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In Number is presented an article *Importance of knowledge management in Mexico's large companies* by LAGUNA-CÓRDOBA, Perla Cristina, JIMÉNEZ-RICO, Artemio and NAVARRETE-REYNOSO, Ramón with adscription at Universidad de Guanajuato, in the next article *Impact of resources and transformational leadership in thestrategic management of small business enterprises* by LEYVA-OSUNA, Beatriz Alicia, JACOBO-HERNANDEZ, Carlos Armando and AGUIRRE-CHOIX, Ricardo with adscription at Instituto Tecnológico de Sonora, in the next section *Leadership in the quality of hotel services in the city of Campeche, Mexico* by QUIJANO-GARCÍA, Román Alberto, ARGUELLES-MA, Luis Alfredo, MEDINA-BLUM, Fernando and FAJARDO Mario Javier with adscription at Universidad Autónoma de Campeche, in the next section *Innovation to the performance evaluation process in a Puebla's government department by means of management tools strategies* by RAMIREZ-ROSAS, José, ORTIZ-CARRANCO, Araceli, FLORES¬-ZAMORA, Jesús and LOZADA-LECHUGA, Jorge with adscription at Universidad Politécnica de Puebla.

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# Importance of knowledge management in Mexico's large companies

# Importancia de la gestión del conocimiento en las grandes empresas de México

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#### **Abstract**

Objectives: The objective of this research work is to know and analyze the importance of knowledge management through the main lines of research related to knowledge management and the extent to which it involves people working for the welfare of an entity. Through it, companies can create and disseminate vital information in a systematic and efficient way in order to achieve better performance in the areas of the organization and improve its competitive advantages. Contribution: If organizations leverage these resources, they will be able to implement a system of transmission and knowledge generation that allows them to improve their business processes, improve the capabilities of their employees and obtain greater Benefits. Conditions should be created that allow knowledge management and business management to complement each other. recommended to map each level of the process of conception of the knowledge management project, to better understand the steps and requirements that take place in them, and also facilitate the identification of inputs, outputs, resources and controls according to company characteristics.

#### Mercados, Conocimiento, Gestión

#### Resumen

Objetivos: El objetivo de este trabajo de investigación es conocer y analizar la importancia de la gestión del conocimiento mediante las principales líneas de investigación vinculadas con la gestión del conocimiento y la medida en que involucra a personas trabajando para el bienestar de una entidad. A través de ella, las empresas pueden crear y difundir información vital de una manera sistemática y eficiente con el fin de lograr un mejor desempeño en las áreas de la organización y mejorar sus ventajas competitivas. Contribución: Si las organizaciones aprovechan estos recursos, podrán implantar un sistema de transmisión y generación de conocimiento que les permita mejorar sus procesos empresariales, perfeccionar las capacidades de sus colaboradores y obtener mayores beneficios. Se deben crear condiciones que permitan que la gestión del conocimiento y la gestión por procesos del negocio se complementen entre sí. Se recomienda mapear cada nivel del proceso de concepción del proyecto de gestión del conocimiento, para comprender mejor los pasos y requerimientos que tienen lugar en ellos, y facilitar, además, la identificación de las entradas, salidas, recursos y controles según las características de la empresa.

Markets, Knowledge, Management, Social

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#### Introduction

Uncertainty, volatility and risk are the factors that best define the current competitive environment. Given this situation, restructuring processes occur in multiple sectors of the economy and cooperation agreements constitute a key piece of the competitiveness of companies in the current knowledge society.

Access to complementary capacities and knowledge, together with the achievement of economies of scale and scope, allow alliances to be a mechanism through which companies build a competitive advantage. Through partnerships, companies can acquire and increase their knowledge-based capabilities, in an environment where such capabilities have an important strategic value (Oxley and Sampson, 2004).

In this work, we try to analyze from the Theory of the Knowledge-Based Enterprise (TEBC) the process of interorganizational knowledge transmission in the cooperation agreements so necessary to obtain the maximum possible benefit of the alliances.

The work is structured in different parts. In the first one, we will make a brief approach to the importance of strategic alliances for the company from different theories. Then, we will analyze the GCO process, to conclude by identifying the main problems of knowledge transfer in strategic alliances, as well as various solutions proposed to try to solve them.

## Methodology to be developed

This work is carried out based on previous research and is done from the Theory of Resources and more specifically the Theory of the Knowledge-Based Enterprise (TEBC), where we will analyze the importance of knowledge transfer in cooperative agreements. Once analyzed the business cooperation from different approaches, we will explain the GCO in the alliances to later analyze the problems that arise from the transmission of knowledge.

From the Theory of Resources, the objective of alliances is the formation of value through the obtaining, exploitation and development of resources and capacities.

Sometimes, the only way to access the resources necessary for the company is cooperation, when they are rooted in other companies (Chung, Singh and Lee, 2000). From the Resources approach, it is argued that companies capable of developing and managing alliances better than competitors - what Kale, Singh and Perlmutter (2000) qualify as the ability to manage alliances - can obtain a sustainable competitive advantage, unless these can mimic the partnership management activities that make the company create value (Ireland, Hitt and Vaidyanath, 2002).

In addition, the more dynamic the environment, the lower the possibility of the company disposing of all the necessary resources, and in this sense, alliances allow access to them and are a continuous source of learning (Ireland et al., 2002).

As an extension of the Resources approach, the Knowledge-based perspective considers organizational knowledge as a factor that contributes to the company's objective of achieving a competitive advantage (Foss, 1999; Grant, 1996; Liebeskind, 1996; Quinn, 1992) and that this can and should be managed in order to improve the company's results (Oliveira, 1999)

Through the management of strategic alliances the possibility of creating income relationships increases (Dyer and Singh, 1998), through: investments in specific knowledge exchange management, adequate combination of resources and complementary capacities and governance mechanisms efficient. Relational income can be understood as "superior benefits generated jointly by the exchange relationship that cannot be generated by any of the companies in isolation and that can only be created by joining the joint contributions of the two partners of the alliance" (Dyer and Singh, 1998: 662).

On the other hand, a series of knowledge is shared in a social network that, when managed together, fosters the development of innovations (Rodan and Galunic, 2004). That is, the heterogeneity of knowledge shared by companies that make up a social network improves the individual result of companies, especially that of their innovation policy (Rodan and Galunic, 2004: 556).

This relationship will involve the company's ability to exploit the network structure, and its ability to expose itself to the existence of diverse knowledge, with whose combination innovations can be developed.

#### **Results**

The development of an appropriate GCO implies working on the best possible strategic design to create, maintain, transfer and apply the organizational knowledge developed by the partners and achieve competitive objectives. Knowledge and, especially that of tacit character, is the most important strategic resource that a company can control, having a series of unique characteristics such as the possibility of being used simultaneously, that does not deteriorate with use and that can be combined with Other knowledge For these reasons knowledge must be encouraged and protected at the same time. To acquire or learn from the tacit knowledge and know-how of the partner companies of an alliance, it is advisable to develop close cooperative agreements, which are those derived from the construction of relational capital (Kale et al., 2000). In these agreements it is easier to detect where the information and valuable knowledge of the partner is located. Based on the TEBC, Lane and Lubatkin (1998) establish that companies try to learn from the knowledge transmitted to develop their capabilities faster than their rivals and improve their competitive position. Kale et al. (2000) argue that differences in the processes of accumulation, codification and way of sharing knowledge explain the differences in the ability of companies to learn from alliances. Therefore, the GCO process is key to promoting learning, with the consequent positive effects it has for the results of the alliance.

On the other hand, Conner and Prahalad (1996) mention that due to the importance that knowledge has acquired, it and its application to business activity are the basis for the existence of the company, justifying at the same time that the presence of knowledge enhances the possibility of opportunistic behavior in alliances. Within these, Inkpen and Dinur (1998) consider that three issues should be analyzed when considering the possibility of creating and managing knowledge processes:

a) What processes do the partners use to access the knowledge of the alliance?

- b) What kind of knowledge is associated with the different processes and how should such knowledge be classified?
- c) What is the relationship between the levels of the organization, types of knowledge and transfer of it?

Based on all this, Inkpen and Dinur (1998) identify four key processes: technology sharing, socio-alliance interaction, personnel transfer and strategic integration. These four processes make up the sources of knowledge creation, since it is in them where the different types of knowledge of the partners converge and become accessible.

In addition, they add that the process of knowledge creation is dynamic since it involves the interaction of several organizational levels of different companies and the contact of different individuals participating in the agreement, which can increase, expand and internalize knowledge. There are two main lines that we could highlight to define the advantages that are obtained from the creation, transfer and ways of sharing knowledge in strategic alliances.

1.- Promote the development of innovations. To position, maintain their competitive companies must strengthen their R&D policy. However, very few organizations have all the resources and capabilities necessary to achieve this goal. For this reason, strategic alliances become an instrument through which companies share knowledge for innovation and, thus, can create and maintain sustainable competitive advantages. Companies with efficient cooperative agreements have better access to valuable information about new technological opportunities than those that act in isolation. This leads to better results in new products (Soh, 2003). On the other hand, for companies to adopt innovations, it is necessary that their structure be flexible, which can be facilitated by generating higher levels of knowledge through cooperation agreements (Peña and Aranguren, 2002).

To enhance the development and dissemination of new technologies, allow their use by small businesses and enable the influence of government actions in the innovation process, complex systems of relationships between companies, universities and public and private institutes of investigation.

These relationships facilitate the creation, storage and transfer of knowledge, skills and instruments that delimit new technologies (Quintana and Benavides, 2003).

2.- Access to new knowledge.- By sharing knowledge and having access to resources and capabilities that the company does not have, it is possible that it develops strategies that it could not perform in isolation and that allow it to create greater added value. If an agreement is developed with a company well established in the market, valuable information and capabilities that increase the value of the company can be accessed (Gulati and Higgins, 2003). Subsequently, the information will be transformed into knowledge through the learning process. For this, Information Technology (IT) plays a key role.

Therefore, the generation of cooperation advantages based on the exchange of knowledge will depend on the interest, on the capacity of absorption and collaboration of the partner that receives the knowledge, on the means of transmission and communication, and on the transparency of the transferor.

Obviously, not all partners have the same abilities to learn and assimilate knowledge, so there is always a risk of imbalance and opportunism.

On the other hand, if we enter the process of knowledge generation and exploitation (March, 1991), we can disaggregate two stages in the development of an alliance (it may be that in a cooperative agreement only one stage occurs, but to obtain the maximum benefits of the collaboration it is recommended that both occur).

Exploration phase.- In this stage the speed of capacity development is increased and the risk of acquiring and exploiting external knowledge is minimized (Lane and Lubatkin, 1998). The objective is to explore new resources and capabilities that the company does not have through cooperative agreements, being able to be oriented to the acquisition of know-how and the learning of any type of skills and resources in the partner companies and / or to create resources and specialized capabilities in combination with those of another company.

Cooperation has an important role in the processes of knowledge transfer and learning, since the communication that occurs in strategic alliances, favors the creation of a common knowledge base and enhances learning between companies, improving the absorption capacity. This is why Inkpen (1998) considers that the governance structure of an alliance becomes a "laboratory" for learning.

Exploitation phase.- It is characterized by "the use and development of things already known" (Rothaermel and Deeds, 2004). The knowledge generated in the previous stage is exploited next to the one that the company has by itself. Sometimes, alliances only go through this stage, that is, it is directly about taking advantage of joint knowledge between companies, without exploring new fields that are unknown.

Companies seek to establish and maintain competitive advantages by acquiring and sharing tacit and explicit knowledge and adapting to changes in the environment. Access to such knowledge is facilitated by the similarities between the partners and by the development of an effective decision-making system in the alliance (Saxton, 1997). In order to share this knowledge it is necessary to carry out an effective transmission of it. The use of this common knowledge allows the company to increase its know-how and / or its technological capabilities, thus configuring alliances as an important instrument for business learning, since through them diverse discoveries are discovered. opportunities, the organizational knowledge base is developed and formed (provided through the GCO) and, finally, the transfer of knowledge between the partner companies is possible (Hamel, 1991; Osborn and Hagedoorn, 1997).

The benefits obtained from the transmission of knowledge developed by a company in an alliance are for the company itself, but also for the partners as the knowledge base to be shared is being increased (Inkpen, 2004: 414). In this way, the similarity of resources and capacities of the partners is increased after the formation of the alliances (Mowery et al., 1996).

For Inkpen (2000), the relationship between the knowledge acquired in an alliance is a key element for the subsequent organizational learning process. Accessing the knowledge of the partner requires a good policy of shared decisions, where the commitments on the benefits that are generated are stipulated and where the recognition of the opportunist behavior of the partner is facilitated (Saxton, 1997).

Achieving the objectives proposed in each of the previous phases is a process that is not without difficulties. Once the key processes of our work have been analyzed, we will identify the most relevant problems of one of the most important stages of the GCO, such as the transfer of knowledge, as well as different alternatives to solve them so that the subsequent learning process is more cash.

In some cases, alliances fail or their results are lower than expected because there are some problems in sharing knowledge among the companies involved. In this section we try to collect the main problems associated with knowledge and their resolution methods.

To apply these solutions to the problems of GCO, a series of factors must be assessed, among which are: the creation of an optimal collaboration environment, training, previous experience3, the inclusion in the corporate culture of cooperative behavior, the level of trust, the ability to transform tacit knowledge into explicit and the learning capacity of cooperating companies.

First of all, partners must understand the potential outcome of the partnership and be willing to share knowledge-based capabilities. Next we analyze the problems related to GCO in alliances as well as their possible solutions (see Table 1):

Cooperation-competition dilemma.- There is a dilemma that has been widely treated by literature (Khanna et al., 1998; Kale et al., 2000; Inkpen, 2004; Oxley and Sampson, 2004) and it is none other than the level of knowledge to be shared in a cooperative agreement. It is clear that the success of an alliance is associated with high levels of cooperation and with the circulation of knowledge and free information among the partners. However, allowing the member access to their own knowledge base can encourage their opportunistic behavior. The solution will be to try to share the highest level of knowledge to promote learning and increase results, while protecting basic skills avoid opportunistic behaviors and jeopardize the competitive situation of the company.

This dilemma can produce a mutual distrust between the partners. The objective will be to develop techniques and mechanisms to reduce mistrust and opportunism and increase collaboration between partners. Das and Teng (1998) mention that it is important to establish formal agreements on the contribution of resources that are required for the proper functioning of the agreement - for this, it will be necessary to establish an open and clear communication between the partners (Kale et al., 2000) -, as well as the formalization of effective control mechanisms and the generation of trust. Therefore, we can say that trust and respect become essential elements to cooperation (Kale et al., 2000: 217), but if trust in the partner is excessive, the company can become a goal easy for the exploitation of their capabilities by partners (Zeng and Chen, 2003: 588).

Problem	Solutions
Cooperation-competition	* Establishment of formal
dilemma	agreements on the
	contributions
	* Effective control
	mechanisms and trust
	building
	* Reduction of the scope of
	the agreement
	* Integrated conflict
	resolution processes
Specificity, complexity tacit	* Create common space in
character of knowledge	the alliance
	* Trust generation
	* Modification and
	adaptation of tacit
	knowledge to the local
	conditions of the partners
	* HR practices
	* Use of Information
	Technology

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Technological diversity and Knowledge DEDD	* Knowledge of the complementary and compatible partner  * Use of Information Technology
Governance structure	* Formal Organizational Forms  * Organizational independence  * Information Technology Support
Cultural barriers for c ollaboration	* HR practices: incentives, promotion, teamwork * Benchmarking system * Use of Information Technology

**Table 1**Source: self made

To solve the problem of the degree of strategic knowledge to share in an alliance Reuer, Zollo and Singh (2002) and Oxley and Sampson (2004) propose the reduction of the scope of the agreement. This implies defining the limits of the product groups, brands, fixed assets or activities in which the partners participate. Finally, mention that the integrated conflict resolution processes have positive effects for the alliance (Kale et al., 2000: 223), especially for the benefits derived from learning (since the idea of justice is transmitted) and protection (improves the strength of the agreement).

The specificity, complexity and tacit nature of knowledge.- In relation to the problem discussed above, for alliances to meet their objectives it is essential to share specific knowledge among the participating partners. There are some difficulties in relation to transmission and the way of sharing knowledge, especially when it is specific, complex and tacit. This type of knowledge is difficult to maintain and transmit because it depends on context, experience, language and prior knowledge, so it is difficult to explain to another. The same problem arises with knowledge that is specific in a context or culture. Transferring tacit and specific knowledge is an expensive process that takes a lot of time. The common space created in an alliance allows members to share their tacit and explicit knowledge, their skills and their productive processes. Likewise, if an adequate level of trust is generated, it is possible to create and exchange new knowledge, especially tacit, generated in the agreement. This knowledge is absorbed and assimilated by companies, which allows them to increase their capabilities (Inkpen, 1998).

The degree of codification of knowledge, its difficulty or ease to be transmitted also depends on the organizational forms that exist in the environment. Therefore, Lam (1997: 973, 976) tries to relate the codification of knowledge, the culture of society and the functioning of institutions. Believes that the British (Western) have a high degree of articulable knowledge, compared to Asians where the team culture makes the knowledge is in the work groups and it is very difficult to code and transmit it. In this way the transmission of knowledge between them is inefficient. The modification and adaptation of tacit knowledge to the local conditions of the partners will be one of the appropriate strategies to solve this problem.

IT can be used as an aid to try to transmit knowledge, as well as some organizational measures and human resources practices, such as working in inter-company teams, promoting open communication or establishing reward systems, as they can motivate to the company to share and transfer tacit knowledge (Guadamillas, 2001; Oxley and Sampson, 2004).

The importance of IT in the GCO is due to the fact that knowledge, under certain conditions (for example, codifiability), is likely to be treated as an 'object' apt to be divided into different modules, stored and transferred (Zander and Kogut , 1995; Sanchez and Mahoney, 1996).

On the other hand, when knowledge is explicit, it is easier to transfer and share, but they have a lower strategic value than tacit knowledge (Zander and Kogut, 1995). Acquiring this type of knowledge can be the main reason to participate in alliances.

3.- Technological and knowledge diversity. Another important factor to achieve the advantages of collaboration is the technological and knowledge diversity among the partners (Kwak, 2004), defined as the degree to which overlaps occur in their technology portfolios (Oxley and Sampson, 2004). If the technological level of the partners is very different, they will have little knowledge and capacity to share. But when this is similar, its transmission will have no interest since it will not generate value.

Therefore, there must be certain differences in technological capabilities between partners in an alliance (Oxley and Sampson, 2004). Ideally, the knowledge of the partner is complementary and compatible (Inkpen, 1998), that is, that companies have comparable basic knowledge but different specialized knowledge4. The heterogeneity of knowledge enhances creativity and innovation in the company, while improving business results.

IT is essential for the adequate coding of knowledge, which facilitates the understanding of the knowledge to be shared by all the partners involved in the agreement (Kogut and Zander, 1992).

4.- Organizational form of the alliance or structure of government.- The lack of common routines, clear lines of authority and less hierarchical organizational forms can make cooperation more difficult. Although all organizational forms are inconvenient, partners must implement one that is optimal according to the nature of the agreements. The more hierarchical forms facilitate the control of processes and results, but involve high costs and more bureaucracy (Oxley and Sampson, 2004).

The governance structure, according to the TCT (Pisano, 1989; Oxley, 1997; Kale et al., 2000; Oxley and Sampson, 2004: 723) is also an important mechanism to achieve a balance in the cooperation-competition dilemma. This is especially difficult when companies are direct competitors in the final product market or in their strategic resources.

To solve organizational problems, alliances must have formal governance structures, and to the extent possible, organizational independence. In addition, the mechanisms and systems that facilitate the process of sharing and transmitting knowledge can be very useful to eliminate barriers to cooperation. Thus, IT will facilitate communication in the alliance by reducing negative effects of inadequate governance structures. Pisano, Russo and Teece (1998) recommend the adoption of hierarchical and protected government structures in strategic alliances.

5.- Cultural barriers to collaboration.- They are often difficult to detect and resolve but have a strong influence on the success of alliances. One of the most important is the culture of companies that promote and reward individualism, so that workers are reluctant to share what they know since they will not have incentives (Hansen and Nohria, 2004: 25).

Another cultural barrier arises when managers and workers consider that the time dedicated to communication and collaboration with other members is not productive. This lack of communication makes it difficult to identify both problems and the right people to solve them.

Human resources practices, such as incentives, promotion, selection and recruitment systems and teamwork, facilitate the transmission of knowledge and can help solve cultural problems related to the rejection of collaboration. Also, benchmarking systems can help identify and learn the best practices of the partners, so it is necessary to work together to achieve the objectives of the alliances.

For their part, IT can contribute to the reduction of differences in terminology and language of knowledge to be shared by partners, thus facilitating their objective of achieving competitive advantages.

Due to the importance of IT in the problems raised, we consider it convenient to deepen its analysis. Within business cooperation, IT can play a fundamental role as a support tool in its operation and, to some extent, help explain the spectacular growth of collaboration agreements and strategic networks in recent years (Gulati, Nohria and Zaheer, 2000). IT is very useful for the transmission and storage of knowledge or the evaluation and control of the results of activities, key aspects in the operation of an alliance.

Thus, the advantages of the GCO and the application of IT in alliances (or networks) are related, in the first place, to the management of the social capital of the company as an intensive resource in knowledge and information by each partner.

Second, the role of IT is of fundamental importance in facilitating and supporting the processes of sharing knowledge and information among partners, which generate specific routines of the relationship, and the possibility of obtaining relational income (Dyer and Singh, 1998 ). In many cases, these routines make alliance partners the largest and most important source of ideas and information, which can generate a stream of innovations. However, organizational differences, knowledge structures and the structure of available IT influence how knowledge will be managed organizations in order to leverage competencies and experiences of participants (Schmaltz, Hagenhoff and Kaspar, 2004).

The advantages of alliances can arise at two different levels: (1) individual, through the creation of value that arises from the dynamics of the interaction between the management of the alliances and the social capital in each company, and (2) dyadic, through the creation and improvement of knowledge sharing routines. These can be defined as "regular patterns of interaction between companies that allow the transfer, recombination or creation of specialized knowledge, and are institutionalized as inter-company processes that are designed to facilitate the exchange of knowledge between partners" (Dyer and Singh, 1998: 665).

#### **Conclusions**

The main objective of this work was to analyze the importance of the GCO process within cooperative agreements, as well as highlight its relevance in determining their efficiency. Cooperative agreements can be a mechanism for the company to create and maintain a competitive advantage, as it provides advantages such as: access to resources and complementary capabilities, entry into new markets, increased competitive power of the company, economies of scale and scope and increases in learning.

The main factors to achieve these objectives and obtain advantages of cooperation have been the generation of adequate interorganizational learning and the development of the transmission of knowledge in alliances. The theoretical approaches of resources, knowledge and social capital recognize strategic and social aspects for the establishment of alliances that the typical economic approaches that analyze this question are not able to gather.

Some important problems that arise in strategic alliances increase the difficulty of achieving an effective development of collaborative activities, in which knowledge is shared and transmitted.

The main one is the specificity and the tacit nature of knowledge that hinders its storage and transmission. In addition, distrust between partners and cultural barriers to collaboration have the consequence that they are more reluctant to participate in cooperative excessive technological agreements. An diversity of knowledge among the partners can present a problem for their learning. Finally, the governance structure of an agreement must be adapted to the objectives of the alliance and the specific requirements of the companies.

To solve these problems we have proposed some solutions, such as the use of IT, the use of some organizational measures and human resources practices and the reduction of the scope of the agreement. Finally, it is important to consider all the solutions explained, because currently, the advantages based on the traditional economies of scale and scope are gradually reducing their importance. Alliances direct companies to build competitive advantages with their partners, which they cannot build in isolation without the help of their rivals.

The main factor for this is the development of an efficient process in which knowledge is shared and transmitted, since it allows companies to achieve and maintain competitive advantages over their rivals. Therefore, we believe that cooperation will be an increasingly used strategy in the future.

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# Impact of resources and transformational leadership in the strategic management of small business enterprises

# Impacto de los recursos y liderazgo transformacional en la gestión estratégica de las pequeñas empresas comerciales

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#### **Abstract**

# A study with a quantitative focus was carried out on 140 small companies in the commerce sector of Ciudad Obregón Sonora, which sought to achieve the objective of analyzing the impact of the company's resources and transformational leadership in the process of strategic management; which allowed an analysis of the strategic situation of these companies. For the scope of the objective, the process of the scientific method was used, where a 36-question instrument with six levels of Likert scale was applied, and the SMART-PLS Model, Structural Equations, was used for statistical analysis, where the Resources variable was observed to have a positive, direct and highly significant effect on the Strategic Management variable, on the other hand, Transformational Leadership has a positive and direct but not statistically significant effect on the Strategic Management variable, Strategic Management, (a.k.a. .218, p<-090 n.s.). This research concluded that the entrepreneur is unclear about his leadership and that when a strategy is formulated and executed efficiently through the correct allocation of resources at each stage of it, a successful situation is achieved in the company's strategy.

#### Strategy, Leadership, Resources

#### Resumen

Se realizó un estudio con enfoque cuantitativo en 140 empresas pequeñas del sector comercio de Ciudad Obregón Sonora, en el cual se buscó alcanzar el objetivo deanalizar el impacto que tienen los recursos de la empresa y liderazgo transformacional en el proceso de la gestión estratégica; lo cual permitió hacer un análisis de la situación estratégica de estas empresas. Para el alcance del objetivo se utilizó el proceso del método científico, donde se aplicó un instrumento de 36 preguntas con seis niveles en escala de Likert, y se utilizó para el análisis estadístico el Modelo de SMART-PLS, Ecuaciones Estructurales, donde se observó que la variable de Recursos tienen un efecto positivo, directo y altamente significativo (β.405, p<=.000), en la variable de Gestión Estratégica, por otro lado el Liderazgo Transformacional, tiene un efecto positivo y directo pero no significativo estadísticamente en la Gestión Estratégica, (β.218, p<= 090 n.s.). En esta investigación se concluyó que el empresario no tiene claro su liderazgo y que cuando una estrategia se formula y ejecuta eficientemente a través de la asignación correcta de los recursos en cada etapa de la misma, se logra una situación de éxito en la estrategia de la empresa.

#### Estrategia, Liderazgo, Recursos

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#### Introduction

The constant exit of SMEs from their market, leads to study the phenomena that do not allow the advance and maturity of many of them and end up closing. According to INEGI (2015) the life expectancy for MSMEs is 7.8 years and this depends on factors such as poor quality, lack of good administrative management, brand, poor planning and low sales; Therefore, for the survival of MSMEs, it is important to develop a strategy and support mechanisms that focus on encouraging innovation and new business opportunities. (INADEM, 2018).

In Mexico, the most incident problems in SMEs during 2018, Arana (2018), describe them in the following areas, for example, their management 50% of entrepreneurs state that their growth is not fast and 66% mention not climbing to the next level, which is reflected in the lack of strategic plans and sales stagnation. Credit is also another factor by which companies do not grow, since 7 out of 10 entrepreneurs state that credit for SMEs is more expensive than the credit that it is granted to large companies, they must keep complicated tax accounting, they can generate a bad credit history as well as not having a good financial analysis; all this the application and good use of the credits. The attraction of Capital must be a strategic priority for the business. With this, entrepreneurs can refine their vision and long-term plans, with the experience and advice of investors.

#### **Problem Statement**

Currently, research in companies in Ciudad Obregón has been booming through universities, where it is about knowing the current situation of SMEs and supporting the improvement of companies with the results. This research stems from the impact of the closure of companies in our state of Sonora, the information provided by INEGI (2014), mentions that the average number of companies at birth is 8 years and this is as "a life expectancy". Among all the factors that can lead to the closure of a company, only in this study will the variables of Strategy Management, Transformational Leadership and Resources be analyzed.

Regarding the strategy issue in Ciudad Obregón, there is not enough information, so we will rely on the study of Levva, Ochoa and Jacobo (2013), where results are obtained from 55 SMEs that were interviewed, and where 42 of them state that they formulate a strategy only, when they detect an opportunity (45.45%) and with (40%) the entrepreneurs who formulate the strategy is because they were presented with a problem. According to this information, the entrepreneur does not take as a priority the strategy to survive in his business, they continue working operatively, being up to date without managing their resources and implementing a strategy. The rest of the SMEs (13) do not carry out the strategy development activity.

It is important to study the aforementioned variables, because they allow us to reduce the closure of SMEs, through the scope good performance since Strategy Management covers areas such as culture, leadership, structure. resources, systems, processes, and other functional and operational areas of SMEs. According to the exposed background, the research question is as follows: What is the impact of the company's Resources and Transformational Leadership of the manager in the Strategic Management of Commercial SMEs, in Ciudad Obregón, Sonora? And to answer this question the following objective is elaborated: to analyze the impact that the resources of the company and transformational leadership have in the process of the Strategic Management.

Each time an SME starts work, it becomes a hope for Mexico, as it is an option that allows it to cope with its economy, because they contribute their grain of sand to the reduction of the unemployment problem. It is clear that it is important to carry out projects that strengthen SMEs in their administration and operation since they begin their work, during their development and support in their survival. (Pro Mexico, 2013).

# Theoretical framework

This section will discuss the variables of Strategic Management, Resources and Transformational Leadership, defining the variables and their dimensions to investigate.

Fernández (2006), clarifies that Strategic Management develops competitive strategies, based on organizational policies and structures that allow the allocation of the resource to be favorable, for its success. So also David, (2008), mentions that the stages of formulation or design, implementation and evaluation of the strategy, is the main function of the variable Strategic Management, this allows to obtain the scope of the objectives set by the leader of the organization.

Below in table 1. The components of the Strategic Management variable are presented.

Information Analysis and Strategy Design	Strategy implementation	Strategy Evaluation
SWOT	Company	Supervision
Analysis	structure	And
		monitoring
Mission and	Motivation	Applications of
vision		corrective
		measures in the
		process
Goals	Strategy	Evaluation of
	Communication	results
Budget	Changes in the	
	internal and	
	external factors of	
	the company	
Company	Employee skills	
resources	in the	
	implementation	
	of the strategy	
Employee		
Participation		

**Table 1** Strategic Management and its Components *Source: own elaboration adapted from Torres (2014). Strategic management.* 

For a company to develop its competitive advantage, it must first know the resources available to the company, and take advantage of them for the development and implementation of the strategy, thus improving its efficiency and effectiveness. According to Barney, 1991, cited by Arbelo & Pérez, (2001), resources are classified into 1) Human resources, 2) Physical Resources, and 3) Organizational Resources.

Next in Table 2, the dimensions in which resources and capacities are divided are represented.

Physical resources	Financial resources	Organizational Resources	Human Resources and Capabilities	Technological Resources and Culture	Commercial Resources
Installations	Budget	Company structure	Training	Information for decision making	Market
Machinery and equipment			Abilities	Technology	Brand
			Motivation	Culture	
			Communication		

**Table 2** Resources and their dimensions Source: own elaboration adapted from Rubio and Aragón (2006) and Grant (2006) cited by Cardona (2013)

Below is presented in table 3, the dimensions to study of transformational leadership and its breakdown.

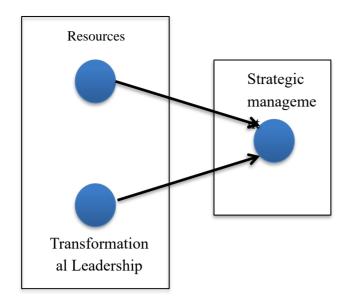
Denro the issue of Transformational Leadership is mentioned as an example that is one that makes a transformation of breadth and depth is not only represented with a change, but that this change is very similar to a metamorphosis. (Burns, 2003). In other words, the leader valuablely transforms the worker by increasing his morale, stimulating his intelligence, increasing his motivation to propose and solve problems and give better performance in his work group.

Specific characteristic of the leader during strategy development	Specific characteristic of the leader during the implementation of the strategy	General characteristics of the leader during the management process
Flexibility	Motivation	Securities
		Congruence
		Charisma
		Individual
		Consideration
		Intellectual
		stimulation
		Inspiration
		Psychological
		Tolerance
		(sense of good
		humor)

**Table 3** Characteristics of the Transformational Leader and its dimensions

Source: own elaboration adapted from Bernal (2001) and Pedraja, Rodríguez, and Rodríguez (2006)

According to the theory and empirical works the theoretical model and the research hypotheses are the following:



**Figure 1** Theoretical model of the variables. Own elaboration

The research hypotheses according to the theoretical model are the following:

H1. Resources have a Positive and Direct effect on Strategic Management.

H2. Transformational Leadership has a Positive and Direct effect on Strategic Management.

These hypotheses will be checked through statistical analysis.

# Methodology

The methodology used in this study, allows validating and giving reliability to the results of the research, so the strategy to follow proposed by Bernal (2010) is as follows:

This research uses the scientific method with a quantitative approach, this approach includes models of structural equations that allow to show causal paths in the investigation. (Creswell, 2003). Thus, this research is also considered correlational since it allows to determine the statistical relationships between the study variables. (Tamayo, 2004). The hypothesis test will be carried out with the PLS statistical method, so the research will also be based on the explanatory method, since the hypothesis test is intended to explain things, phenomena or facts. (Bernal, 2006). Finally, the research design is NOT experimental and Transactional, the data is collected in a single moment without manipulation. (Toro & Parra, 2006).

An instrument was developed which allowed to obtain information regarding the variables to study which will help the acceptance or rejection of the hypotheses raised. The structured questionnaire consists of 36 questions, which is divided into four sections, which are: 1) General data of the interviewee, 2) strategic management section, 3) resources section, 4) transformational leadership section.

The measuring instrument is focused to be answered by people with the highest hierarchy in the company, or be the person who can make important decisions in the company. Through the six-level Likert scale, the questionnaire questions will be measured. The advantage on this scale is that it helps the answers do not match in the centralism (Rositas, 2014).

The validation of the instrument, with respect to its format, to the questions that constitute the study variables and their dimensions; This validation is carried out through five experts in the field of research through a questionnaire with a Likert scale from 1 to 4, adapted from (Segovia, 2014).

This also measured reliability through a pilot test of 60 companies that make up the population of Small businesses in Ciudad Obregón. The calculations of the chronbach alpha for reliability are obtained from the Statistical Package SPSS version 21 and the data of the companies were taken from the list of (INEGI-DENUE, 2012).

The companies under study are the small commercial companies of Ciudad Obregón, Sonora, which according to the Official Gazette of the Federation (2013) mentions that small commercial companies are those that range from 11 to 30 employees. The population of these companies is obtained from INEGI-DENUE (2012) obtaining a total of 258 commercial companies in Ciudad Obregón.

The calculation of the sample strongly impacts the results of statistical significance, with respect to structural equations there is not so much robustness in the sample, but according to Hair, Anderson, Tatham and Black (1999), the recommended samples can range from 100 to 200 units The sample obtained for this research is 140 companies, according to the golden rule according to Barclay, Higgins and Thompson (1995), cited by Hair, Hult, Ringle and Sarstedt, (2017), where it is indicated that the sample is obtained to multiply 10 times the largest number of training indicators (items) of the same construct: In this study, the Strategic Management variable is the one with the highest Items 14 in its total, so the sample is 140 companies to be surveyed. The method to analyze the statistical results of the hypotheses will be through the SMART-PLS software (Structural Equations).

#### **Results**

This section presents the statistical analysis of the information that was collected from the small commercial companies of Ciudad Obregón, Son. Within the results, the alphas obtained from the pilot test are presented.

Construct	Cronbach's Alpha	Deleting Item	Cronbach's Alpha removing the Item
X1 Resources	.783	1	.801
X2	.853	2	.887
Transformational			
Leadership			
Y. Strategic	.883	2	.887
Management			

Table 4 Cronbach Alpha concentrate per construct in the pilot test

Source: own elaboration Data obtained from the Basic System SPSS Statistics, version 21

The cronbach alphas can be seen in table 4, which are above 6, so it follows that the questions that are part of a construct are independent of each other, there is no correlation. (Oviedo and Campos, 2005). The results with respect to the demographic analysis of the profile of the respondent is as follows: the companies are newly created by 46% and are 1 to 3 years old. The interviewees who represent themselves as the person who has the highest level for decision-making in the company, has a bachelor's degree at 49%, and with 52% the women are represented who are the ones who administer the majority to the companies surveyed.

ISSN-On line: 2414-4819 ECORFAN® All rights reserved. Results of the statistical analysis through the PLS-SEM, the following table shows the statistical tests of the study.

#### Evaluation of the reflective measurement model

- 1. Internal Consistency (Cronbach's alpha, composite reliability)
- 2. Convergent validity (reliability of the indicator and the average variance extracted (AVE)
- 3. Discriminant Validity
- 4. R2 coefficient

**Table 5** Evaluation of PLS-SEM (statistical tests) *Source: Hair, et al (2017). Adapted format of Martínez and Fierro (2018).* 

First Validity and Reliability Stage, of the 140 companies evaluated.

	Cronbach's alpha	Composite reliability	Mean extracted variance (AVE)
X1 Resources and	0.811	0.864	0.515
Capabilities			
X2	0.889	0.911	0.562
Transformational			
Leadership			
Y. Strategic	0.898	0.915	0.473
Management			

**Table 6** Results of cronbach's alpha analysis

Source: own elaboration, adapted from the data obtained

from the SMART-PLS statistical system. (Structural

Equations)

The indicators that are part of a latent variable are measured through composite reliability, since it is more accurate than cronbach's alpha (Nunnally and Bernstein, 1994), less than .60 is considered low reliability, according to the results of the Table 3, the reliability is strong. In the same way it can be evaluated that the Strategic Management variable does not explain more than 50%, this means that the degree of validity is only 47%, its variance in the construct is not explained through its indicators. (Fornell and Larker, 1981).

	Strategic management	Transformational Leadership	Resources and Capabilities
1F	0.744		
2F	0.761		
3F	0.699		
4F	0.560		
5F	0.710		
6F	0.707		
7I	0.694		
8I	0.614		
10I	0.594		
11I	0.649		
12e	0.750		

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13e	0.691		
14e	0.742		
18rc			0.694
19rc			0.764
20rc			0.764
21rc			0.717
22rc			0.604
23rc			0.750
24Lt		0.706	
25Lt		0.801	
26Lt		0.758	
27Lt		0.714	
28Lt		0.712	
29Lt		0.742	
30Lt		0.786	
31Lt		0.771	

**Table 7** Results of the measurement analysis: loads Source: own elaboration, adapted from the data obtained from the statistical system SMART-PLS (Structural Equations)

From the applied questionnaire the loads of each items are obtained, Chin (1998) states that the charges that are below .5 should be eliminated (in this case 6 items are eliminated) where .7 is represented by 68%, and with charges of .6 is represented with 25%, these two are the most outstanding levels of charges per items.

The last validity test will be carried out through discriminant validity within the PLS, in which the result is that the measurement that a construct is different from another in the model to be studied. (Martínez & Fierro, 2018). In order to carry out this type of validity, two tests will be considered: a) Fornell and Larcker Criteria, b) Cross Load Criteria, which are presented below: Criterion Fornell and Larcker points out that a latent variable does not share more variance with another latent variable, shares more variance with its indicators, its correlations are greater than with others, (Hulland, 1999). Observe data in table 5.

	Strategic management	Transformational Leadership	Resources and Capabilities
Strategic management	0.688		
Transformational Leadership	0.481	0.750	
Resources	0.547	0.650	0.718

**Table 8** Correlation between latent variables (Fornell-Larcker criteria)

Source: own elaboration, adapted from the data obtained from the SMART-PLS statistical system. (Structural Equations)

This criterion of validity of table 8 is met according to what is stated by (Hulland, 1999).

Cross Loads is the second discriminant validation criterion, Chin (1998) exposes the assumption that the indicator must be greater than its own variable compared to the other variables of the model, as can be seen in Table 9, complying with the results with the criterion of validity.

Indicator	Strategic management	Transformational Leadership	Resources and Capabilities
1f	0.744	0.267	0.325
2f	0.761	0.261	0.423
3f	0.699	0.336	0.365
4f	0.560	0.207	0.215
5f	0.710	0.265	0.281
7I	0.707	0.352	0.353
8I	0.614	0.388	0.394
10I	0.594	0.342	0.433
11I	0.649	0.329	0.462
12e	0.750	0.398	0.474
13e	0.691	0.342	0.405
14e	0.742	0.452	0.395
18rc	0.431	0.329	0.694
19rc	0.493	0.429	0.764
20rc	0.356	0.620	0.764
21rc	0.398	0.458	0.717
22rc	0.237	0.341	0.604
23rc	0.437	0.616	0.750
24Lt	0.320	0.706	0.523
25Lt	0.395	0.801	0.545
26Lt	0.283	0.758	0.475
27Lt	0.292	0.714	0.468
28Lt	0.283	0.712	0.519
29Lt	0.372	0.742	0.430
30Lt	0.413	0.786	0.486
31Lt	0.465	0.771	0.505

Table 9 Cross Loads

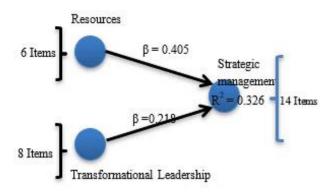
Source: adapted from the data obtained from the SMART-PLS statistical system. (Structural Equations).

To verify both the reliability and the validity of the instrument, it can be concluded according to these tests that were performed within the outer model, of the structural equations program PLS, the questionnaire is statistically valid and reliable through the measurement of latent variables.

Second Stage Evaluation of the Structural Model Component of the Structural Model (inner model). According to Henseler et al. (2009), this model tries to explain the relationships between latent variables, likewise R2 is the important coefficient that determines the structural evaluation of the model to analyze.

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**Figure 2** Model of Structural Equations. (Calculation Algorithm of SMART-PLS.)

Variables	$\mathbb{R}^2$
Strategic management	0.326

**Table 10** Results of the R<sup>2</sup>

Source: adapted from the data obtained from the SMART-PLS statistical system. (Structural Equations)

The ranges for  $R^2$  according to Hair et al. (2017) range from 0.75, 0.50 and 0.25 (substantial, moderate and weak. correspondingly). Chin (1998) describes ranges of 0.67, 0.33 and 0.10 as substantial, moderate and weak. For Falk and Miller (1992), cited by Martínez and Fierro (2018), the minimum value for R<sup>2</sup> is 0.10 in the social sciences. According to the information in table 10, the results of the R<sup>2</sup>, state that the dependent variable (Y) (endogenous) Strategic Management explained with 32% by the independent (exogenous) Resources and Transformational Leadership variables, which according Chin (1998) is considered a weak effect. Next, for the hypothesis test, the calculation of 5000 bootstrapping-PLS interactions was performed, replacing the original sample 140 observations this investigation, this in calculation determines the standard error and allows the hypothesis test. The calculated sample represents the population (Henseler et al., 2009).

	β	t Student	P Value	Result
H1. Resources have a positive and direct effect on Strategic Management.	0.405	3.713	0.000	Accepted With a strong β impact and highly significant p-value.
H2. Transformational Leadership has an effect: Positive and Direct in Strategic Management.	0.218	1.697	0.090	It is rejected β important but the p-value n.s.

 Table 11 Hypothesis testing

Source: own elaboration, to obtain results of  $\beta$ , T Student and P Value, the PLS-SEM software was used

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According to Table 11, it is considered that there is a level of interrelation between the variables considered acceptable in the case of Transformational Leadership and Strategic Management and highly acceptable in the relationship of Resources with Strategic Management. (Chin, 1998). Likewise, another statistical test that helps us to analyze the hypothesis test is the T-Student, which indicates the impact of the independent variables on the dependent and the P value, shows the level of statistical significance of each of the betas in the relationships of the variables. (Rositas, 2014). The results in these calculations show that the T-Student is considered acceptable since they are less than 5% error, however the results in the P value are not met in the relationship of Transformational Leadership and Strategic Management since it is for above (0.090) of the acceptable minimum (p <=. 05). (Rositas, 2014).

## **Conclusions**

This section presents the achievements, findings and interpretations of the statistical and theoretical results. The dependent variable Strategic Management is explained with 30% by the variables of Resources and Transformational Leadership. The equation dependent on Strategic Management is:

GE (Y)= 
$$f(\beta 0.405 (RC)) + (\beta 0.218 (LT))$$

According to the results for hypothesis 1, the Resources variable has a direct impact on Strategic Management. According to the results in the model, it is confirmed that these relationships have a positive, direct and highly significant effect ( $\beta$  .405,  $p \le 0.00$ ).

The results obtained statistically in this study are supported in a toric way. Mintzberg, Quinn and Voyer (1997) emphasize that a strategy that is formulated efficiently puts order in its execution, appropriately allocating the organization's resources according to its attributes and deficiencies in the company; in order to achieve a viable and original situation and allow the scope of the aforementioned strategy.

The SMEs must effectively and efficiently attend to all their resources, such as technological resources that, through them, seek to improve their facilities and allow for better operational and market development.

Another resources to take care of in the SMEs is the financial one, in which its planning must be taken care of so as not to fall into lack of liquidity, and it can be one of many causes of business closure. And finally the human resource, this is considered within companies as the main cause of business failure. (Rubio and Aragón, 2006)

Before a company decides to manage a strategy and deal with the competition, it must ensure an internal analysis and assess whether it has the necessary resources to compete and launch an effective strategy. Monfort (2002).

hypothesis In the results of Transformational Leadership has a direct but not significant positive impact with Strategic Management, ( $\beta$  .218, p <= 090 n.s.). According to the results this hypothesis is rejected. According to results in their empirical research Rodríguez, Pedraja, Delgado and Rodríguez (2010), conclude with reference to transformational leadership that does significantly impact the quality of the strategy design (p <0.569), however the quality of the design of The strategy positively impacts the quality of the strategy implementation, (p <0.000).

The authors Pedraja, Rodríguez, and Rodríguez, (2006) state that with respect to their leadership relationships with the strategy there is no integrative model in the field of strategic management regarding the relationship between leadership-decision-making process-effectiveness, (Performance).

Currently the mentality of the entrepreneur these companies of Comerciales in Ciudad Obregón, expresses the little importance that he gives to the strategic management process in his company; since no important results are obtained. However, the idea of some of its human resources is strengthened, it is considered the engine of the same, that the operational, administrative and strategic areas depend on them, since the Transformational Leadership variable impacts within the stages of Strategic Management, as well as in the Organizational Performance of the same.

It is suggested as future research, to analyze the situation of the companies of other turns to complement the results, such as SMEs companies of industrial and services, individually (by turns), as well as to include in future investigations other factors of more specific studies as for example, within the human resources, the culture and structure of the company, for the purposes of this research were not included.

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# Leadership in the quality of hotel services in the city of Campeche, Mexico

# Liderazgo en la calidad de los servicios hoteleros de la ciudad de Campeche, México

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#### Abstract

# The remainance and development in the market depend, among other factors, on the quality of sold products or provided services, which is a situation of concern in sectors such as tourism where globalization demands first level services, as is the case in the city of Campeche, where businessmen are investing in hotel infrastructure according to the colonial characteristics of the town. The research's objective is to identify the incidence of leadership in the quality of services under the perception of hotel managers as responsible for the operability results. This research is a descriptive type with non-experimental transversal design, with a enumerated population; the results obtained through the quality and leadership indexes indicate that, contrary to expectations, managers consider that the provided services don't have an adequate level of quality, and the design of new strategies is needed to improve the processes under the transformational leadership which must face problems with opportunity in order to innovate in the services of the market where they participate.

# Quality, Leadership, MSMEs

#### Resumen

Permanecer en el mercado y desarrollarse depende entre otros factores, de la calidad de los bienes vendidos o los servicios prestados, situación por demás preocupante en sectores como el turismo donde la globalización exige servicios de primer nivel, tal como ocurre en la ciudad de Campeche, donde los empresarios están invirtiendo en infraestructura hotelera acorde a las características coloniales de la localidad. Este trabajo tiene como objetivo identificar la incidencia del liderazgo en la calidad de los servicios bajo la percepción de los gerentes de los hoteles como responsables en gran medida de los resultados de la operatividad. El estudio es descriptivo con diseño no experimental transversal, con una población censada considerando su número; los resultados obtenidos a través de los índices de liderazgo y calidad señalan, contrario a lo esperado, que los gerentes consideran que los servicios otorgados no reúnen niveles adecuados de calidad, debiéndose diseñar nuevas estrategias para la mejora de los procesos bajo el liderazgo transformacional que debe enfrentar los problemas con oportunidad para innovar los servicios del mercado donde participan.

# Calidad, Liderazgo, Mipymes

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#### Introduction

Based on the economic information of the last planning document of the Mexican government (Six-Year Development Plan), the tourism sector is a source of wealth for Mexico, occupying the third place in the generation of foreign currency after the oil activity and the reception of remittances sent by Mexicans who work abroad mainly in the United States, therefore the promotion of tourism activity is essential for job creation and economic stability (National Development Plan, PND 2013-2018).

The government of the state of Campeche through the State Development Plan (PED 2015-2021), designed strategies and lines of action to strengthen tourism potential and thus generate jobs and economic growth along with the social welfare of the population through the ordering of the sector, promoting a greater flow of direct investment and financing by raising the competitiveness of the activity in a sustainable way. As main tourist assets, the State has the fortified city of Campeche, the only walled city in Mexico that has the UNESCO Cultural Heritage badge granted by UNESCO in 1999 as well as the Mixed Heritage (cultural and natural) ) granted to the ancient Mayan city and protected tropical forests of Calakmul since 2014. There are 16 archaeological areas open to the public where you can appreciate the Mayan culture, two site museums and 9 museum spaces (PED 2015-2021).

#### **Justification**

As part of the strategic objectives of the PED 2015-20021, the city of Campeche intends to position itself as a final tourist destination and not passing to other points of the Yucatan Peninsula, to pick up the sector and not depend on the oil activity that is found focused on Ciudad del Carmen, and which is going through serious operational and economic problems; In this sense, Campeche hotel MSMEs must identify their competitive advantages for their economic development.

The hotel sector needs to be integrated by organizations that know their strengths and weaknesses at the level of infrastructure and processes under the leadership style of the decision maker, to position themselves in a market that demands quality in comprehensive services for national and foreign tourism.

#### **Problem Statement**

According to the data of the National Statistical and Geographic Information System of Tourism (SNIEGT, 2019) at the end of 2018, the tourism sector generated 4,187,000 direct jobs, which represents 8.9% of the total economically active population employed, its contribution to National GDP is equal to 8.7% at the end of the third quarter of the same year.

Given the resurgence of the crisis in the oil sector that has consequences at international and national level, the strategies proposed in the economic planning documents seek to promote tourism investments of MSMEs, promoting the care and preservation of the country's cultural, historical and natural heritage (PND , 2013-2018).

Based on the above, studies are required that contribute to the strengthening and development of the companies that participate in this sector, to turn them into organizations that offer competitive services at international level as required by globalization.

# **Objectives**

This study aims at the following objectives: a) Identify the quality elements in the operations of MSMEs in the hotel sector of the city of Campeche, b) Identify the leadership style present in this type of organizations and c) Establish the perception of managers regarding leadership and its impact on the quality of hotel services in the city

# **Theoretical framework**

# **Leadership** in the tourism sector

Turbay (2013), poses as a question in his study of leadership and organizational innovation, what are the factors that will allow organizations to survive the changes that occur in their environment and be competitive, believes that from leadership, organizations make in the face of the changing environment that modifies its structures and processes, therefore innovation is the condition to remain in the market.

The author argues that leadership is a strategic factor for the development and maintenance of companies in the market, indicating transformational leadership as the to lead the organization towards ideal innovation, in this same sense Contreras and Barbosa (2013), consider that Leadership has strong implications for organizational change and raises the need to evolve from a type of transactional leadership (typical of stable environments) to a transformational one (instability and uncertainty are common); conceptualizing the company as a system that through self-organization manages to adapt to the unstable environments where they currently operate. Estrada (2006), proposes a leadership model for changing organizations, such as the tourism sector, based on the integrality of the organizational leader; part characterization of the leader, composed of the qualities, skills, and attitudes necessary to lead organizations to achieve the proposed goals. Some studies indicate that the professional capacity, the way of communicating, the commitment to the organization and the way in which the problems are solved are related to the competences and leadership performance in the organizations of the tourism sector, (Zayas 2011). According to Velázquez (2005) empathic leadership allows the design of work schemes and organizational structures, for which it is necessary to develop high levels of affinity between managers and collaborators, the result must be reflected in the innovation of the processes, the development of creativity in favor of the company, identity with the organizational culture and achieve customer satisfaction in the tourism sector.

Barreto and Azeglio (2013), formulated a study in the tourism sector of Buenos Aires, Argentina and conclude that adequate training and motivation of human resources, and group work are linked to leadership style; This is related to the professional training of the managers responsible for making decisions in the organizations participating in the project. In Mexico Díaz, Medina and de la Garza (2011), through the questionnaire called inventory of leadership practices formulated by Kouzes and Posner, evaluated whether leadership provides competitive advantage, its results indicate that it influences the quality of the services offered through the way in which it acts, solves problems, takes risks and involves employees in the future of the organization considering their opinions through open communication.

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# **Quality in SME hotel services**

and Rojas (2014), developed a bibliometric analysis on the scientific production of research related to quality in tourism services, finding that knowledge has been generated on this topic and opportunities for new research, considering that the studies developed are basically concentrated in North America, Europe and Asia, which gives an opportunity to expose throughout problem the hemisphere. Foronda and García, (2009), consider that quality is a differentiator in tourist destinations, as an axis of strategy and that forces the renewal of quality plans developed by organizations, which have encouraged the application of tourism planning instruments in mature and emerging destinations; they have reinforced the cooperation networks of public and private administrations, they are a way of acting and provoking a dynamic effect in the tourism sector of Spain.

Fuentes, Hernández and Morini (2016), indicate that the quality recognized in the services influences the satisfaction obtained by the client in a different way, they could establish that the average quality of the services in the five-star hotels is high and the client does not observe a significant difference; the differences are greater in three-star hotels, where hotel managers often have little guidance on how to establish whether the experience of the service provided to the customer is satisfactory. As part of the research to diagnose the quality of lodging services, Reyes, Guzmán and Morales (2015) developed a work that allowed them to know the expectations and perceptions of tourists in Acapulco, Gro., Using the Servqual model, finding that the The best evaluated variables were human resources, with a perception above expectations, but not in the case of facilities and equipment, which allowed them to point out the need to modernize the traditional areas of the tourist destination to recover the level of competitiveness and raise hotel occupancy, which has remained stagnant in recent years, in this international reference port of Mexico.

Ibañez (2011), made a diagnosis of the quality and competitiveness of the tourism sector in Mexico considering that the globalization of the economy intensifies competition between destinations, pointing out the need to undertake efforts to maintain the privileged position that Mexico had, who has not yet It has consolidated the culture of quality and competitiveness which originates its tendency to lag in the ranking of the main tourist destinations in the world, for which it recommends implementing programs that certify the training of personnel, granting facilities for companies and workers to obtain certifications in quality, originate truthful and up-to-date information from government institutions, improving access to information; incentivize socially responsible companies to promote the use of alternative energy and revalue the human resources of all levels, which has an impact on the image that the company, the destination and the country offer the tourist.

Guerra and Cardozo (2010) considered that the management by competences is a tool that contributes to guarantee the quality of the service in the tourist inns of Tachida Venezuela, these researchers consider the human factor as essential in the sector, therefore, they identify the need to train and train staff in a planned way, measure their performance and thus together with other elements to evaluate the service.

They proposed a tool based on competencies and variables of the Servqual, to determine the key positions, profiles for both generic and specific competencies, seeking to increase the demonstrated performance. Gutiérrez and Rubio (2009) considered the need for a change in the culture of tourism businesses and identified the human factor as a fundamental element in the management of service quality, the above when observing the increase in competition linked to the improvement of quality and its management systems, where the human factor is finally mentioned but not involved as a key piece in the development of services to achieve customer loyalty and satisfaction.

The foregoing defines as the sole evaluator of customer quality and subjectivity of their perception.

# Research methodology

# Type of investigation

Descriptive study because information is measured or collected on the variables analyzed, with a non-experimental cross-sectional design since data were collected at a single moment in their natural context, through questionnaires administered to the MSME managers of the hotel sector, with the purpose to describe variables and analyze 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, 2016).

# Subjects in the study

The population was satisfied with tourist MSMEs of the hotel sector, specifically those that do not belong to chains or franchises of the city of Campeche and whose leadership was previously studied by Quijano, Arguelles, Medina and Fajardo (2017), now addressing its incidence in the Quality of services provided. The companies identified with this specialty were 26, according to the Mexican Business System directory as of February 2, 2016. Of the 26 hotels identified, 23 agreed to participate, representing 88% of the initial universe.

#### **Instruments**

The information was obtained through the questionnaire formulated by Mul, Mercado and Ojeda (2013) who designed it to study how knowledge is managed in companies in southeastern Mexico and includes reagents related to leadership, the integration of the instrument described in Table 1.

Dimension	Operational Definition	Reagents	Proportion
Transformational	It consists of accepting challenges and risks in the search to provide an innovation.	77, 78, 79, 80, 81	13.1%
Transactional	It is the identity of the leader between what is said and what is done in business practice, to create momentum and progress in the organization.	73, 74, 75, 76	10.5%
Problem resolution	It is the opportunity and way in which business obstacles are faced by the leader of the organization.	83, 82	5.3%

**Table 1** Elements of the leadership questionnaire administered to hotel managers

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

The instrument has a section that collects socio-demographic information and the manager's administrative profile, as well as the company's positioning in the market. In the case of the quality variable, the questionnaire designed by Parasuraman, Zeithaml and Berry (1985) was used. This instrument is linked to the objectives of the investigation by contributing to the identification of the expectations and perception that hotel managers have regarding the services offered by participating companies, (Table 2).

Dimension	Definition	Reagents	Proportion
Tangibility	It is the operational and administrative infrastructure that serves as the basis for the services offered by the organization.	1, 2, 3, 4	22.2%
Reliability	These are the processes developed by the company's personnel through which the services are provided.	5, 6, 7, 8, 9	27.7%
Answer's capacity	Operations carried out by the organization's employees in a timely manner.	10, 11, 12	16.7%
Warranty	Performing processes by staff with attitude and vocation of customer service.	13, 14, 15	16.7%
Empathy	They are the processes developed by the collaborators with a sense of identity towards the client.	16, 17, 18	16.7%

**Table 2** Definitions of the quality questionnaire administered to hotel managers

Source: own elaboration with data from Parasuraman, Zeithaml and Berry (1985) Both instruments consider scores assigned on a Likert scale with values ranging from 1 = Strongly disagree, 2 = Disagree 3 = Agree and 4 = Strongly agree.

# **Instrument Reliability**

The pilot test was developed with 10% of the population to adapt them to the participating population; Cronbach's alpha was determined with a value of 0.701 for leadership and 0.902 for quality. When the test is replicated, the values in general for each variable and dimension are shown in Table 3.

Variable	Dimension	Number of items	Cronbach's alpha
Leadership		11	0.654
	Transformational	5	0.601
	Transactional	4	0.624
	Problem	2	0.685
	resolution		
Quality		18	0.937
	Tangibility	4	0.887
	Reliability	5	0.874
	Answer's capacity	3	0.770
	Warranty	3	0.720
	Empathy	3	0.535

**Table 3** Reliability of the leadership and quality questionnaire administered to managers

Source: own elaboration based on statistical information

It is important to note that the reliability parameter for the leadership variable and the empathy dimension in the case of quality can be considered low for certain standards; However, Kerlinger (2002) states that when an instrument does not reach an index that is considered reliable, this may be due to the insufficient amount of reagents, and an error may arise due to chance or the individual's interpretation. of the reagent.

For the particular case of the questionnaires used, these contained few questions for the variables under study; Another factor to consider in this result is that the population surveyed was only 23 people.

# Procedure for data collection and analysis

Questionnaires were personally applied to hotel managers with a duration of twenty minutes each, and the data was processed through SPSS version 21 software.

#### **Results**

The leadership questionnaire includes three dimensions and the five quality one, through the calculation of the mean and standard deviation, the closest and most distant reagents of the values assigned in the instruments were identified, being able to observe the degree of dispersion of the responses, (Table 4).

Dimension	Number N	Minimum value	Maximum value	Half	<b>Standard</b> deviation
Transformational	23	1	4	3.16	0.816
Transactional	23	1	4	2.73	0.868
Problem	23	1	4	2.37	1.157
resolution					
Variable Calidad		•			
Tangibility	23	2	4	2.94	2.0879
Reliability	23	2	4	3.21	2.5568
Answer's capacity	23	2	4	3.05	1.6693
Warranty	23	2	4	3.31	1.2960
Empathy	23	1	4	3.17	1.3440

**Table 4** Descriptive statistics of the leadership and quality variables

The table indicates the average of the values assigned by the respondents with respect to the variables studied, in no case the averages reach the highest value established, the above is corroborated with the dispersion in the responses. Source: Statistical information obtained from the survey previously determined by Quijano et al (2017). In the leadership variable, the lowest average was obtained by the dimension "problem solving" and the highest was called "transformational", which indicates that the followers understand the power system in the organization, negotiation processes are promoted with the work team and agree with the rewards scheme provided by the company, Table 5.

Reagent	Minimum	Maximum	Half	Standard deviation
82. The formal leader only intervenes when the problems become serious.	1	4	2.65	1.112
83. The formal leader avoids making decisions.	1	4	2.09	1.203

**Table 5** Descriptive statistics regarding the problemsolving dimension of the leadership variable

In the case of the quality variable, none of the five dimensions obtained values close to 4, the highest corresponds to the "guarantee" dimension, and the lowest "tangibility", which indicates that the managers of the companies consider that the personnel inspire customer trust, but facilities and infrastructure must be improved. On the other hand, "reliability" is the dimension that obtained a greater dispersion in the responses, which indicates that in most organizations, personnel need to commit more to the service policies offered by companies in terms of time and characteristics (Table 6).

Reagent	Minimum	Maximum	Half	Standard deviation
5. If your establishment's staff	2	4	3.17	.650
agrees to do something for a				
certain period of time, it complies	_		2.15	
6. When a customer has a	2	4	3.17	.576
problem, the staff of your				
establishment shows a sincere				
interest in solving it	_	_	2.20	<b>605</b>
7. The staff of your establishment	2	4	3.30	.635
provides an agile and timely				
service.	_	4	2.22	<b>510</b>
8. The staff of your establishment	2	4	3.22	.518
provides / concludes its services				
in the promised time	_	4	2.22	726
9. The staff of your establishment	2	4	3.22	.736
informs the client of the				
characteristics of the product or				
service that you are receiving				

**Table 6** Descriptive statistics regarding the reliability dimension of the quality variable

The smallest dispersion in the opinions of the respondents was obtained by the "guarantee" dimension, which indicates that in general the personnel of the participating companies transmit confidence to the clients, inspiring safety (Table 7).

Reagent	Minimum	Maximum	Mean	Standard deviation
13. The staff of your establishment	2	4	3.13	.458
inspires / transmits trust to				
customers				
14. Customers of your	2	4	3.30	.635
establishment feel safe in their				
facilities				
15. The staff of your establishment	3	4	3.52	.511
is always friendly with customers				

**Table 7** Descriptive statistics regarding the guarantee dimension of the quality variable

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To assess whether sociodemographic and business factors affect the variables, the Student's T test was determined for independent tests (gender and marital status), and the ANOVA to determine the most relevant differences between variances of the values grouped into ranges; In both procedures, no statistical differences were identified for the leadership variable. In the case of the quality variable when analyzing gender, significant differences were obtained in the "guarantee" dimension, which allows us to infer that this factor affects subjective aspects such as customer trust towards staff, according to the opinion expressed by the management; Similarly, the "tangibility" dimension reported differences in assessing the type of school where the last studies were conducted, whether public or private, as well as the seniority of the manager in the position and the number of employees of the organization, which may originate of the experience acquired when performing the duties of the position; In the case of the number of workers who collaborate in the company and the type of school, it is inferred that this element of the administrative profile affects the decision to participate in courses of non-governmental instances. organize formal training employees, share project information and in the hiring of specialized personnel.

On the other hand, the "response capacity" dimension presented statistical differences with respect to the age factor, which represents an important aspect to evaluate, since according to management's opinion it can affect the moment of carrying out operations without errors or availability to resolve customer questions from other contributors.

With the quantitative values obtained from the instrument, indices were designed that make it easier to interpret the perception that the management body has regarding leadership and the quality of the services offered; They were called Leadership Index (LI) and Quality Index (CI) which were determined by expressing in percentage the ratio of the division of the individual scores of each company between the maximum value that could be obtained according to the number of reagents of each instrument. A higher value of LI and IC means that the manager has a better perspective of leadership and its impact on the quality of services provided by hotels, (Table 8).

	Leadership Index			ex Quality Index		
Business	Company Score	Top Score	LI (%)	Company Score	Top Score	IC (%)
1	22	44	50.00	43	72	56.40
2	20	44	45.45	64	72	55.81
3	31	44	70.45	48	72	47.09
4	41	44	93.18	66	72	81.98
5	41	44	93.18	64	72	83.14
6	38	44	86.36	67	72	86.63
7	31	44	70.45	53	72	69.77
8	40	44	90.91	69	72	94.19
9	36	44	81.82	64	72	59.88
10	31	44	70.45	54	72	67.44
11	42	44	95.45	60	72	86.63
12	22	44	50.00	62	72	56.40
13	28	44	63.64	51	72	60.47
14	26	44	59.09	57	72	69.77
15	26	44	59.09	57	72	69.77
16	30	44	68.18	53	72	57.56
17	32	44	72.73	54	72	58.14
18	27	44	61.36	54	72	58.14
19	24	44	54.55	50	72	45.93
20	24	44	54.55	48	72	45.93
21	11	44	25.00	48	72	31.98
22	31	44	70.45	54	72	43.02
23	31	44	70.45	50	72	43.02

LI = Leadership Index = Maximum Score / Score x 100. The result can be interpreted as the manager's perception of the leadership present in the organization.

CI = Quality Index = Maximum Score / Score x 100. The result obtained for each company is the manager's perception of the services offered and the quality of the company.

**Table 8** Leadership Index (LI) and Quality Index (CI) *Source: self made* 

According to the results of Table 8, the LI average is 67.68 and reflects the need to formally share the mission and vision for the achievement of long-term business objectives; the average obtained from the CI of the population studied is 62.13, which gives an idea of the opinion that managers have regarding the quality of their services, and that contrary to what one might think they do not consider them to be adequate.

The results of Table 8 were compared to study the relationship between managers' perception regarding the incidence of leadership in the quality of services provided by each organization and assess whether there is a correlation between the variables, through regression analysis.

Linear Pearson coefficient was determined (r = 0.75400) and the determination coefficient (r2 = 56.8%), which was obtained by squareing the previously obtained value of the Pearson coefficient. (Lind, Marchal and Wathen, 2012).

#### **Conclusions**

#### **Discussion of results**

From the evaluation of the sociodemographic factors it was observed that gender affects the levels of trust between the client and the staff, as well as the type of school either public or private where the last degree of studies was taken, which is reflected in the aspects of security, priceservice relationship and availability of services. Of the elements related to the administrative profile, seniority in the position and the number of employees who collaborate in the company offers differences in the population studied, which coincides with the restrictions identified by Gutiérrez and Rubio (2009), when it is intended to implement systems of quality management, where constituting the direction by young professionals favors its development as an enabling factor. The leadership identified in the analysis units is the transformational type, where the leader promotes individual and collective negotiation processes with the work teams, which allows to guide creativity in the members of the entity and coincides with that indicated by Turbay (2013).

It highlights that the lowest values were assigned to the way the leader solves the problems, since the market requires changing organizations as Estrada (2006) points out, where the leader with qualities, skills and attitudes facilitates conflict resolution. It is observed that the means obtained as a whole for the quality dimensions will not be considered high since their average value ranges from three, the dimension with the lowest value being tangible, which indicates that infrastructure investment is not sufficient for standards that national and foreign guests demand according to the opinion of the managers of the organizations participating in the study, which is in contrast to what was suggested by Ibañez (2011), who points out that the image of tourism companies as a whole raises their level of occupation and competitiveness, therefore, it is desirable to assess whether the physical investment made to date is adequate according to service standards.

On the contrary, the dimension called guarantee reached the average with the highest average, which indicates that employees are friendly to customers and generates a climate of trust and security, which confirms that the human factor is a fundamental element in the Quality management, and should be involved in the service delivery processes. The above is necessary to achieve customer loyalty and satisfaction, (Gutiérrez and Rubio, 2009).

Reliability is the dimension with the greatest dispersion in the responses expressed by managers, which indicates that the opinions do not coincide in the level of commitment of the other collaborators to solve the possible problems that guests have, it is desirable to encourage the provision of services based in values, norms and practices tending to satisfy the expectations of the client, (Reyes et. al, 2015). On the other hand, there is a coincidence in the managerial opinion regarding the kindness with which employees treat customers, which can be reinforced through training schemes measuring their performance based competencies and thus have a better profile design (Guerra and Cardozo, 2010).

#### **Conclusions**

The first objective of the investigation establishes the identification of the quality dimensions from the point of view of the managers of the participating companies who assign an average value of 62.13%, an unexpected situation, since the managers being employed are also responsible for the operation of the hotels and they are aware of the need to raise their quality, therefore, it is desirable to analyze current processes and propose quality management strategies that meet customer expectations.

The next objective is to identify the leadership style present in the hotels, being the transformational one, although the person responsible for guiding these companies in the long term should intervene with opportunity in solving problems, and make decisions whose results raise the positive perception of its management in favor of business goals which was ratified with the leadership index.

Finally, it was observed that there is a relationship between the variables studied and it can be inferred that the implicit quality of the services offered depends on the way in which the organizations are managed and made decisions.

This research has as a limitation the number of participating companies and the personnel surveyed, developing similar studies in other regions of the country can help establish internal and external factors that affect the level of quality of services offered by companies in the hotel sector and which is reflected in the levels of occupation and competitiveness within the market.

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Innovation to the performance evaluation process in a Puebla's government department by means of management tools strategies

Innovación al proceso de evaluación del desempeño en un departamento gubernamental del estado de Puebla mediante el uso de herramientas de gestión estratégicas

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#### **Abstract**

The purpose of this work is to present an innovation to the performance evaluation process for a government department in the state of Puebla, which has as its main function the evaluation and monitoring of the scopes, goals and objectives of all the City Council dependencies and entities from the municipality of Puebla. The innovation presented is supported by the use of the Balanced ScoreCard (BSC) tool, automated by the use of strategic management software to provide timely, visual and executive monitoring of the results and scope of the strategic indicators proposed. In the development of this work, the following is proposed: the bases of the strategic planning of the government department in question, through the proposal for the BSC as well as, the elaboration of the strategic indicators of the same and ending with the simulation of the operability of the department already mentioned, in a software that supports the management of the BSC. The results showed a significant advance in the dependency's operations, reducing the time in the operative tasks in the evaluation process, deliverable executive documents for their valuation and making timely decisions for a constant improvement regarding the service provided.

#### Innovación, Desempeño, Cuadro de mando integral

#### Resumen

El presente trabajo tiene como objetivo presentar una innovación al proceso de evaluación del desempeño para un departamento gubernamental en el estado de Puebla, el cual tiene como función principal la evaluación y seguimiento de los alcances, metas y objetivos de todas las dependencias y entidades del Ayuntamiento del municipio de Puebla. La innovación que se presenta está apoyada en el uso de la herramienta Balanced ScoreCard (BSC), automatizada mediante el uso de un software de gestión estratégica para darle seguimiento puntual, visual y ejecutiva a los resultados y alcances de los indicadores estratégicos planteados. En el desarrollo de este trabajo, se plantea lo siguiente: las bases de la planeación estratégica del departamento gubernamental en cuestión, pasando por la propuesta para el BSC así como, la elaboración de los indicadores estratégicos del mismo y finalizando con la simulación de la operatividad del departamento ya mencionado, en un software que apoya la gestión del BSC. Los resultados mostraron un avance significativo en las operaciones de la dependencia disminuyendo los tiempos en las tareas operativas en el proceso de evaluación, documentos ejecutivos entregables para su valoración y toma de decisiones oportunas para una mejora constante en cuanto al servicio prestado.

Innovation, Performance, Balanced scored card

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## Introduction

The present work deals with the application of the BSC in a public body attached to the Government of the State of Puebla, through the innovation of a strategic management software in order to visualize the fulfillment of the proposed objectives, since, this administrative model has been functional in the entities with lucrative purposes; However, it is very useful to consider implementing it in non-profit organizations with the purpose of optimizing the budget granted.

This research is divided into five sections of which the first refers to the theoretical framework of the topic exposing the main currents of the BSC; the second section establishes the study methodology, emphasizing a practical cut; the third section presents the case study where the reference of the BSC proposal to the public body is made; in the end, the conclusions of the study will be explained as well as the results obtained from the study and finally the bibliographical references consulted from the research.

#### Theoretical framework

## Innovation

#### **Etymology**

The word innovation comes from the Latin innovatio, -ōnis, a term that derives from the term innovo, -are "make new", "renew", which is formed with in- "inward" and novus "new". (EcuRed, 2019)

#### **Definition**

The economist Schumpeter in his book the theory of Economic Development, defines innovation as follows:

"A process of creative destruction through which new technologies replace old ones that allows the economy and economic agents to evolve; It is the way in which the company manages its resources over time and develops competencies that influence its competitiveness". (EcuRed, 2019)

According to the Oslo manual (Oslo Manual, 2006) an innovation is:

ISSN-On line: 2414-4819 ECORFAN® All rights reserved. "The introduction of a new, or significantly improved, product (good or service), a process, a marketing method or an organizational method, in the internal practices of the company, the organization of the workplace or external relations"

Another definition for the term innovation is the following: "introduce novelties in a specific field of human knowledge that generates a social benefit".

#### **Process**

#### **Definition**

A relevant aspect in manufacturing and service organizations are the processes, because thanks to these, there can be continuous improvement promoting organizational innovation. It is important to start from a definition for the term process. For ISO 9000-2001 process is

"A set of mutually related or interacting activities, which transform input elements into results".

In the same way, (Ponjuan, Villardefrancos, & León, 2005) defines process as:

"set of interrelated activities that transform input elements into output elements. Resources may include personnel, facilities, equipment, techniques, methods, information and others."

An integrative definition for process is presented by (Medina, Nogueira, & Hernández, 2009)

"Orderly sequence repetitive of activities that are carried out in the organization by a person, group or department, with the ability totransform inputs (inputs) into programmed outputs results (outputs) for a recipient (inside or outside the company that has requested and that are the clients of each process) executed in an effective and efficient way to obtain added value."

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Continuing with (Medina, Nogueira, & Hernández, 2009) some characteristics of the processes are:

- The inputs and outputs can be described.
- People, groups or departments are involved in the realization of these.
- It has goals and objectives, answers the question What?
- It has indicators that can be visualized in graphic form for its measurement and evolution.
- They are dynamic: they depend on resources, skill and motivation, as well as knowledge to generate the desired result.

## Types of innovation

Following the Oslo Manual (Oslo Manual, 2006), it proposes four main types of innovation: product, process, marketing and organization. For the purposes of this work, only the definition of process innovation will be addressed. A process innovation is:

"The introduction of a new, or significantly improved, production or distribution process. This implies significant changes in techniques, materials and / or software."

It is worth mentioning that process innovations can aim to reduce unit production or distribution costs, improve quality or distribute new or significantly improved products.

The Oslo manual is very precise in establishing that process innovations include new or significantly improved techniques, equipment and software, as well as the introduction of a new, or significantly improved, information and communication technology (ICT) ) is a process innovation if it is intended to improve the quality of a basic support activity.

## **Balanced Scorecard or Integral Scorecard**

When contemplating implementing a BSC or Balanced Scorecard it is very important to have a clearly defined mission, vision and values organizations, to elaborate or develop a strategy that is consistent with what the nature of the company and the way in which it visualizes in a Future (Herrera, Martín, & Frías, 2019)

The Balanced Scorecard translates the mission and strategy of the organization into a comprehensive scenario that provides performance measures for strategic management decisions (Estupiñan, 2010).

The balanced scorecard includes four perspectives which have the same importance within an organization, these four perspectives are:

- Financial Perspective: economic measures that are reflected by the actions taken in organizations
- Customer Perspective: Identifies the customer and the market segment in each business unit, as well as the performance indicators for each business unit referring to the organization.
- Perspective of internal processes: Measures the "critical internal processes in which the organization must excel".
- Learning and Growth: Measures the infrastructure that the organization must build to create a long growth team (Kaplan & Norton, 2008).

#### Strategic map

Strategic maps are the most conceptual contribution of the Balanced Scorecard; They provide support to understand the coherence between the strategic objectives and allow a simple and very graphic visualization of the company's strategy (Fernández, 2001). The strategic map reflects the chain of cause-effect relationships of the strategy to be developed and graphically shows the activities necessary for the organization to achieve the vision proposed (Yetano, 2005). The strategic map helps assess the importance of each objective, because it shows them classified by perspective. (Fernández, 2001).

## **Key Performance Indicator**

A KPI, the English Key Performance Indicator, known as the Key Performance Indicator, (or also the Key Performance Indicator) is a measure of the level of performance of a process; The value of the indicator is directly related to a target set in advance. It is usually expressed as a percentage (Jackson, 2015).

According to (Muñoz, 2009) an indicator can be defined as a variable whose control provides accurate information through periodic comparisons. The indicators can be financial or non-financial, they are used to measure the degree of compliance with the previously established objectives, they are usually expressed as a percentage; They are generally considered in the strategic plan of an organization. (What does KPI mean ?, 2017).

It is very important to clarify what it is that you want to measure, it must be consistent with the objectives set. Some essential indicators are those related to customers, product quality, financial health and teamwork success (Sánchez, Bayona, Prado, & Mendoza, 2019)

## **ICT**

Currently, in organizations the use of Information and Communication Technologies (ICT) is a differentiating factor, executives who make use of ICT in the strategic management process can make better decision making, because they have information reliable and in real time (Cotrina, and others, 2019).

In fact, (Aguilera & Riascos, 2009) mention that in the strategic analysis phase a large amount of information can be generated, at two specific moments: when the knowledge that the different experts of the organization have is abstracted and later in the analysis of the information collected.

In the same way, when using management control tools, it is important that executives can help themselves with software designed for this purpose, so that the visualization of processes, indicators and their monitoring are integral. So too, the C.E.O. You can help with computer tools such as: process flow diagram, statistical software or decision support systems (Domínguez & Gaytán, 2019).

## Methodology to be developed

The present study has been based on a methodology called Action Research (Yin, 2014) which cyclically seeks to diagnose an organizational problem and plan its solution, it is mixed cut because quantitative and qualitative data will be collected that will allow the proposed indicators of the BSC, participatory type because the research considered the people of the study subject in order to solve the practical problems (Torres, Fernández, Espinoza, & Cabrera, 2019). On the other hand, the developed methodology to achieve objectives of the research was carried out based on the following guidelines.

- a) A diagnosis was carried out by applying an exploratory questionnaire to obtain results to be analyzed to develop the BSC indicators.
- b) Based on the above, a SWOT analysis was carried out to determine that in the end the MAFE matrix will be carried out in order to determine the strategy to be attacked.
- c) In conjunction with the above, the business philosophy proposal was made based on the BSC model being guided through the mission of the organization.
- d) From the above, the next step was elaborated, which was the formulation of BSC indicators.
- e) Subsequently, the BSC mapping proposal was made.

To select the strategic management software tool, the following was done.

- a) The different tools that could be used to export the BSC model to the computer system were identified.
- b) The most appropriate tool was selected based on the needs of the organization.
- c) So that, finally, the computer tool with the BSC model was implemented and thus obtain results.

## Case study

The study presented was conducted in a government department in the state of Puebla where an exploratory questionnaire was designed to be self-applied; this with the objective of determining the strategy through the analysis of the SWOT and MAFE matrices as described in tables number 1 and 2.

<b>3</b> .	
Strengths	Opportunities
1. Training and ongoing	1. Possible reduction of
advice are provided.	time in receiving
2. The SEDEM, is	information (quarterly).
recognized at local,	2. Possible reduction of
national and international	time in obtaining results
level	(currently 60 days).
The collaborators of the	3. Executive reports can
D.E. have a bachelor's or	be generated
postgraduate degree.	automatically. (Office).
	4. Coordinated work
	could be carried out with
	national and international
	organizations.
Weaknesses	Threats
1. Times of elaboration of	1. Possible modifications
prolonged reports (60	to methodologies,
days).	programming processes,
2. Amount of information	evaluation and budgeting
exceeds the capacity of	by the higher levels.
the department (5 people).	2. Budget reduction by the
3. Little training is	government.
received within the D.E.	3. Possible delays to the
(once a year).	activities of the
	4. D.E for external errors

**Table 1** SWOT matrix of the organization *Source: elaboration based on (IMPLAN, 2019)* 

Strengths	Weaknesses
1. Training and	l 1. Times of
ongoing advice are	elaboration of
provided.	prolonged
2. The SEDEM, is	reports (60 days).
recognized a	t 2. Amount of
local, national and	linformation
international level	exceeds the
3. The	capacity of the
collaborators o	department (5
the D.E. They have	people).
a bachelor's o	3. Little training
postgraduate	is received
degree.	within the D.E.
	(once a year).

Opportunities	SO strategies	WO strategies
	1. Monthly	
reduction of time in	trainings to public	executive reports
receiving	servants to	of the
receiving information	strengthen the	performance
(quarterly).	SEDEM (F1, O2,	evaluation in less
2. Possible	O4)	time, after the
reduction of time in obtaining results (currently 60 days).	2. Increase the	analysis of the
obtaining results	position of the	information.
(currently 60 days).	municipality of	(D1, O1, O2, O3)
3. Executive	Puebla, in national	2. Obtain
reports can be	and international	training for the
generated	programs. (F2, O1, O2, O3, O4)	evaluation
automatically.	O2, O3, O4)	department. (D2,
(Office).	3. Reduce the	D3, O4)
	times of analysis	
	and evaluation of	
	the information.	
national and	(F3, O1, O2, O3)	
international		
organizations.		
Threats	SA strategies	WA Strategies
	1. Ability to solve	
modifications to	high impact	rate of errors in
methodologies,	problems. (F1, F3,	the information
programming	A1, A3)	delivered to the
processes,	2. Obtain quotes	evaluation
processes, evaluation and	before scheduling	department. (D1,
budgeting by the	the activity budget	D3, A3)
	to limit the	
	resources needed	
	to carry out its	
	activities. (F2, A1)	
	3. Generate rapid	
in D.E activities	response in	professional field
	external changes	
errors	of methodologies	
	(F2, A2, A3)	

**Table 2** MAFE matrix of the organization *Source: elaboration based on (IMPLAN, 2019)* 

The BSC model focuses on financial perspectives, internal processes, growth and development and clients (Kaplan, 2008), based on the entity's business philosophy, so the mission and vision proposal that was followed It is described.

"Vision: To be an evaluation department of the public sector that is a national reference, following up on the Performance Evaluation System in an effective, efficient, transparent and honest way".

"Mission: Periodically evaluate and monitor the municipal development plan, as well as the performance evaluation system of the municipality of Puebla, encompassing the different agencies and entities based on government regulations."

According to the above, the strategic indicators were constructed using the signalization of the colors indicating green as something correct, yellow being defined as alert and red as an indicator of a danger state, proposing the BSC model for the department which is described in table number 3.

Indicators	Satisfactory	Preventive	Unsatisfactory
Obtain at least 3 quotes before programming	3	2	0 - 1
the activity budget to limit			
the necessary resource.			
Provide 1 monthly training to public servants to strengthen performance evaluation	100% - 90%	89% - 80%	< 80%
system.			
Reduce by 20% per year the errors in the information delivered to the evaluation department based on the training provided to the workers of the municipality of Puebla.	≥20%	18% - 15%	<15%
Achieve at least 86% in the "Diagnosis on the progress in the implementation of the PbR-SED" of the SHCP	85.5% - 86%	84.1% - 85.5%	< 84%
Reduce to 42 days, the analysis and evaluation times of the performance information of the municipality of Puebla. (use of software)	42 - 47 days	48 - 53 days	> 53 days

 $\label{thm:constraints} \textbf{Table 3} \ \mathsf{BSC} \ \mathsf{mapping} \ \mathsf{proposed} \ \mathsf{to} \ \mathsf{the} \ \mathsf{organization}$ 

However, to achieve the parameters described above, the strategies are described in the four perspectives of the BSC model.

ISSN-On line: 2414-4819 ECORFAN® All rights reserved. For the indicator of the financial perspective, it was proposed to improve the use of the budget granted to this department based on the quotation before requesting its budget, as described in Table 4.

General objective	Indicators
Improve the use of the	Obtain at least 3 quotes before
budget as a management	programming the activity budget
tool.	to limit the necessary resource

**Table 4** Financial Perspective Strategy Source: elaboration based on information from (IMPLAN, 2019)

In the client perspective section, it was proposed to take as reference the information received by the department based on the training of public servants, which is described in table number 5.

General objective	Indicators
Improve the information received from the other departments of the town hall of Puebla, to generate the performance evaluation.	Provide 1 monthly training to public servants to strengthen the Performance Evaluation System. Reduce by 20% per year the errors in the information delivered to the evaluation department based on the training provided to the workers of the municipality of Puebla.

**Table 5** Customer Perspective Strategy Source: elaboration based on information from (IMPLAN, 2019)

For the perspective of internal processes, it is intended to reduce work times in terms of the realization of deliverables by the department, as described in table number 6.

General objective	Indicators
Reduce work times	Achieve at least 86% in the "Diagnosis on the progress in the implementation of the PbR-SED" of the SHCP Reduce to 42 days, the analysis and evaluation times of the performance information of the municipality of Puebla. Deliver 26 executive reports of the evaluation of the performance of the municipality of Puebla 30 days after receiving the information.

**Table 6** Internal Process Perspective Strategy

Source: development based on information from (IMPLAN, 2019)

RAMIREZ-ROSAS, José, ORTIZ-CARRANCO, Araceli, FLORES¬ZAMORA, Jesús and LOZADA-LECHUGA, Jorge. Innovation to the performance evaluation process in a Puebla's government department by means of management tools strategies. ECORFAN Journal-Republic of Peru. 2019

With regard to the perspective of learning and growth, the aim is to improve the capacities of employees through constant training schemes, focused on their daily work, which is described in Table 7.

General objective	Indicators
Improve the skills of the employees of the Evaluation Department.	Obtain 4 annual trainings for the D.E. on performance evaluation issues. Obtain 1 annual training for the D.E. in professional matters.

**Table 7** Learning and growth perspective strategy *Source: elaboration based on information from (IMPLAN, 2019)* 

Once the relevant indicators were developed for each perspective, the management software was selected to support the monitoring of the indicators in the BSC.

The criteria chosen for the selection of the tool were the following: 1) The language 2) Free access for the trial period without the use of a credit card to the tool 3) No computer skills are needed to manipulate the software.

In this way, it was possible to follow up the indicators of the D.E. for its continuous assessment by managers, as well as support for timely decision making regarding the programming of the annual activities of this department. The procedure followed for the use of the software is as follows:

- a) A user was registered on the platform of said software, in order to access the free trial period.
- b) Creation of projects Once the account with which the software will be used is created, we proceed to enter the platform, which will allow us to create new projects or strategic maps, modify or eliminate existing ones.
- c) Integration of strategic indicators. Once within the new or existing project, the information of the indicators is loaded together with its general objective, it should be mentioned that these were previously proposed here only loaded into the software for monitoring.

- d) Indicator settings In this section, the appropriate adjustments were made to each indicator, such as its goal or scope, its starting point, its evaluation parameters and the specific signaling ranges for its visualization in more detail.
- monitoring of the indicators. To closely monitor the scope of the strategic objectives and indicators of the ED, the software provides us with some exposure options, which will depend on the person interested in the information to obtain the results regarding the progress and performance of each of the activities highlighted to meet your final goal.

#### **Conclusions and Results**

The results obtained were aligned with the objectives set out in the present study. The SWOT analysis and the MAFE matrix were prepared, so the proposal of the strategic philosophy was also developed and the design of the BSC for the D.E. In the same way, a strategic management software for the manipulation of the BSC information of the organization was implemented so that the indicators can be monitored immediately and the decision-making process is expedited.

Derived from the above, an innovation was generated in the process of performance evaluation from a strategic point of view due to the use of the BSC to monitor the implemented strategy; and from the technical perspective, the innovation is due to the implementation of a business management software to automatically have the available information and improve the quality in the measurement of the objectives set by the entity.

Finally, it has been possible to indicate that this type of business strategies is not limiting for profit-making entities, but that, in turn, they work for those public organizations because it is about optimizing processes, improving customer satisfaction. client and improve the management of the budget granted.

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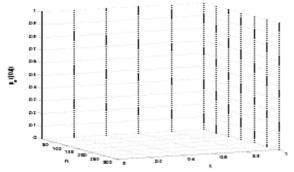
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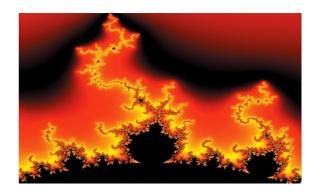


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