista, 2010).

Subjects in the study

It was considered as a population the tourist SMEs in the hotel sector specifically hotels and hostels that do not belong to hotel chains or franchises, located in the city of Campeche, Mexico.

These organizations need to identify the activities they develop in favor of business knowledge and management, as well as the link with the culture of the organization, both as elements of permanence and development in the market as well as: a) generate employment for people who in their majority do not have studies with professional level that allows them to accede to other activities, and b) by their contribution to the economy of the state. The companies identified with this specialty were 26, according to the Mexican Business System directory as of February 2, 2016, of which 23 (88% of the population).

Instrument

Quantitative information was obtained from the dimensions identified as organizational culture and knowledge management of the questionnaire designed by Mul, Mercado y Ojeda (2013). This instrument is linked to the central objective of the research by contributing to the identification of the management practices developed and its relationship with the organizational culture. The elements that integrate it are indicated in Table 1.

Variable	Dimension	Operation at Definition	Reagents	Proportion
Organizational culture	Open communication	Process through which knowledge is transferred among the members of the entity.	53, 55, 58, 70, 71, 72	8.6%
	Trust	It is the willingness to share knowledge in a fluid way	46, 47, 48, 49, 50, 54	8.6%
	Collaboration and support	It is the managerial intervention to facilitate and encourage knowledge permeate throughout the organization	51, 52, 64, 66, 67, 69	8.6%
	Clear structure	They are the processes or mechanisms that facilitate the acquisition and transmission of knowledge	56, 57, 59, 60, 61, 62, 63, 65, 68	12.9%
Knowledge management	Acquisition	It is the natural or designed process by which the company obtains and generates the organizational knowledge that allows to reach its objectives	2, 3, 5, 6, 11, 12, 16, 25, 29, 31, 32, 33, 40	18.6%
	Application	They are the processes developed by the company to spread knowledge to the various areas that make up the organization.	17, 37, 38	4.2%
	Storage	Methods implemented to convey the knowledge acquired or acquired to the staff that collaborates with the organization.	1, 8, 10, 26, 27, 30, 35, 36, 41	12.8%
	Transfer	Use of technological systems and tools to safeguard the knowledge generated by the company	4, 7, 15, 14, 18, 19, 20, 21, 22, 23, 24, 28, 34, 39	20.0%
	Storage	It is the safeguard of knowledge applied and generated in the company and that allows it to remain or lead the market.	42, 43, 44, 45	5.7%

Table 1 Definitions of the questionnaire administered to managers of MSMEs in the hotel sector

Source: own elaboration with Mul, Mercado and Ojeda data (2013)

The scale of the instrument is a Likert type and an initial section was added to obtain socio-demographic and position information of the leader, followed by questions to establish the administrative profile of the organization.

Reliability of the instrument

A pilot test was developed to evaluate the understanding of the instrument with 10% of the population obtaining a Cronbach alpha of .836 for the knowledge management variable and .800 for organizational culture. Subsequently, the test was replicated, establishing the values in general for each variable and dimension, which are shown in Table 2.

Variable	Dimension	Elements number	Cronbach alpha
Organizational culture		27	.961
	Open communication	6	.841
	Trust	6	.876
	Collaboration and support	6	.900
	Clear structure	9	.919
Knowledge management		43	.972
	Acquisition	13	.925
	Application	3	.937
	Transfer	9	.878
	Storage	14	.922
	Protection	4	.876

Table 2 Reliability of the survey administered to managers of MSMEs in the hotel sector

Source: Own elaboration

Personal questionnaires were administered to the managing directors of the hotels with a duration of twenty minutes each, and the information obtained was processed through SPSS software version 21

Results

The sociodemographic and administrative profile aspects were established in a previous study (Quijano, Arguelles and Fajardo, 2016), on leadership and its practices considering the same population, where it is established that entrepreneurs are between 41 and 50 according to the age range with the highest frequency, and that 30.4% refer between 9 and 12 years of business experience. 69.6% of companies have between 5 and 13 employees.

In terms of competitiveness, 47.8% consider themselves to have a good level and 42.4% indicate that the price of the services they offer is their main competitive advantage, followed by quality (27.3%) and the same percentage of service. Of note are the active and participative working environment (24.2%), as well as good commercial relations with the government sector (47.8%), private sector (78.3%) and social sector (60.9%).

Among the business objectives, profits (73.9%) stood out, supported by respect for values such as honesty (24.4%) and service to customers (20.7%), facing challenges such as hiring qualified personnel (24.6%) and competition (13.8%). For this, they used better internal and external communication (26.8%), applying added value to products or services (23.2%).

The questionnaire administered to the leaders participating in the study contemplates four dimensions for the organizational culture variable and five for knowledge management, which were determined both the mean and its standard deviation with the objective of analyzing the reagents closest and far from the values assigned, as well as the level of dispersion of the responses, which are observed in Table 3.

Variable	Dimension	N	Minimum value	Maximum value	average	Standard deviation
Organizational culture	Open communication	23	1	4	2.81	4.003
	Trust	23	1	4	3.00	3.813
	Collaboration and support	23	1	4	2.86	4.238
	Clear structure	23	1	4	2.95	6.861
Knowledge management	Acquisition	23	1	4	2.35	8.659
	Application	23	1	4	2.52	2.793
	Transfer	23	1	4	2.27	6.185
	Storage	23	1	4	2.73	9.456
	Protection	23	1	4	2.52	3.553

Table 3 Descriptive statistics related to organizational culture and knowledge management variables. The table shows the level of dispersion that is presented in the opinion of the respondents, which ratifies with the levels reached by the arithmetic mean

Source: Statistical information obtained from the survey

In the dimensions of the organizational culture variable the average obtained is not high since no data is higher than 3, where the dimension "confidence" obtained the highest value (3.0), and "open communication" the smaller (2.81), above reflects an environment of openness and interaction, where workers do not actively participate in problem solving and decisions are not transmitted quickly to staff.

In most organizations, employees are not being rewarded when working as a team and the elements of strategic planning are not clearly defined, based on the dispersion in responses obtained in the "clear structure" dimension (Table 4).

Reactivo	Minimum	Maximum	average	Standard deviation
59. The jobs and lines of command are clearly defined.	1	4	3.13	.968
60. For the company it is essential that the workers recognize the tasks that they must carry out according to their position.	1	4	3.39	.783

57. Employees are rewarded when working as a team and not just for individual performance.	1	4	2.87	1.100
65. The strategy, mission, values, objectives and standards are clearly defined.	1	4	2.26	1.096
56. Employees are rewarded for sharing their knowledge and experiences with their peers.	1	4	2.43	.992
68. The company is committed to continuous improvement.	1	4	3.00	1.044
63. Employees are highly motivated and committed to the values of the company.	1	4	2.74	.915
61. Employees are clear who their superior is.	1	4	3.39	.941
62. Employees are clear who their subordinates are.	1	4	3.35	.935

Table 4 Descriptive statistics relating to the clear structure dimension

On the contrary, the lowest standard deviation was generated in the "confidence" dimension, which allows to infer that in the MSMEs studied, employment security is promoted with an acceptable level of uncertainty, as described in Table 5.

Reactivo	Minimum	Maximum	average	Standard deviation
48. There is a high level of face-to-face interaction among workers in the workplace.	1	4	3.04	1.065
47. In the company there is an atmosphere of trust and openness.	1	4	3.17	.650
46. The company is promoting job security and the existence of little uncertainty.	1	4	3.13	.626
49. Information flows easily at all levels of the organization.	1	4	2.74	.864
54. The company values informal communication networks.	1	4	2.83	.778
50. In the company the ideas of employees are heard.	1	4	3.09	.793

Table 5 Descriptive statistics related to the trust dimension

For the case of the knowledge management variable it is observed that the average generated in the five dimensions are also not high since in no case were values close to 3 or 4, the highest corresponds to the dimension "storage", and the lowest to "transfer" which indicates that the population studied is more concerned with the safeguarding of their information but suffers from own schemes to make known the organizational knowledge.

Protocols on information repositories, activity feedback or the use of electronic media as a key tool, according to the dispersion of responses in the "storage" dimension (Table 6) are not well defined in most participating organizations.

21. It is important for the company that the databases be updated regularly.	1	4	3.22	.951
14. In the company electronic means are indispensable to capture and store information relevant to the business.	2	4	3.43	.728
22. The company has specific catalogs and files for important documents such as reports and reports.	1	4	2.91	.793
23. It is possible to access information repositories, through some type of internal computer network (for example, intranet).	1	4	2.43	1.121
24. The work teams have regular meetings to feedback their activities.	1	4	2.61	.988
4. The use of electronic media is a key tool for accessing valuable information for the business.	1	4	3.04	.928

Table 6 Descriptive statistics for the storage dimension

In general, there are established and defined processes for the design and redesign of products and services, as well as market research as a standard practice for generating information, which corresponds to the application dimension (Table 7).

Reactivo	Minimum	Maximum	average	Standard deviation
18. Company procedures are documented in protocols or manuals.	1	4	2.09	1.125
7. Induction courses are given so that staff know the workplace, their colleagues, as well as everything related to their position.	1	4	2.52	.898
34. Internal rules, procedures and processes are constantly being disseminated.	1	4	2.83	.778
19. Reporting and reporting on processes and best practices is an established practice.	1	4	2.48	1.238
15. Writing documents written as repositories of valuable information is commonplace.	1	4	2.30	1.105
28. There are formal mechanisms that allow for the exchange of best practices among areas or departments.	1	4	2.43	.788
20. The company provides employees with databases and paper files with information that is relevant to their work.	1	4	2.70	1.020
39. The company has mechanisms to respond to the opinions, suggestions, needs and complaints of customers.	1	4	3.17	.778

Reactivo	Minimum	Maximum	average	Standard deviation
38. The analysis and design of new processes, products and services is carried out on a regular basis.	1	4	2.39	1.033
37. The analysis and redesign of processes, products and services is carried out on a regular basis in the company.	1	4	2.52	.898
17. Reporting and reporting on markets, technologies and new products and / or services is an established practice.	1	4	2.65	1.027

Table 7 Descriptive statistics for the application dimension

In order to establish the influence of sociodemographic factors and the administrative profile on the studied variables, t-tests were used for independent tests such as gender and marital status, and ANOVA was used to determine the most important differences between variances for the case of age, level of studies, position in the company, seniority of the organization, origin of the same, seniority in the position, number of workers and subordinates.

Referring to the variable organizational culture no significant statistical differences were found when examining the sociodemographic elements for both independent tests and for variances.

The analysis of the knowledge management variable did not show statistical differences for gender and marital status. For age, significant differences were obtained in the "application" dimension, which allows us to assume that evolution as a person over time, influences the elaboration of processes for the design and redesign of services, as well as market research for the generation of information, Table 8.

Dimension	Age range	average	Standard Deviation	F	Sig.
Acquisition	26-30	29.80	9.066	1.352	.290
	31-40	43.00	.		
	41-50	34.28	9.604		
	51-60	26.57	7.934		
	61-70	28.33	2.081		
Application	26-30	9.40	2.190	5.137	.006
	31-40	12.00	.		
	41-50	8.28	2.563		
	51-60	4.85	1.772		
	61-70	7.66	1.154		
Transfer	26-30	20.20	7.328	.894	.488
	31-40	24.00	.		
	41-50	23.42	6.106		
	51-60	17.42	6.553		
	61-70	20.00	1.732		
Storage	26-30	41.00	7.314	1.203	.344
	31-40	52.00	.		
	41-50	39.85	12.979		
	51-60	34.71	7.387		

Protection	61-70	33.00	.000	.694	.606
	26-30	9.60	4.277		
	31-40	12.00	.		
	41-50	11.71	3.988		
	51-60	8.71	3.401		
61-70	9.66	1.154			

Table 8 Comparison of population means by age range N=23* p < 0.05

When analyzing the seniority in the position only the dimension "application" reported important differences, which allows to assume that the experience acquired in carrying out functions of the position influences the design of processes for the use of own or acquired knowledge, (Table 9).

Dimension	Age range	average	Standard Deviation	F	Sig.
Acquisition	1-3	33.40	9.191	1.465	.254
	4-8	31.20	9.523		
	9-13	29.60	5.504		
	14-18	18.00	.000		
	19-23	29.00	.		
Application	1-3	8.50	2.460	4.228	.014
	4-8	9.40	2.792		
	9-13	5.80	.836		
	14-18	3.00	.000		
	19-23	7.00	.		
Transfer	1-3	21.10	7.093	1.050	.409
	4-8	21.20	6.942		
	9-13	21.80	3.033		
	14-18	12.00	.000		
	19-23	21.00	.		
Storage	1-3	40.40	10.926	.735	.580
	4-8	41.20	8.555		
	9-13	33.00	9.000		
	14-18	35.00	.000		
Protection	1-3	11.40	3.835	1.091	.391
	4-8	10.00	4.062		
	9-13	9.40	2.509		
	14-18	6.00	.000		
19-23	9.00	.			

Table 9 Comparison of the population averages by seniority in the position. N=23* p < 0.05

The "acquisition" and "transfer" dimensions reported statistically significant differences for the number of workers and subordinates who collaborate in the company, which allows us to assume that this element influences the decision to participate in training courses, of specialized personnel and formation of interdisciplinary teams, (Table 10 and 11).

Dimension	Age range	average	Standard Deviation	F	Sig.
Acquisition	1-4	24.50	5.196	4.285	.018
	5-13	33.93	7.758		
	14-22	18.00	.000		
	32-40	26.00	.		
Application	1-4	7.50	3.872	2.651	.078
	5-13	8.00	2.250		
	14-22	3.00	.000		
	32-40	10.00	.		
Transfer	1-4	15.00	4.242	4.914	.011
	5-13	23.00	5.291		
	14-22	12.00	.000		
	32-40	19.00	.		
Storage	1-4	33.00	9.626	.602	.621
	5-13	39.81	10.061		
	14-22	35.00	.000		
	32-40	39.00	.		
	1-4	7.75	4.349	2.326	.107
	5-13	11.18	3.124		
	14-22	6.00	.000		
	32-40	10.00	.		

Table 10 Comparison of the population averages by number of workers in the company. N=23* p < 0.05

Dimension	Age range	average	Standard Deviation	F	Sig.
Acquisition	1-3	24.50	5.196	3.775	.021
	4-6	31.58	8.317		
	7-9	37.66	4.618		
	10-12	38.50	3.535		

	13-15	18.00	.000		
Application	1-3	7.50	3.872	1.915	.152
	4-6	7.91	2.151		
	7-9	8.00	3.464		
	10-12	9.50	.707		
	13-15	3.00	.000		
Transfer	1-3	15.00	4.242	3.643	.024
	4-6	22.00	5.640		
	7-9	24.66	.577		
	10-12	24.50	7.778		
	13-15	12.00	.000		
Storage	1-3	33.00	9.626	1.331	.297
	4-6	37.16	10.107		
	7-9	45.33	5.773		
	10-12	47.00	7.071		
	13-15	35.00	.000		
Protection	1-3	7.75	4.349	2.023	.134
	4-6	10.58	3.260		
	7-9	12.00	.000		
	10-12	13.00	4.242		
	13-15	6.00	.000		

Table 11 Comparison of Population Averages by Number of Subordinates. N=23* p < 0.05

In addition, with the objective of having a clearer idea of the perception of the managers of the companies regarding the organizational culture, a quantitative analysis was developed to evaluate this perception and obtain an Organizational Culture Index (ICO), developing the following Steps:

- a) The sum of the values assigned in each question per company was obtained.
- b) The maximum score that could have any company was 108 (4 points maximum for 27 items).
- c) The number obtained in section "a" was divided by 108 and the result was multiplied by 100, to obtain an "Organizational Culture Index" (ICO). At higher ICO, it means that the manager has a better perception of it, (Table 12).

Enterprise	Score by company	Top Score	ICO (%)
1	64	108	59.26
2	60	108	55.56
3	68	108	62.96
4	95	108	87.96
5	106	108	98.15
6	95	108	87.96
7	82	108	75.93
8	108	108	100.00
9	102	108	94.44
10	81	108	75.00
11	103	108	95.37
12	64	108	59.26
13	75	108	69.44
14	77	108	71.30
15	77	108	71.30
16	80	108	74.07
17	76	108	70.37
18	80	108	74.07
19	67	108	62.04
20	67	108	62.04
21	35	108	32.41
22	73	108	67.59
23	73	108	67.59

Table 12 Organizational Culture Index (ICO).ICO= Index of organizational culture = Score / Score x 100. The result obtained for each company can be interpreted as the perception of the manager or founding member regarding the importance of culture and its management as an element of permanence and growth in the sector
Source: self made

The average obtained by the ICO of the population studied is 72.78%, which gives an idea of the actions developed by these organizations to achieve an adequate communication with the collaborators of the company, the level of confidence that prevails within them, the way in which staff are organized to perform their functions individually or by work teams and the level of definition of posts and lines of command according to the established administrative structure.

For the variable knowledge management, the same steps of the organizational culture variable were followed to construct a Knowledge Management Index, which are described below:

a) The sum of the values assigned in each question per company was obtained.

b) The maximum score that could have any company was 172 (4 points maximum for 43 items).

c) The number obtained in section "a" was divided by 172 and the result was multiplied by 100, in order to obtain a "Knowledge Management Index" (IGC). At higher IGC, it means that the manager has a greater knowledge of it as a competitive advantage, (Table 13).

Enterprise	Score by company	Top Score	ICO (%)
1	97	172	56.40
2	96	172	55.81
3	81	172	47.09
4	141	172	81.98
5	143	172	83.14
6	149	172	86.63
7	120	172	69.77
8	162	172	94.19
9	103	172	59.88
10	116	172	67.44
11	149	172	86.63
12	97	172	56.40
13	104	172	60.47
14	120	172	69.77
15	120	172	69.77
16	99	172	57.56
17	100	172	58.14
18	100	172	58.14
19	79	172	45.93
20	79	172	45.93
21	55	172	31.98
22	74	172	43.02
23	74	172	43.02

Table 13 Knowledge Management Index (IGC).IGC= Index of organizational culture = Score / Score x 100. The result obtained for each company can be interpreted as the perception of the manager or founding member regarding the importance of culture and its management as an element of permanence and growth in the sector
Source: self made

For the case of the IGC, the average was 62.13%, as a reference of the practices of acquisition, transmission and safeguard of information and management of own or acquired knowledge through the operation of the organization. The present study, being descriptive, does not present an initial hypothesis, however, in the development of the same it is deduced the possibility of establishing the correlation between the variables, without it being preconceived of origin.

The results of Tables 12 and 13 were compared to evaluate the relationship between entrepreneurs' perception of organizational culture and knowledge management. By means of a linear regression analysis, the Pearson coefficient (1) and the coefficient of determination (2) were determined, which was obtained by squaring the previously obtained value of the Pearson coefficient. (Lind, Marchal and Wathen, 2012).

Where: N = Population; X = Values obtained from the ICO in each company; Y = Values obtained from the global IGC in each company.

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}} \quad (1)$$

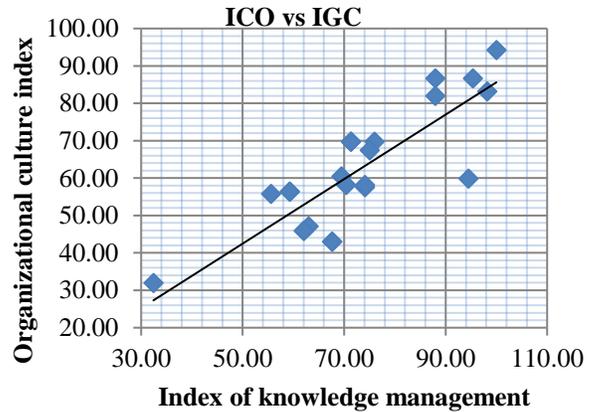
Substituting:

$$\begin{aligned} N &= 23 \\ \sum X &= 1674.07 \\ \sum Y &= 1429.07 \\ \sum XY &= 108793.2 \\ r &= \frac{23(108793.2) - (1674.07)(1429.07)}{\sqrt{[23(127385.5 - (1674.07)^2)][23(94619.3) - (1429.07)^2]}} \\ r &= 0.841 \end{aligned}$$

$$r^2 = \frac{b_0\sum Y + b_1\sum XY - n\bar{Y}^2}{\sum Y^2 - n\bar{Y}^2} \quad (2)$$

$$\begin{aligned} r^2 &= (0.841)^2 \\ r^2 &= 0.7072 = 70.72\% \end{aligned}$$

The correlation of the values obtained for each index is observed in Graphic 1.



Graphic 1 Scatter diagram between organizational culture and knowledge management indexes. The grouping of the results indicates that the data obtained are not dispersed and the correlation is considered high when being in a range of 0.75 and 1.0 which indicates that there is a relation or nexus between the variables
Source: Own elaboration

Conclusions

Discussion of results

The contrast of the results obtained with previous research makes it possible to establish that the companies studied in the tourism sector are not transmitting in a formal way the knowledge acquired or generated by the organization, which is in opposition to what has been suggested by Canals (2003), Pérez) and Goncalvez et. to (2014), and that may be the source of loss of operational and administrative information. In general, the participants point out that, for the company, electronic media are indispensable for capturing and storing relevant information, as well as constant updating, since they are considered a fundamental tool for the business; as happened in the study developed by Mul and Ojeda (2014), who consider that the technology is key to the management activities of the organizations and factor that contributes to the competitiveness of the same.

For participating companies, it is important to have established processes for the design and redesign of services, as well as market research to generate information, as concluded Pérez et. to (2014). 50% of the population considers having good relations with the different social and productive sectors, although this has not impacted in their competitive level, in spite of the signed governmental agreements for the support to the sector; this can be due to the lack of adequate strategic management based on values (Simaro et al., 2012), with a view to being sustainable companies.

For the case of the organizational culture in the participating companies, there is an acceptable level of interaction with workers, in an open and safe environment, where employees' ideas are heard (Goncalves et al., 2006), on the contrary, open communication requires an active participation of the collaborators and to promote the exchange of knowledge with the superior managers, this would foment a culture of innovation as suggested by Mul et. to 2013.

In the studied population, the way in which the organizational culture is managed is reflected in the motivation and satisfaction of the collaborators, as well as their performance, whose origin may be that the jobs and lines of command are not clearly defined, as well as the strategies and objectives, and that can be reflected in employees who are not motivated and committed to the values of the participating organizations (Ortiz et al., 2014).

Most of the participants agree that job security is promoted, in an atmosphere of trust and with the openness to listen to the ideas of the employees, as established by Esparza and García (2011) who consider as a fundamental element for tourism sustainable respect for values as the basis for building a new model of organizational culture, (González et al, 2015).

Conclusions

In accordance with the objectives of the study, it is possible to conclude that the activities of acquisition, application, transfer, storage and protection are carried out within the companies studied, without having a high level of development according to the information obtained; which requires greater formalization of the operational and administrative processes by those responsible for safeguarding organizational information.

Regarding the processes implemented to share, store and protect knowledge is used information technology and communication to share experiences, and consider it important to ensure the permanence of people recognized by their knowledge of the business.

Socio-demographic factors do not influence the organizational culture, and in the case of knowledge and its age management they influence the promotion of their practices according to the business and professional experience that is acquired over time. There are elements within the administrative profile that favor the establishment and formalization of knowledge management actions such as seniority in the position, the number of employees that collaborate in it and the number of subordinates, which is justified because it is precisely the human resource who originates and perfects the knowledge in the companies.

The activities of open communication, trust, collaboration and clear structures are present in the companies studied, without having a high level of development so that the organizational culture is strengthened by the confidence levels originated by the security environment and little uncertainty but there are no formalized processes to foster better communication through the exchange of knowledge and learning.

The companies studied should establish mechanisms to formalize and strengthen knowledge management practices as a competitive advantage that, over time, and their results be integrated into the organizational culture, based on the individual results generated through the indexes of knowledge management and organizational culture, which fluctuate in values not higher than 70% on average, but which are highly interrelated.

The population studied consists of small hotels and hostels, which represent investment efforts of its owners in infrastructure according to the demand of domestic and foreign clients whose main restriction is the lack of interest in developing sectoral studies with an administrative approach. Future research lines would allow to know if the variables studied have the same behavior in other regions of the country and their results would contribute to a real linkage of the government with the needs of the sector.

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