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RINOE Journal-Economic Systems

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Support the international scientific community in its written production Science, Technology and Innovation in the Field of Social Sciences, in Subdisciplines of Capitalist systems; Socialist systems and transitional economies; Socialist institutions and their transitions, Other economic systems; Comparative economic systems, Comparative analysis of Economic Systems, Comparative studies of particular economies.

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Presentation of the content

In the first article we present, *Organisational culture and climate in agricultural enterprises*, by GAMEZ-GASTÉLUM, Rosalinda, with adscription in the Universidad Autónoma de Sinaloa, as next article we present, *Diagnosis of training needs in micro and small enterprises in the municipality of Maxcanú, Yucatán, Mexico*, by BRUNO, Cattia, CENTURIÓN-CANTO, Erick, ROBLIDA-SÁNCHEZ, Guadalupe and PÉREZ-CONDE, Enrique, with adscription in the Universidad Tecnológica del Poniente, as next article we present, *Mexican micro and small family-owned enterprises with a model of continuity in a globalised environment*, by COLMENARES-OLIVERA, Esperanza & FLORES-OLIVERA, Ismael, with adscription in the Universidad Tecnológica de Tehuacán, as next article we present, *Design of a Local Development Model for the Textile Industry of the Tulancingo Region in the Tulancingo Polytechnic University-Business Link; based on the knowledge network approach*, by DOMINGUEZ, Benedicta, GORDILLO, Liliana, RIVEROS, Luz and VEGA, Claudia, with adscription in the Universidad Politécnica de Tulancingo.

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Organisational culture and climate in agricultural enterprises

Cultura y clima organizacional en empresas agrícolas

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Abstract

This research aims to describe how a company with a very defined organizational structure, manages to achieve the goals it has set for financial gain at the same time that it has the work schedule had been settled, fulfill with the values estimated as priority to work the way of the main organizational climate is. This would be seen through the perspective of former employees of the same, this because the research looks not to coerce favorably the interviews answers for fear of losing his job. The main objective will be to know the cohesion of the organizational structure of the company with the scheme of values that the operation of the structure pursued.

Organizational climate, Work scheme, Organizational culture

Resumen

La presente investigación busca describir cómo una empresa con una fuerte estructura de organización interna, logra alcanzar los objetivos que se ha planteado para lograr obtener beneficios financieros al mismo tiempo que el esquema de trabajo que se ha planteado, cumple con el cuadro de valores que se han definido como los que la empresa estima que han de definir su forma de trabajo y constituyen su propio clima organizacional. Esto se percibirá a través de la perspectiva de ex empleados de la misma, con el fin de que estos no se sientan coaccionados de responder a las entrevistas de manera favorable por temor a perder su trabajo. El objetivo central será el de conocer la cohesión de la estructura organizacional de la empresa con el esquema de valores que el funcionamiento que la estructura persigue.

Clima organizacional, Esquema de trabajo, Cultura organizacional

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Introduction

The purpose of knowing the above is to suggest modifications to remedy what hinders the consistency of the cohesion of the organisational structure with its scheme of values or to propose new practices if necessary, by means of an adequate synthesis of data, with detailed descriptions of the phenomenon under investigation. For this purpose, the present case study will analyse the social reality of former employees of Euronovedades Agrícolas S.A. de C.V. from their perspective. Therefore, the research will focus on the qualitative perspective in order to know the motives that lead the employees to act and to know the scenario of their work, and thus obtain an analysis that contributes to the improvement of the quality of the work of the company in particular and that, establishes a precedent, which with its particularities and unique characteristics, serves other research for companies that go through similar situations and becomes a useful tool. The work starts from the main research question: What is the prevailing organisational climate in Euronovedades and how does it favour productivity?

Literature review

Definition of organisational culture and work climate

First of all, it is important to define the environment and its perspectives. Environment is understood from everything that surrounds us to study the dynamics of interaction as a result of the elements that make it up, which are active, considering now not only the physical space but also people and situations. According to the author it is important to approach the definition of environment on three levels, from its etymological meaning, from the structure and functioning (Arana, 2008).

Thus, the environment is understood as an environment, as a given space, which has constituted the configuration of a scheme where activities take place. In terms of the living environment, space refers specifically to the places where the various social activities take place: work, leisure and where social relations take place.

The structural conformation includes aspects such as the nature that contains the elements, whether artificial such as technology and culture, as well as the physical elements of the system itself, thus considering a natural and social dimension of the environment (Arana, 2008). In this way, the concept of environment begins to contemplate the idea that links culture, values and human action in the environment, understanding it as an environment that facilitates the adoption of different behaviours.

It is through this generation of environment that humans carry out activities, the function of all human occupation revolves around what they have generated and the systems they have made available as necessary for living. Systems require concrete structures to be functional, if one process does not occur properly, it is reflected in others, which is why institutions fail in their general objectives, they do not concentrate on the specific steps that achieve the major ones.

Regarding the generation of the environment, again Tréllez and Quiróz affirm that "currently the most generalised conception of the environment reflects, on the one hand, the dynamic nature of the interrelations between natural and social elements; and on the other, from an integral point of view, that the human being, as well as his different levels of social organisation, with his needs and potentialities, creative and destructive, is an indissoluble part of this network of interactions, both as a biological being and as a creator of culture. (Arana, 2008).

It is the ethical elements that direct and underpin human action, which is why he makes use of everything he has at his disposal to satisfy his needs, this is how artificial environments are born, they are manufactured from a need. Understanding the above, we can investigate one of the artificial environments that man has generated and that is indispensable for his daily life and sustenance, his organisational culture. This organisational culture will define its way of working and will distinguish it within the social environment in which it develops.

There are countless definitions of organisational culture and they integrate different variables, but the truth is that many knowledge and experiences that are generated from defining organisational culture from different case studies with their particularities, can be applicable to other types of organisations, which is why this research has chosen to adopt the definition of Schwartz and Davis.

We can conclude that organisational culture is not a phenomenon that occurs naturally in the physical environment, it is born of a need and it is another need that drives its modification, which may or may not be felt immediately, above all because it has to be real and materialise in the interaction of individuals as a social system.

Organisational cultures can only exist in clearly established structures, otherwise it may only be a reality constructed from the customs and habits of individuals who share certain traits but who do not necessarily have an organised system that specifically directs assigned activities.

In accordance with the definition of organisational culture, it is understood that one of the elements that make up this culture is the organisational climate or also known as work climate, which is an indicator of how the culture in a company or institution is influencing the employees and how they are responding in their daily work as individuals and as part of a group, to the fulfilment of the objectives that the structure of the company establishes and that allows it to continue to exist. For this reason, it is necessary to define and understand the concept of organisational climate.

From the human approach, Pérez de Maldonado (1997; 2000; 2004) states that "the work environment or organisational climate can be understood as a socially constructed phenomenon, which arises from individual-group-working conditions interactions, resulting in a meaning to individual and group experiences, because what belongs to and occurs in the organisation affects and interacts with everything. Organisational results are precisely the consequence of these interactions, which occur in a dynamic, changing and affectively charged way". (Maldonado, 2006).

At this point, the action of individuals comes to draw on the work structure, not only the reality that workers live day by day, but previous experiences that have been shaping them and that will depend not only on the individual's own training but directly related to their work skills, their position and function and the relationship they have with their other colleagues, as well as the degree of impact that their work has on other processes in the company.

It should be remembered that Román Muñoz and Patiño Vargas maintain that the foundation of organisational culture lies in individuals, so it is not possible to consider a valuable study in this field without considering these groups as the object of study. For this reason, for the present study it is essential to know in detail the impressions and appreciations of what is experienced within the company not only from the point of view of the work structure, but also from the point of view of the individuals who work in the company and make up its social system.

As Sinaloa is a predominantly agricultural state, more than 80% of the state's economy depends on this primary activity, which is why many companies engage in economic activities derived from providing professional services to this sector.

Given the relevance of agriculture in Sinaloa and the fact that many of the most important companies in the state are related to this activity, it has been determined that the research should derive from a company that is dedicated to providing products or services to this sector, since these are the companies that have been in the market the longest, and therefore have had more time to integrate their organisational structure with values. For this reason, the present research has been inclined towards the study of a company dedicated to providing services to farmers, choosing Euro Novedades Agrícolas S.A. de C.V. to carry out the case study, since the company has 20 years of experience in this field, has a defined work structure and has also sought to integrate this structure with values and philosophies that allow it to have a socially responsible character, looking for the human element to be taken into account.

Definition of the characteristics of a suitable work environment

The present study will understand that a suitable work environment is one that complies with having integrated the values that it determines as those that employees will seek to adhere to the work structure that has been determined from the position that the individual holds, regardless of The present research has been carried out mainly with information that the company has available about itself on its website, printed advertising and above all through interviews with 10 research subjects to determine the congruence of what has been established as an ideal working environment according to the company's own standards. The observation was not very detailed, since it was not possible to visit the company to see its facilities and interview company employees due to the lack of personnel available to attend a visit to the company for academic purposes, which was requested but could not be carried out.

The interviews took place anonymously and the most relevant data were extracted in order to answer the central research question, under a semi-structured scheme. Four of the interview subjects were women, while six were men, ranging in age from 23 to 55 years old.

The women worked in administrative positions reporting to more than one manager, except for one who worked in the maintenance and cleaning area. The men, on the other hand, all worked in middle-level positions, being subordinate to a specific manager, only two of them worked at the administrative level, while the rest worked at the technical level.

Of the total number of the research subjects, seven of them finished school at bachelor level, only one of them completed graduate studies, two of them finished only high school and one of them finished high school with a technical degree. All seven of them were dismissed due to a downsizing that the company carried out approximately two to three years ago, while one was dismissed for violating company rules, one resigned and the other was not hired when his internship ended. It is important to note that both the person with the least education, the one who finished high school, was dismissed and the only one of the research subjects who had postgraduate studies, due to retrenchment layoffs.

Nine of the research subjects indicated that they had co-workers in the department in which they worked, the only one who did not, worked in the area of vehicle surveillance and was in charge of taking care of the administration of the security systems of the company's vehicles, their insurance in case of accidents and claims, their maintenance in the agencies where they were acquired, taking care of the use of the vehicles, location, use of transport allowances, as well as the continuous drafting of online and physical reports for the management. Although she did not have co-workers in her area, she shared her workspace, so she had the opportunity to interact with other people because other departments were assigned to that area to work in.

Due to the functions that all the interviewees performed, their work was related to other departments that intervened in their productivity levels. So it is clear that in order for the different departments to function properly there had to be a willingness to cooperate with each other, so that the departments could achieve their individual and overall objectives.

Below is a table, constructed on the basis of the data obtained from the interviews, showing the work area where the subjects worked, as well as the departments involved in the performance of their duties and the perception each subject had of how the departments cooperated with their work area. the position for which he/she has been hired. According to García Villamizar, in order to understand the climate of the organisation, one must seek to discover the intrinsic traits of the organisation. (García, 2006).

Taking the latter into account, it can be stated that the ideal working environment at Euro Novedades is the work that is carried out with commitment, passion, "love of work", loyalty, honesty and a sense of justice, regardless of the dependence of the company in which one works, with the understanding that all those who work in the company are highly trained professionals whose knowledge and values help to increase participation in the project market, in order to provide customers with the best equipment, products and services, while at the same time taking care of the environment by complying with labour and environmental regulations.

Although the working environment is dictated by management and must be supervised by the same, the truth is that it is largely determined by the individuals who work in it, since they are the ones who live day to day seeking to respect the margins of conduct expected of them while they must comply with the work for which they have been hired and in turn are heading to meet the objectives of each department and thus, all departments meet the overall objective of the company. For this reason, interviews were necessary in order to find out about the day-to-day atmosphere in the company.

Methodology

In order to establish the sample, we have tried to interview as many former employees as possible, regardless of their sex, age or position, as long as they have completed a period of 6 months, because it is in this period of time when it is possible to establish working relationships that would be very difficult to develop in less time.

It is therefore essential to know the relationship of individuals between members of their own work area and with the areas with which they co-ordinate, and we will explore this below.

Sujeto de investigación	Relación con los miembros de trabajo de su propia área	Alguna vez tuvo un conflicto con algún compañero de su área	Pudo resolver el conflicto con su compañero	Alguna vez tuvo un conflicto con algún compañero de otra área de trabajo	Pudo resolver el conflicto con el compañero
Sujeto 1	Buena	No		Si	No
Sujeto 2	Buena	Si	Si	Si	Con unos si y otros no
Sujeto 3	Buena	No		Si	No
Sujeto 4	Buena	Si	Si	No	
Sujeto 5	Buena	No		Si	No
Sujeto 6	Buena	No		No	
Sujeto 7	Sujeto 7	No		Si	No
Sujeto 8	Buena	No		No	
Sujeto 9	Buena	No		No	
Sujeto 10	Buena	No		Si	No

*Cuadro de elaboración propia a partir de los resultados de las entrevistas a los sujetos de investigación.

Table 2

Of the total number of respondents, seven had conflicts with a co-worker, two of them with a person who worked in the same department, while six had conflicts with a co-worker who was not part of their department, subject 2, it should be noted, had conflicts with people in and outside his department. Only subject 2 was able to resolve his conflicts and that was with the colleague who was part of his work group. The subjects were asked whether the conflicts they had were work-related or whether they had to do with personal reasons. Given the relevance of this point, table 3 is presented below.

Sujeto de investigación	Área en la que se desempeñaba	Área que intervinieron en el cumplimiento de sus funciones	Percepción de la coordinación que existía los departamentos para cumplir con sus funciones.
Sujeto 1	Parafinanciera	Diseño	Mala
Sujeto 2	Parafinanciera	Diseño	Mala
Sujeto 3	Promotora	Diseño, Ventas y comercialización	Mala
Sujeto 4	Parafinanciera	Diseño, Ventas y comercialización	Mala
Sujeto 5	Vigilancia vehicular	Gerencia, Una empresa subcontratada	Buena
Sujeto 6	Recepción	Todos los departamentos	Buena
Sujeto 7	Mantenimiento y limpieza	Todos los departamentos	Buena, pero una vez tuve un problema
Sujeto 8	Mensajería	Todos los departamentos	Buena
Sujeto 9	Diseño	Ventas y comercialización, Inventarios	Buena en mi casa, mala para mi jefe.
Sujeto 10	Jardinería	Contabilidad, Gerencia.	Mala

*Cuadro de elaboración propia a partir de los resultados de las entrevistas a los sujetos de investigación.

Table 1

The table shows that half of the opinions about coordination of work between departments is bad and half good and of the half that find it good, there are two observations that indicate that overall coordination was good but they had a negative detail to highlight.

Sujeto de investigación	Problema con compañero de área	Problema laboral	Problema personal	Problema con compañero de otra área de trabajo	Problema laboral	Problema personal
Sujeto 1				Si		Si
Sujeto 2	Si	Si	Si	Si		Si
Sujeto 3		No		Si	No	
Sujeto 4	Si	Si	Si	No		
Sujeto 5		No		Si	No	
Sujeto 6		No		Si	No	
Sujeto 7		No		Si	No	

*Cuadro de elaboración propia a partir de los resultados de las entrevistas a los sujetos de investigación.

Table 3

Seven employees indicated that they had perceived discrimination through problems they had had with co-workers, but although subject 6 did not indicate having had personal or work-related problems with a co-worker, she did indicate that she had the perception of having been discriminated against because of her age. At this point, it is worth defining what is meant by discrimination in Mexico in legal terms. The Ministry of the Interior of the United Mexican States (SEGOB), through the body known as the National Council for the Prevention of Discrimination (CONAPRED), indicates that discrimination should be understood as the unfavourable treatment or undeserved contempt for a person or group of persons due to physical characteristics or ways of life, whether ethnic origin, nationality, sex, age, disability, social, economic, health, pregnancy, language, religion, opinions, sexual preferences and marital status, among others that may be grounds for distinction, exclusion or restriction of rights. The law establishes that such practice has negative effects on the quality of life of people as they lose rights due to their condition of isolation or living in violence and in extreme cases lose their lives.

This is why a law was created to help prevent individuals from losing their rights.

Understanding what the law establishes as discrimination, we will now compare the characteristics of discrimination with the situations that the research subjects indicate they have experienced in table four.

Sujeto de investigación	Problema que percibe el sujeto de investigación	Tipo de discriminación
Sujeto 1	Fue discriminada por sus compañeros.	Debido a su religión y su apariencia.
Sujeto 2	Fue discriminada por sus compañeros.	Debido a su nivel académico, su puesto, nivel de vida y religión.
Sujeto 3	Le llamaron la atención por mal desempeño.	Por el mal desempeño de un tercero, del que su productividad depende.
Sujeto 4	Fue discriminada por sus compañeros. Le llamaron la atención por mal desempeño.	Por su edad. Por el mal desempeño de un tercero, del que su productividad depende.
Sujeto 5	Recibió quejas de sus compañeros de trabajo por su trato hacia otras personas.	No tienen que decirle como tratar a los demás.
Sujeto 6	Fue discriminada por la gerencia.	Despedida por su edad.
Sujeto 7	Fue discriminada por sus compañeros.	Debido a su nivel académico, su puesto, nivel de vida y religión.
Sujeto 8	Fue discriminado por la gerencia. Le llamaron la atención por mal desempeño.	Tuvo problemas con el gerente por comentarios de su desempeño. Por el mal desempeño de un tercero, del que su productividad depende.

*Cuadro de elaboración propia a partir de los resultados de las entrevistas a los sujetos de investigación.

Table 4

In view of the results, it is not possible to speak of a violation of the rights of the people who indicated that they felt they had been discriminated against, however, it should not be overlooked that these attitudes do not reflect the values that the company's constitution upholds and that they do not reflect a healthy organisational climate that allows individuals to develop professionally and prosper, which in turn allows the company itself to achieve its objectives. Table 5 shows which of the values on which the company is based is, in their opinion, the most appropriate for them, while at the same time indicating how they perceive this value to be lived in their working environment.

Sujeto de investigación	Valor de la empresa con el que se siente identificado	Percebe que la en la empresa este valor forma parte del clima	Razón
Sujeto 1	Honestidad	No	Es increíble que con un departamento de recursos humanos no se den cuenta del trato hacia personas que profesan una fe distinta.
Sujeto 2	Justicia	No	No es justo que se trate mal alguien porque no pudo estudiar y que por eso no pueda ganar más y porque tiene otra religión
Sujeto 3	Compromiso	No	No existe un compromiso de buscar hacer un buen trabajo cuando hay personas incompetentes que están ahí porque le caen bien al gerente.
Sujeto 4	Amor al trabajo	No	No todos los empleados tienen el mismo nivel de compromiso para trabajar y despiden a los que si se esmeran y dejan a los que son favoritos de gerencia
Sujeto 5	Compromiso	Si	Yo hago mi trabajo porque me pagan y mientras eso pase, no hay razón para dejar de ser productivos.
Sujeto 6	Compromiso	No	No todos los empleados quieren realmente trabajar y dejan a los que son jóvenes y sin experiencia, solo por su aspecto.
Sujeto 7	Justicia	No	Las personas no deberían ser tratadas diferentes porque no pudieron estudiar o porque se dedican a limpiar y menos por la religión en la que creen.
Sujeto 8	Amor al trabajo	No	Más que ir a trabajar, las personas van a presumir sus puestos y salarios.
Sujeto 9	Justicia	No	No es justo que no se paguen las horas extras, es tiempo que los empleados están sacrificando por apoyar a una empresa que no los recompensa.
Sujeto 10	Honestidad	No	No es honesto tener favoritismos por la apariencia de las personas, cada quien debería ganarse su lugar con méritos y esfuerzo, no por ser amigos del gerente.

*Cuadro de elaboración propia a partir de los resultados de las entrevistas a los sujetos de investigación.

Table 5

The results of the interviews indicate that only one person perceives that the value he considers most important takes place in his work, while the others say that they are discriminated against by a colleague because of their level of education, their position, their standard of living, their age, religion, and others have problems due to management favouritism towards people who are not fulfilling their functions and therefore hinder their performance.

Conclusions

One of the main problems of any company is that the human resources department only considers their exams to determine attitudes, aptitudes and capabilities of applicants for a position without following up on how they fit in with their co-workers and how they interact with other departments. While it is true that few companies exploit the advantages of a human resources department by seeking dynamics that integrate employees first within their own work area and then look for ways to create links with other departments, it would be worthwhile to explore this possibility.

The results indicate that former employees do not feel comfortable talking about the working environment they experienced while working there, as almost half of the sample that was intended to be studied decided not to participate in the interviews, which is not indicative of a plural, open and inclusive organisational environment. On the other hand, of those who agreed to conduct the interviews, the majority perceived problems with other members of staff and more than half perceived poor management, which did not try to reconcile in favour of a better direction of work activities that have a certain degree of dependence on the work of a third party.

Although the work environment is determined by the employees, the organisational climate is definitely dictated by the leaders and managers of the companies, so it cannot just be written on the desk, the organisational climate must be directed and built not only on a daily basis, but through a conscious search to improve the work environment for the benefit of all.

It could be thought that this type of dynamics within the workplace would take time away from the employees to fulfil their functions, however, in countries such as France, the work dynamic includes as part of the evaluation of professionals that there is coexistence between employees, for example, part of their monthly evaluation has to do with them attending at least once a month to a breakfast with other co-workers, this in order to foster closer ties that are reflected in a better work performance in the departments.

Considering what the team can gain as a social system in addition to the gratitude and feelings of attachment that the individual employee can develop towards the company, it is important to consider this as a medium and long term investment. It is true that this represents an enormous challenge for any company, regardless of its field of work, resources and objectives, but it must be understood that for more than thirty years, companies have been trying to expand by being more and more audacious in their sales, advertising, administration and accounting strategies, so they cannot be left behind in terms of innovating strategies that facilitate the creation of better cooperation ties and the generation of better working environments.

The present research work makes it clear that the perception of the company's former employees shows that the company's structure does not reflect the values it sets as part of its configuration as a company.

What stands out is that the central point of the problems that the ex-employees perceived in the time they worked, lies in the need to change the administrative management for the sake of an adequate intervention that helps them to achieve the objectives that each department sets itself and as a consequence the general objective of the company. It can be concluded that there is a need for a management that is responsible for the proper management of the organisational climate and work environment that employees build day by day, its responsibility cannot end in establishing principles and values that should be pursued, it is necessary to find out how it is living and what is necessary for the departments to be able to streamline their work to improve their performance without falling into impartiality that hinder their work.

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Diagnosis of training needs in micro and small enterprises in the municipality of Maxcanú, Yucatán, Mexico

Diagnóstico de necesidades de capacitación en las micro y pequeñas empresas en el municipio de Maxcanú, Yucatán, México

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Abstract

One of the key elements for the competitiveness of MYPES in our country is the performance of its human capital. There are many references around the problems that arise in family businesses arising from the lack of knowledge, skills and attitudes in their members. This study aims to determine which Training Needs and Assessment has the micro and small tourism businesses in the municipality of Maxcanú Yucatán, in the framework of the institutional programs of Technology Transfer and Continuing Education, of the Universidad Tecnológica del Poniente. In this sense, from the results, must be designed a training plan that be effective to satisfy the individual needs of employees and which in turn be important for the business strengthening in order to raising the level of competitiveness that allows social development the western part of the state.

Micro and small enterprises, Training needs, Competitiveness

Resumen

Uno de los elementos principales para lograr la competitividad de las MIPYMES en nuestro país es el desempeño de su capital humano. Son numerosas las referencias sobre los problemas que se presentan en las empresas familiares derivados de la carencia de conocimientos, habilidades y actitudes en sus integrantes. El presente tiene como objetivo determinar cuales son las necesidades de capacitación de las micro y pequeñas empresas turísticas del municipio de Maxcanú Yucatán, en el marco de los programas institucionales de Transferencia de Tecnología y Educación Continua, de la Universidad Tecnológica del Poniente. En este sentido, a partir de los resultados, se propondrá un plan de capacitación que sea efectivo para poder satisfacer las necesidades individuales de los colaboradores y que a su vez sea trascendente para el fortalecimiento empresarial, elevando el nivel de competitividad que permita el desarrollo social de la zona poniente del estado.

Micro y pequeñas empresas, Capacitación, Competitividad

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Introduction

The role played by companies in the market is of great importance for a correct and efficient functioning in the economy of countries, Mexico is no exception, in our country Micro and Small enterprises represent 99% of businesses, which generate more than 70% of the formal workforce and contribute 52% to the gross domestic product, far exceeding the large companies in the country, this according to data from the Ministry of Economy (2014).

The INEGI economic census (2012) indicates that the majority segment of MYPES is made up of family businesses, in this business segment, management is carried out empirically in most cases and these commonly have serious problems of lack of training of the human capital that make them up, which is the cause of difficulties in their creation, growth and development.

Today's markets demand competitive business levels. Porter (2000) points out that "the competitiveness of a country is determined by the productivity with which it uses its human, economic and natural resources. Therefore, a competitive company can be considered to be one that is able to offer products and services that are valued by its customers, through the efficient use of its resources.

Although the global scenario represents challenges for MSEs, it also brings great opportunities for growth, which will only be taken advantage of by those companies that take on the task of strengthening their structure.

"The development of policies to support Small and Medium Enterprises is an essential part of any country's long-term strategy for poverty reduction and economic development" World Bank, (2009). According to Galán and Vecino, (1997) state that:

The competitiveness of the company is determined by three types of factors: those related to the country where the company is located, those derived from the sector to which it belongs, the sector effect or industry effect, and those originating in the company itself.

Micro and small business environment

In Mexico there are several ways of classifying micro, small and medium-sized enterprises. The official classification of the Ministry of Economy (SE) was published in the Official Gazette of the Federation on 30 June 2009.

Clasificación de las Empresas en México				
Tamaño	Sector	Rango de número de trabajadores	Rango de monto de ventas anuales (mdp)	Tope máximo combinado*
Micro	Todas	Hasta 10	Hasta \$4	4.6
Pequeña	Comercio	Desde 11 hasta 30	Desde \$4.01 hasta \$100	93
	Industria y Servicios	Desde 11 hasta 50	Desde \$4.01 hasta \$100	95
Mediana	Comercio	Desde 31 hasta 100	Desde \$100.01 hasta \$250	235
	Servicios	Desde 51 hasta 100		
	Industria	Desde 51 hasta 250	Desde \$100.01 hasta \$250	250

Table 1 Classification of companies in Mexico

According to data from the Centro de Desarrollo de la Competitividad Empresarial (2015) in Mexico, 75% of the country's MSMEs fail and have to close their businesses only two years after starting their activities.

In the state of Yucatán, these economic units employ more than 537,000 people, according to data on the behaviour of economic activity in the state. SEFOE (2015) and are the entities that generate the highest income in this federal entity, as well as in its municipalities.

The trade and services sector is the largest contributor to the state's gross domestic product, and is considered of vital importance for regional development. According to the II Population and Housing Count, in Yucatan there is a total of 2 325 inhabited localities, of which 95.8% have less than 2,500 inhabitants and are considered by INEGI (2012) as rural localities; in these, 17.0% of the population of the entity resides.

It is clear then, the beneficial impact of MYPES as detonators of social development both for the economic spillover they generate and for being the livelihood of many families who invest their own resources in them, creating sources of employment in their community, hence the importance of strengthening micro-enterprises.

The aim of this research is to design a programme that will allow the MSMEs in this rural community to have the necessary tools to achieve outstanding levels of competitiveness that will result in raising the standard of living of the inhabitants of the western part of the state. "At present, numerous advances have been made in terms of rural business training, based on the particular conditions of this environment and including the interests of different actors" Guajardo et al. (2004); Ostertag (2007).

Based on the above approach, the following research question arises:

What are the types of training required by tourism MSEs in the municipality of Maxcanú to achieve a higher competitive level?

With regard to this, the general research objective is to detect the main training needs for tourism MSMEs in the municipality of Maxcanú, Yucatán; in order to achieve this, the following specific objectives are set out below:

1. To determine by means of administrative documentary revision the degree of formality of the position.
2. To characterise the opinion of the entrepreneurs on the expected performance of their human capital.
3. To determine the gaps between the expected and actual performance of workers in MSEs through the diagnosis and analysis of training needs.
4. To select the topics for the design of training programmes to be offered to tourism MSEs in the municipality of Maxcanú Yucatán within the framework of the university's institutional programmes for continuous training and technology transfer.

Literature review

This section describes concepts related to the detection of training needs in MSMEs recognising that training represents an opportunity to achieve business competitiveness, in this regard Beer (2015) comments:

Staff development is one of the key methods available to firms to obtain the talent pool they need in order to remain competitive in the future. It is a type of investment that is directly related to a company's ability to be flexible and adapt to changes in its environment.

As Marroquin (2001) points out, "training is the set of systematised processes through which the aim is to modify the knowledge, skills and attitudes of individuals, so that they are better prepared to solve problems related to their occupation".

Importance of training

Lattman et al. (1992) and Martin (2001) indicate that the purpose of all training is to train an individual to be able to perform a given task or job properly, to promote the employee's advancement and to eliminate existing deficiencies. It also recognises the importance of training for the strengthening of enterprises as long as these needs are addressed within their own social context. Business training adapted to rural conditions and focused on strategic planning can bring important economic and social benefits, contribute to adapting to changing competitive environments and to greater participation in the local or national market" Durstewitz & Escobar 2006; Suárez-Zurita (2009).

To achieve a correct development of staff in the work area it is necessary to provide them with good training to improve their skills, Rodriguez (2006) mentions that:

"Staff training should be planned to cover the shortcomings and deficiencies that people present in relation to the objectives of the organisation to which they belong".

In this way, the same author mentions the following advantages for the organisation:

- Increased employee productivity.
- Reduction in costs, due to savings in learning time.
- Reduction of accidents at work.
- Lower absenteeism.
- Increased customer satisfaction.

The training plan must be integrated into the organisation's strategic plan. The aim is to turn it into a strategic factor that allows the company's competitive advantages to be boosted.

On the other hand, López (2002, p. 57) reaffirms that "the success of any training plan is linked to a good detection of training needs". The author, when referring to needs, does not refer to deficiencies, but to the practical result of the process called needs assessment in an organisation.

Pérez (2000, p. 127) mentions that "the training needs of the company are derived from the qualification needs determined from the foresight analysis of human resources". Once these needs have been established and identified, it is then that a training strategy can be developed and implemented and, consequently, objectives can be defined.

This includes a cost-benefit analysis of the possible alternatives in order to "define the content of the plan, which is mainly constituted by the different training programmes" (Pérez, 2000, p. 127).

Methodology

The present study is in the exploratory-descriptive research stage and the object of study is the MSEs of the tourism sector dedicated to the commercialisation of food and beverages and those of lodging services in the municipality of Maxcanú, Yucatán. In order to systematically carry out the Training Needs Detection (DNC), Reza (2006) proposes the following: a) to obtain quantitative and qualitative information on the personnel according to the area of the company's job position. B) Determine the priorities of the staff in training in order to offer an adequate training programme. C) Determine training programmes, learning strategies, job positions and core competencies and skills. D) Structure an initial skills inventory of the company's staff.

E) Identify the objectives, thematic content and necessary resources etc. required for each course/event to be delivered. F) Observe which are the training needs, which are training needs and which are development needs.

In agreement with López (2005, p. 78) who says that:

The diagnosis must be the result of a work of analysis of the internal reality of the organisations and the external scenarios that condition them; of a thorough examination of the competences of its members to find out what learning they need to improve their activities and develop their professional careers. And an assessment of the perceptions of the stakeholders who exert some degree of influence.

Based on the above, it is necessary to determine which are the scenarios in which the analysis is carried out, for the present research the classification of needs according to their origin will be taken as shown in figure 1 below:

Por su origen

Organizacional	⇨ Análisis situacional de la empresa.	Debilidades generales, se identifica en dónde es más necesaria la capacitación.
Ocupacional	⇨ análisis del puesto	Lo que es necesario en términos de capacidad, conocimiento, habilidades y actitudes.
Individual	⇨ evaluación del trabajador	La persona que necesita capacitación y en qué la necesita.

Figure 1 Classification of Training Needs by their origin. STyPS (2008, p. 27)

Among the main methods for the detection of training needs, Reza (2006) proposes the following:

- Occupational model
- Diagnosis of needs by key skills or competencies.
- The logical framework method.
- Focus groups.
- DNC based on problem analysis.

In this study, the method to be developed for the NCD is the job model in which the ideal activities are compared with the real activities carried out by the person or persons within the company, according to Reza (2006).

The same author comments that this method consists of four stages:

1. Definition of the ideal situation - In this stage, the functions and requirements are established through the analysis standards that the company must have. The standards of analysis are: a) material resources b) results c) efficiency indexes e) requirements f) physical working environment g) safety measures.
2. Determination of the actual situation: In this stage, information is obtained on how the activities of the job are being carried out. The way to obtain the information can be through interview, questionnaire, huddles, etc.
3. Comparisons between the two situations - In this stage is to compare the ideal situation with the actual situation.
4. Determination of needs and decision making - In these stages is to analyse how the activities are being carried out and to make the corresponding decisions.

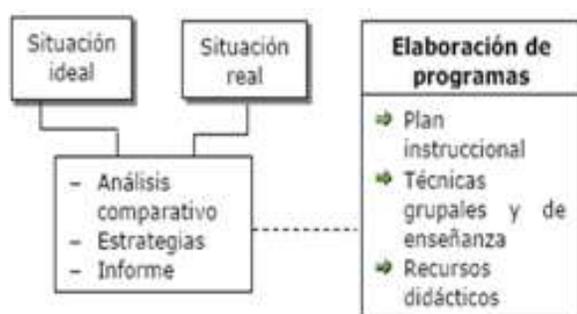


Figure 2 Methodology for the detection of Training Needs. STyPS (2008, p. 31)

With reference to the aforementioned methodology, a sample of 10 MSEs was considered in order to know aspects of the company's conformation as well as the ideal situation by means of job descriptions (documentary review).

As an instrument for data collection, a survey was carried out to detect generic training needs and was applied to 43 people, who at the time of the survey were working in these entities. The instrument assesses incidence in terms of knowledge, skills and attitudes.

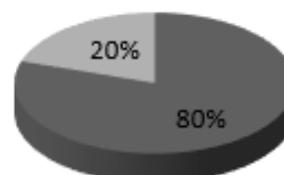
Finally, the comparative analysis proposed in the methodology is carried out to determine which training needs have the highest incidence.

Results

With respect to the fulfilment of the general objective of the detection of training needs for tourism MSMEs in the municipality of Maxcanú, Yucatán, the following results were obtained:

Tipo de Empresas

■ Familiares ■ Privadas



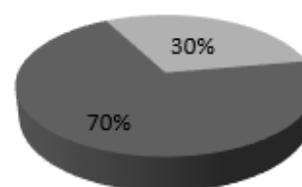
Graph 1 Type of enterprises

The survey shows that the majority of the enterprises are family businesses and only 20% of the owners are not related to the employees.

Likewise, as can be seen in the following table, 70% of the enterprises are commercial and are dedicated to the sale of food and beverages and 30% of the respondents are enterprises that offer accommodation services.

Tipo de actividad

■ Alimentos y bebidas ■ Hospedaje



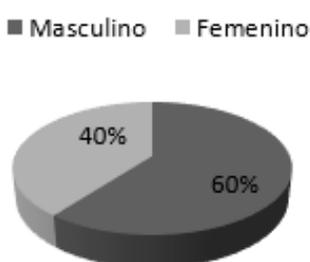
Graph 2 Type of activity in the companies

It can also be determined that the average age of the workers is between 40 and 50 years old and 60% are men.



Graph 3 Age of workers in companies

Género de los trabajadores



Graph 4 Gender of workers in companies

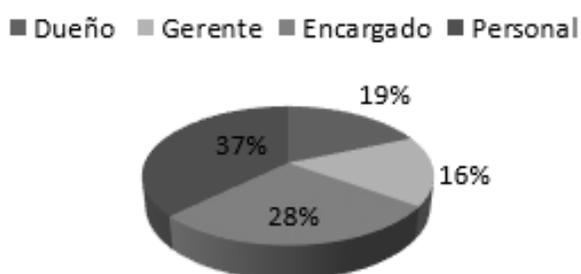
Source: Own Elaboration

Regarding the average level of education of the workers, the following relevant data indicates that around 23% of the workers have commercial and technical studies.



Graph 5 Level of education of the workers

Puesto que desempeña



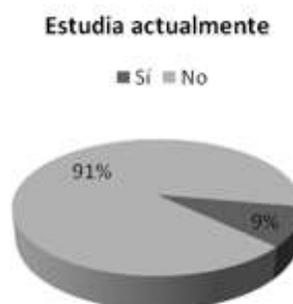
Graph 6 Position held by the workers

In this graph we can see that 37% of the respondents are business owners. In contrast to the figure below, 84% have not received any training in their current position.



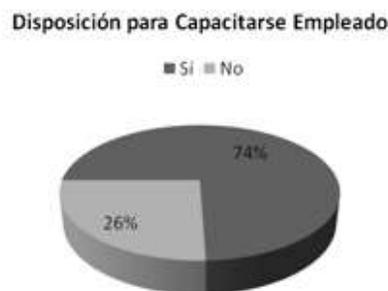
Graph 7 Training of workers

91% of the respondents are not doing any studies and said that they are 100% dedicated to this business activity.



Graph 8 Current studies of employees in the companies

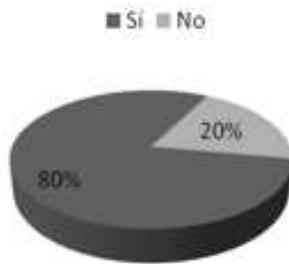
As for the employees, we found that most of them are willing to be trained and are interested in improving their professional performance.



Graph 9 Willingness to train (Employee)

In this respect, business owners are willing to train their staff, if it represents an improvement for their business and does not have a high cost for their company. In this respect, observations were also recorded in the instrument applied, referring to the relevance of the training schedules and the duration of the training, so that their interests are not affected.

Disposición para Capacitar Empleado/Dueño

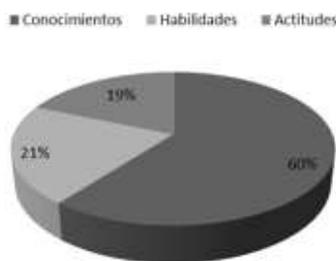


Graph 10 Willingness to train (Employer/Owner)

Based on the situational analysis between ideal and real performance, the need to reinforce the worker's knowledge is determined as a priority area of opportunity, with the greatest discrepancies in terms of the administrative and financial management of the business, marketing knowledge, service quality, computers and English.

Service quality, computer skills and English. The skills that need to be reinforced are those related to food handling and beverage preparation, and in the attitudinal area, customer service, interpersonal relations and teamwork.

Áreas de Capacitación detectadas



Graph 11 Training areas detected in the companies

Conclusions

Training in the workplace helps to improve the performance of individuals at work and the performance of the organisation itself, with a view to achieving a better competitive position in the market. However, the lack of knowledge of the procedures for detecting training needs has in many cases caused employers to err in this task. The situation of MSEs as enterprises susceptible to early failure due to poor management can change if they are provided with tools to strengthen the competencies of their human capital.

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Mexican micro and small family-owned enterprises with a model of continuity in a globalised environment

Las micro y pequeñas empresas familiares mexicanas con un modelo de continuidad en un entorno globalizado

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Abstract

Family businesses in our country are the main source of income and therefore provide us with social stability. Unfortunately the failure rate presented is very high; its origin is a combination of different interests or purposes of those involved in its organizational structure. Informality is one of the major specific and common problems of family businesses and the lack of rules to support conservation and create harmony among the family members, generating competitiveness and profitability in the company, according to the documentary and field research conducted by Hilario Díaz (Ph.D.), Thesis 2011, survey on family businesses in manufacturing, commerce and services of Tehuacan, Puebla. Family businesses are an engine of the economy of every country in the world. Family firms perform better than non-family, both sales growth and return on shareholder value.

Resumen

Las empresas familiares en nuestro país son la principal fuente generadora de ingresos económicos y por lo tanto nos proporcionan estabilidad social, desafortunadamente el índice de fracasos que se presenta es muy elevado, esto tiene como origen la conjugación de los diferentes intereses o fines de los involucrados en su estructura organizacional. Siendo la informalidad uno de los principales problemas propios y comunes de las empresas familiares, así como la carencia de reglas que apoyen a conservar y generar armonía entre los familiares participantes, al mismo tiempo generar competitividad y rentabilidad en la empresa, esto según la investigación documental y de campo realizada por el Dr. Hilario Díaz, Tesis 2011, en la que se encuestó a empresas familiares de manufactura, comercio y servicios de la ciudad de Tehuacán, Puebla. Las empresas familiares son un motor de la economía de todos los países en el mundo, las empresas familiares tienen un mejor desempeño que las no familiares, tanto en crecimiento de ventas como en retorno de valor para los accionistas. (Kachaner, 2012).

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Introduction

Family businesses are businesses in which all or most of the owners are members of a single family, including those who are linked by blood, but also those who are spouses. In this type of business it is generally observed that its members tend to get into less debt than those who are not family members, one of the characteristics is that they have great liquidity and are even over capitalised and manage to keep money idle.

Family businesses usually arise with the dream of being generators of their own employment and income and sustainability of many families, so the members of these, put all their effort, mind, body and soul to grow that microenterprise, with a view to achieving prosperity and success, both their business and the family, this subsists until the second generation, This subsists until the second generation, where the members form their own families when they get married and these begin to pursue personal interests with different approaches, this results in various problems when the rules and organisational structure are not defined, directly affecting the company, because the families put their personal wellbeing before that of the company in question.

Therefore, in order for the company to continue to function, it is necessary to correctly establish the guidelines, the philosophy and the lines of authority and responsibility as well as communication, all of which are focused on the benefit of the company and, as a consequence, that of the family.

Development

Definition of family business

"A company controlled and/or managed by a family group or nucleus that shapes the vision of the same, in such a way that it seeks the sustainability of the company through the generations". (Sandoval, 2013)

Family businesses are considered to be the backbone on which the economy of all countries worldwide is based; they perform better than non-family businesses in terms of sales growth and return of economic value to shareholders (Katcher, 2012). (Katcher, 2012)

Exaudi de Investigación (www.exaudionline.com) in combination with distinguished academic institutions, business associations and consulting firms from different Latin American countries, carried out a study on 750 family businesses in the countries of Argentina, Colombia, Costa Rica, Mexico, Peru, Uruguay and Venezuela, with the objective of determining both the demographic characteristics and the impact of the local environment on the managerial and strategic decision-making of family businesses in the region.

As a result of this study, it was found that 85.20% of private companies in Latin America are family-owned and were founded during the last two decades, have on average between 11 and 50 employees with gross annual sales of approximately US\$3,000,000 and 12.38% of the companies generate more than US\$23,000,000 in annual sales. Globally, family businesses are considered fundamental for the development of countries and regions, as statistics show. (Gomez, 2012)

In the USA:

- 95% start out as family-owned
- 70% of the Fortune 500 are family-owned according to Fortune magazine.

In Europe:

- 86% in the South
- 75% in the North
- 60.5% in France
- 75% in Italy
- 82% in Germany
- 76% in the UK
- 80% in Spain
- 76% in Great Britain

In Latin America

- 75% in Argentina
- 70% in Colombia
- 90% in Chile
- 86% in Mexico

C. Porrás and M.L. Nalda, *La Empresa Familiar, un motor de riqueza*, 21 May 2008, Gaceta.es, C.Porrás and M.L.Nalda, "La Empresa Familiar, un motor de riqueza", 21/05/08. J. Amat, *La continuidad de la Empresa Familiar* (Barcelona: Gestión 2000, 2001).

According to statistics reported by Mario Rizo, partner of the firm Salles, Sáinz-Grant Thornton, in Latin America, 9 out of 10 companies are family businesses, and unfortunately 2 out of 3 fail.

In Mexico, more than 87% of existing businesses are family businesses, but 8 out of 10 fail and die before they are two years old.

Decision-making in this type of organisation is less bureaucratic than in non-family businesses, because there are few managers in whose hands the decision-making powers are concentrated, so it is more flexible and adapts more quickly to changes in the environment. Mario Rizo, partner of the firm Salles, Sáinz-Grant Thornton, said. (CNNExpansion 29/01/2013).

Mexican micro and small family businesses in the national context

In Mexico 97 % of the commercial activity is given by microenterprises, let's take into account that 86 % of the companies in Mexico are family businesses, of seven economic activities that are registered in the State of Puebla, Secretary of Economy (SE, 2013) there are 108481 economic units, of which 106537 are microenterprises, small 1391, medium 410 and large 143. INEGI (2009) In Tehuacán there are 9640 economic units of the commerce sector. INEGI (2008)

SE. Ministry of Economy, federal institution. It promotes and implements public policies and programmes aimed at creating more and better jobs, more and better companies and more and better entrepreneurs.

INEGI. The National Institute of Statistics and Geography is an autonomous organism of the Mexican government, dedicated to the coordination of the National System of Statistical and Geographical Information of the country.

In Mexico there are 95.5 percent of microenterprises 4.1 percent are small and medium-sized enterprises while 0.3 percent are large.

Sector económico	Número de empresas	Porcentaje	Número de empleados	Porcentaje
Comercio	1013743	93.0%	5215808	32.1%
Servicios	1580587	2.6%	4997366	30.8%
Manufactura	328718	0.9%	4198579	25.9%
Totales	2921011	97.2%	14411753	88.8%

Table 1 Number and percentage of enterprises by economic sector and employment

Tamaño de empresa	Total Absoluto	%	Distribución porcentual				
			Persona física	Sociedad mercantil	Coop y asociac.	Serv y admón. Pub.	Otras
Micro	1533865	97.0	94.3	5.2	0.3	0.1	0.1
Pequeñas	33031	2.1	20.9	75.8	1.1	1.9	0.3
Medianas	9976	0.6	5.9	90.5	1.2	2.0	0.4
Grandes	3715	0.2	0.8	97.6	0.6	0.8	0.2
Totales	1580587	100	89.8	7.4	0.3	0.3	0.2

Table 2 Legal category by company size and branch (commerce)

Various studies on the initial duration of new enterprises show that there is a high rate of closure; only 20 per cent will reach the age of two years.

Causas de fracaso	Porcentaje
Conflictos familiares	17%
Mala administración	16%
Ausencia de liderazgo	14%
Inadaptación al cambio	11%
Falta de claridad en el objetivo	10%
Falta de capacitación	10%
Ausencia de planeación	9%
Falta de actualización del empresario	9%
Ignorancia de la problemática del país	5%
	100%

Table 3 Causes of micro and small enterprise failure
Source: (valencia, 2010)

Another research carried out by the author of the book Administración de Pequeñas y Medianas Empresas (CONACYT, reference 0880-59110), whose purpose was to determine the causes of failure in micro, small and medium-sized enterprises:

Causas de fracaso	Porcentaje
Falta de estudios de prevención (estudios de mercado, financiero y fiscal)	29.0%
Falta de experiencia en el ramo	18.0%
Falta de habilidad administrativa	22.0%
Escasez de personal calificado	14.0%
Inflación	12.4%
Fraudes	3.6%
Desastres	1.0%
	100%

Table 4 Cause of failure
Source: (Valencia, 2010)

The most successful Mexican family businesses at the national level

Main problems of family businesses

There is a popular saying that mentions that the first generation is the founder, the one who creates and grows the family business; the second generation, the one who enjoys the benefits of the family business; and the third generation, who spends all the profits of the family business.

The second generation enjoys the benefits of the family business and the third generation spends all the money and leads it to bankruptcy. (Sandoval, 2013). A recent study carried out by Banamex together with a consulting firm called Profit Consulting, shows us a broad x-ray of family businesses in Mexico. The aim of this study was to understand the profile of family businesses by identifying the level of compliance with the best business practices that family businesses should carry out. To carry out this study, seven challenges were defined, on which the level of compliance of each company was evaluated in order to determine the extent to which each challenge has or has not been met.

With the seven challenges of the Banamex and Profit Consulting study, the level of compliance of each company was defined according to a list of "best practices". The study shows that 68% of the companies are at 50% or less of compliance with the practices, which means that there is much to be done to ensure the continuity of these companies.

Main challenges for family businesses

The "succession" challenge is the most critical, as 40% are at a critical level as they have not planned for the succession of the family business. This is followed by the "governance" challenge, the "finance" challenge, the "strategy" challenge, the "wealth" challenge, the "family" challenge and the "business" challenge. With this information we can realise the main issues of the family business. The following table shows the name of the challenge and the main problem or practice not carried out by the majority of the family businesses surveyed in the Banamex study.:

Reto	Problema o practica no llevada a cabo
Empresa	Vulnerabilidad ante la ausencia del líder
Familia	Ausencia de reglas escritas y mecanismos de comunicación que mejoren las relaciones entre la familia y la empresa
Estrategia	Falta un plan estratégico por escrito
Finanzas	No hay un plan financiero por escrito
Gobierno	No tienen Consejo Familiar y un grupo directivo profesional
Sucesión	No hay un plan de sucesión
Patrimonio	No hay un plan patrimonial por escrito

Table 5 Problems and challenges of family businesses

With all this information, we can conclude that there are three main areas in which we can work with family businesses on the basis of their specific problems:

The professionalisation of management practices (strategy). The development of communication and negotiation skills of the members of the business family.

The dissemination and application of models for the sustainability and succession of the family business (innovation and continuous improvement).

Competitive advantages, success stories of family businesses in Mexico

Family businesses, including those of dynasties such as Slim, Servitje and Azcárraga, represent between 70% and 90% of all businesses in Mexico.

Case 1 Grupo Bimbo

The "teddy bear" firm started out as a powerful company from its inception, when in 1945 the Servitje family began to market bread. From that moment to date, it has managed to multiply its workforce to 73,000 employees, spread across 74 plants and seven sales companies in 16 countries.

In recent years, the company has worked hard to expand its branches by acquiring small companies in the sector, as well as strengthening its portfolio by adding sweets and biscuits to its traditional dough sales. It has also increased its international market share through acquisitions such as Sara Lee.

Case 2 Grupo Televisa

Although Emilio Azcárraga Vidaurreta first experimented with radio and then television broadcasting in 1930, officially Televisa began operations in 1972, with the merger of Televisión Independientes de México (TIM), Canal 8 and Telesistema Mexicano. Soon after, the latter became the owner of all the firms, passing into the hands of Emilio Azcárraga Milmo for the next 25 years, which was enough time for it to become the most important Spanish-speaking television network. Currently, it is Emilio Azcárraga Jean (Milmo's son) who is at the helm of the business group, showing business power and a strong influence in the public media. Proof of this is the large number of companies that the conglomerate owns, among them Club de Fútbol América, Cablevisión and Editorial Televisa. Despite strong criticism for his so-called monopoly and the media revolution facing television, following the emergence of the internet, social networks and other electronic platforms, Azcárraga Jean recently assured that his business has not only not declined but is at its best.

Case 3 Grupo Carso

The success of this conglomerate is directly linked to Carlos Slim Helú's business skills. The Mexican businessman is today considered the richest man in the world, with a fortune that Forbes estimated in 2010 at 54 billion dollars, and that according to an update made at the beginning of this year has grown to 74 billion dollars. Slim and his family currently own shares in companies such as América Móvil (Telcel), Telmex, Grupo Carso, Inbursa, Ideal and US Com, but they are looking for more. Of all of them, América Móvil stands out, which has become one of the four mobile operators with the most lines in the world. Participating in 18 countries and serving more than 250 million customers.

Case 4 Cemex

The Zambrano family, originally from Monterrey, has managed to transform Cemex into one of the largest cement companies in the world, thanks to its 51 plants in 11 countries on four continents. Lorenzo Zambrano, its leader, had an annual production capacity of close to 78 million tons of cement and sales of more than 5.6 billion dollars a year until the beginning of 2010. Unfortunately, the cement company has suffered one of the sharpest falls in recent years, accumulating an immense debt of more than 18 billion dollars, which has forced it to take drastic measures. In the fourth quarter of 2011, Cemex plans to sell between 100 million and 200 million dollars, which it will use to pay off its financial obligations. In any case, the company continues to be one of the most important in the country.

Case 5 Mexican commercial

Carlos González Nova, together with Antonio González Abascal, created Comercial Mexicana in 1930. After all these years, and with the leadership of Guillermo González Novoa, today the company is the third largest chain store in the country. According to its own figures, it operates 227 shops throughout the country, but divided into brands such as Comercial Mexicana, Mega, Bodega Comercial Mexicana, Costco, Sumesa, City Market, Alprecio and Fresko, all of which it owns. Like Cemex, Comerci currently has a large debt (1.5 billion pesos), although it hopes to reduce it this year.

And it seems that it will succeed, as a few days ago the company reported that after three years of low growth it will resume its expansion thanks to investments of two and a half billion pesos to open new shops and renovations. In this way, the company presided over by Guillermo González Novoa has set itself the objective of opening a total of 22 units for the following year.

Case 6 Wal-Mart Stores, Inc.

A family-owned company founded in 1962 by Sam Walton. Wal-Mart's winning strategy is based on selling products at consistently low prices. (Anthony, 2008) It performs a daily analysis of the performance of all shops on items such as sales, expenses, profits and losses. The data from the top shops is used to improve operations in problem shops.

In a very simple way, the daily sales performance is compared with the previous year's figures.

I always had the soul of an operator, of someone who wants things to go well, then better and then as well as possible.

Their organisation is a "shop within a shop" and managers are encouraged to be creative and incentivised. The three-metre attitude of looking at customers and asking "can I help you with something" is a big help and has helped to support customers and reduce shoplifting.

Pay increases based on performance rather than seniority and an open door policy. He instilled frugality as part of Wal-Mart's DNA.

Frugality: is the quality of being thrifty, prosperous, prudent and economical in the use of consumable resources (such as food or water), as well as optimising the use of time and money to avoid waste, profligacy and extravagance. (Jhon, 1999) In behavioural science, frugality has been described as the tendency to acquire goods and services in a restricted manner, as well as the optimised use of economic goods and services one already possesses in order to achieve one or more long-term goals.

Case 7 Carlos Kasuga, CEO of Yakult Mexico

Carlos Kasuga, a Mexican entrepreneur of Japanese origin who is currently Chairman of the Board of Yakult Mexico, has a business philosophy based on hard work, trust and cooperation. (Herrero, 2013) These values have made him a sought-after and inspirational speaker, as well as a role model in the world of business and social responsibility. Here are 10 inspiring insights he has shared in interviews and lectures:

On being a good leader

1. "Being the head, the entrepreneur has the responsibility to lead people. It is very important to set goals that are not exaggerated and, when those goals are achieved, to deploy them in a big way".

2. For Kasuga, it is important that executives make their employees feel needed, useful and respected. This is what the businessman calls the "moral wage".

On failure

1. "We know that there can be mistakes because we understand that people have qualities but also flaws. Therefore, you have to teach people to grow like bamboo and show them that in storms or failures you can be down but you can never break, and then get up again".

On entrepreneurship

1. "We must educate companies, because the only way to generate wealth is through education".
2. "The best seasoning for a restaurant and the best merchandise for a store are the owner's footsteps. By this I mean that you have to keep an eye on the shop every day, even on Saturdays and Sundays".
3. "If we earn one peso, we should spend only 80 cents, and if we can't have everything we want, we should take care of what we have.
4. Kasuga argues that the success of SMEs is linked to constant investment in training, courses or workshops.
5. He is also emphatic about the importance of having good relationships with all stakeholders, especially with suppliers, as they will reciprocate with on-time deliveries, better prices, etc.

On personal values

1. Values are what make the individual a quality person. To have quality as an entrepreneur, as a person and as a company as a whole, four steps must be followed:

Well-being: Being honest, punctual, clean, responsible and hardworking.

Doing well: Doing everything right from the start.

Well-being: Give more than you get: to your family, to your work, to society. In the end it makes one feel well being, which is synonymous with full happiness.

The good to have: If the above three steps are followed in that order, you will achieve the well-being of money and material things.

On environmentalism

1. "When you get married, plant a tree; when your child is born, plant a tree; when you enter primary school, plant a tree; before any really important event, plant a tree."

Continuity model

Formal presentation of the continuity model for family micro-businesses.



Figure 1 Continuity model for family micro-businesses

Description of the continuity model

All the elements revolve around the business, in the first level there are three factors directly related to the business, which are the economic factor, the product factor and the most important factor, the customer, where competitive advantages must be developed for each factor. Secondly, there are five elements of analysis: strategy, leadership, innovation, institutionalisation and continuity, where a diagnosis is made by means of an X-ray of the business and work is done on the weakest points.

In the external line we find the transgenerational potential that is divided into the family factor, which are the unique resources and capacities that family businesses have when interacting the family, individuals and the business itself, the entrepreneurial orientation refers to those dimensions to be continuously undertaking, developing organisational learning and innovative performance. The proper functioning of all these elements generates continuity in a family business.

The deming cycle as a tool for applying the continuity model



Figure 2 Deming Cycle

Case study: Real application of the continuity model to a family micro-business in Tehuacán

Plan

Identify the process to be improved: Continuity for family micro-businesses that only work with empirical procedures: Name of the micro-business: "Carmen" Grocery Store.

Collect data to deepen the knowledge of the process.

a) Application of a questionnaire that will provide information for the analysis of the following aspects:

- General data of the company
- Strategy
- Leadership
- Innovation
- Institutionalisation
- Continuity

CUESTIONARIO PARA EL NEGOCIO FAMILIAR	
DATOS GENERALES	
NOMBRE DE LA EMPRESA	TIENDA DE ABARROTES CARMEN
DIRECCION	AV PEÑAFIEL 507 COL. SARABIA
ESTADO	PUEBLA CIUDAD TEHUACÁN
CARGO DE QUIEN CONTESTA LA ENCUESTA	ADMINISTRADOR GENERAL
	* ADMINISTRADOR GENERAL
	* EMPLEADO FAMILIAR
	* EMPLEADO NO FAMILIAR
NUMERO DE PERSONAS QUE LABORAN EN EL NEGOCIO	5
AÑO DE FUNDACION	2007
GENERACIONES DE FAMILIA AL FRENTE DEL NEGOCIO	PRIMERA Generacion
MODELO FAMILIAR DE LA EMPRESA	CAPITAN
	* CAPITAN
	* EMPERADOR
	* Equipo Familiar
	* Familia Profesional
	* Corporación
	* Grupo de inversión familiar

Table 6 General data

CUESTIONARIO	
ESTRATEGIA	
Conteste las preguntas en una escala de 1 a 5, de acuerdo al grado de cumplimiento si contiene el elemento preguntado.	
El modelo de negocio de la empresa está planteado en la mente del director y por escrito	1
En qué grado el modelo de negocio es entendido por los demás integrantes	2
En qué grado la estrategia del negocio está más enfocada recuperación de la inversión o seguir innovando	3
Su plan estratégico está enfocado a cumplir objetivos de corto plazo o largo plazo.	3
La elaboración del plan estuvo más enfocada a una metodología informal o formal	1
Para la elaboración del plan estratégico se utilizaron herramientas de análisis externo e interno de la empresa	1
Qué tan benéfico para la empresa ha sido haber desarrollado el plan estratégico	1
¿El plan de trabajo de la operación/comercialización está alineado al plan de estratégico?	1
¿Se está realizando una medición constante sobre el cumplimiento del plan estratégico?	1
¿El plan estratégico se actualiza constantemente?	1
Cuando ha revisado la estrategia de su empresa ha implicado un fortalecimiento de su modelo de negocio o un cambio en el mismo	2
Los cambios en el modelo de negocio han sido motivados por necesidad o por aprovechar una oportunidad, o ambas	5
PROMEDIO	1.83

Table 7 Strategy questionnaire

LIDERAZGO	
Conteste las preguntas en una escala de 1 a 5, de acuerdo al grado de cumplimiento si contiene el elemento preguntado.	
¿En su empresa, en general, quienes ocupan los puestos de la alta dirección, cuentan con la capacidad y experiencia para el puesto	5
El estilo de liderazgo está enfocado tanto a logro de la tarea y resultados como a la satisfacción de las personas	5
La motivación al personal está basada más en técnico de control que en la inspiración	5
¿El director es consciente de que debe ser líder ante su gente?	5
El reconocimiento de los logros generalmente se hace más al esfuerzo grupal que al individual	5
Qué tanto beneficio le ha dado a la organización capacitar y desarrollar al personal:	3
En general, la toma de decisiones es llevada a cabo por la máxima autoridad o por consenso	5
El considerado líder, da la libertad para tomar decisiones y acepta otras opiniones	5
Ante una situación de crisis, las decisiones son tomadas por la una sola persona o por un equipo.	5
En las decisiones importantes se toma tanto en cuenta la experiencia e intuición como el análisis de datos e información.	5
La alta dirección es proactiva/conciente, que asume el control/al tomar acciones	5
El liderazgo ha impactado positivamente el crecimiento del negocio	
En la toma de decisiones se toman en cuenta la responsabilidad social y el respeto por la dignidad de las personas	5
PROMEDIO	4.83

Table 8 Leadership questionnaire

INNOVACIÓN	
Conteste las preguntas en una escala de 1 a 5, de acuerdo al grado de cumplimiento si contiene el elemento preguntado.	
La empresa tiene un alto grado de innovación/actualización en los productos o servicios	4
La empresa tiene un alto grado de innovación en los procesos y procedimientos	1
Existe una preocupación constante por la calidad y la mejora continua	5
La empresa es agresiva competitivamente hablando	5
Las nuevas oportunidades de negocio son aprovechadas generalmente por la empresa	5
Se promueve la generación de ideas nuevas	5
Se aplican las nuevas ideas en la empresa	5
Se aprovecha el capital social (relaciones o redes) que ha establecido el fundador y los miembros de la familia	5
Existen sistemas de mejora continua establecidos en la empresa	1
Se tiene asignado algún presupuesto a la innovación	1
Las innovaciones y generación de ideas ha tenido un impacto positivo en el crecimiento de la empresa	1
PROMEDIO	3.8182

Table 9 Innovation questionnaire

INSTITUCIONALIZACIÓN	
Conteste las preguntas en una escala de 1 a 5, de acuerdo al grado de cumplimiento si contiene el elemento preguntado.	
¿Qué tan informal o formal es su consejo de familia en su empresa?	3
¿Qué tan bien funciona el consejo de familia de su empresa?	3
¿Qué tan informal o formal está planeada como es la dirección en su empresa?	1
¿Qué tan bien funcionan la dirección de su empresa?	3
¿En su empresa, en general, quienes ocupan los puestos de la alta dirección, cuentan con la capacidad y experiencia para el puesto?	4
¿En su empresa, en general, quienes ocupan los puestos de la gerencia media y niveles de supervisión, cuentan con la capacidad y experiencia para el puesto?	5
Cuenta su empresa con sistemas de información integrales (ERP, SAP, MCR, Particular etc.) que facilitan el control y el uso de la información	1
El nivel de formalización (reglas, políticas y procedimientos) se encuentran por escrito en la organización	1
Existe un mecanismo eficiente de comunicación (a quien dirigirse) entre familia y empresa	1
¿Cuál ha sido el impacto de no contar o de contar con un órgano de gobierno	1
PROMEDIO	2.5

Table 10 Institutionalisation questionnaire

CONTINUIDAD	
Conteste las preguntas en una escala de 1 a 5, de acuerdo al grado de cumplimiento si contiene el elemento preguntado.	
Existe un plan de sucesión formal de la empresa familiar	1
Hay una visión compartida de futuro de la familia empresaria	4
Los miembros de la familia se pueden comunicar de manera efectiva	4
Se llevan a cabo mecanismos para involucrar a los potenciales sucesores y compartir el conocimiento entre generaciones	1
Los miembros de la familia pueden trabajar en equipo armónicamente	5
Existen mecanismos y políticas familiares para tratar los asuntos de la familia relacionados con la empresa	1
Han impactado los valores y las creencias de la familia en el desarrollo y crecimiento de la empresa	5
Existe un plan de futuro para las generaciones senior luego de su retiro o nuevo rol en la empresa.	1
La incorporación de las nuevas generaciones en el crecimiento de la empresa ha sido positivo	3
Existen mecanismos para la resolución de conflictos entre familiares	3
El impacto del prestigio de la familia en el crecimiento de la empresa ha sido positivo	5
Ha impactado positivamente las relaciones y redes (capital social) de la familia con su entorno en el crecimiento de la empresa	5
PROMEDIO	3.17
PROMEDIO GENERAL	3.23

Table 11 Continuity questionnaire

An average result is obtained for interpretation in graphical form in the following step.

a) Transgenerational Potential Analysis



Table 12 Transgenerational potential analysis

Do

1. Draw up an X-ray.
2. Elaborate an analysis of the transgenerational potential of the family business.
3. Elaborate competitive advantages of three aspects directly related to micro-businesses.

ANÁLISIS DEL POTENCIAL TRANSGENERACIONAL

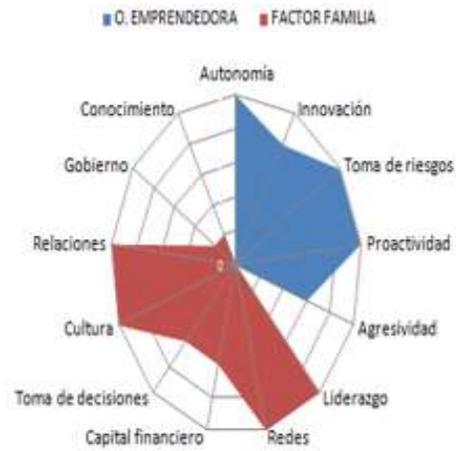


Figure 4 Analysis of transgenerational potential, grocery shop

In this business there is no governance as there is no organisational structure, so this analysis allows defining a work plan for the family business to maintain the elements that facilitate continuity, and to develop those that are unfinished and in progress.

Check

1. Carry out a diagnosis of the X-ray of the family business.
2. Conduct a transgenerational analysis and identify the areas to work on in conjunction with the X-ray diagnosis.

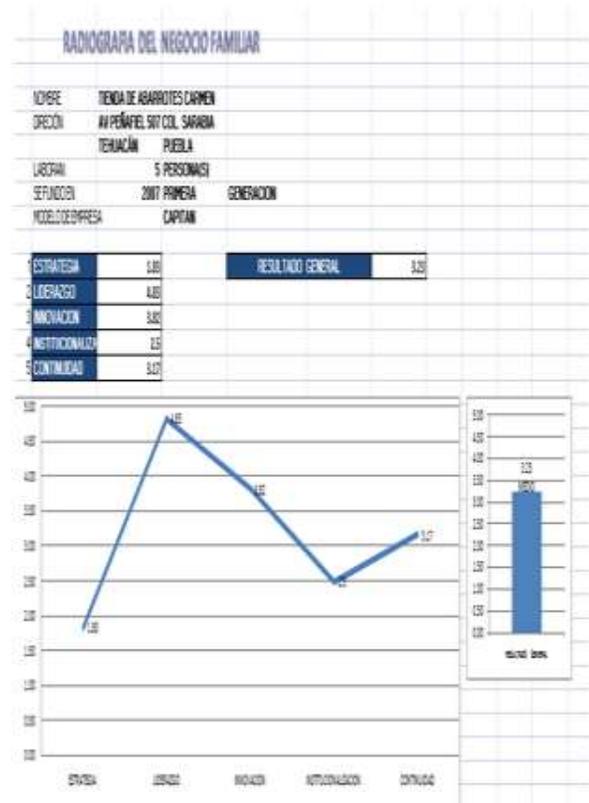


Figure 3 X-ray of Family business, grocery shop

Bajo <= 1 a 2.99		Medio = 3 a 4.29		Alto = 4.3 a 5	
ESTRATEGIA	LIDERAZGO	INNOVACION	INSTITUCIONALIZACION	CONTINUIDAD	
BAJO	ALTO	MEDIO	BAJO	MEDIO	
DIAGNOSTICO	DIAGNOSTICO	DIAGNOSTICO	DIAGNOSTICO	DIAGNOSTICO	
Significa que el negocio familiar cuenta con una estrategia que no ha impactado el crecimiento de la organización.	Significa que el liderazgo en el NF ha impactado positivamente el crecimiento de la empresa.	Significa que la EF fomenta algunas veces la innovación y esta ha impactado medianamente a los objetivos de la organización.	Significa que no cuenta con órganos de gobierno (consejo de familia, de empresa y de dirección).	Significa que el NF cuenta con algunos planes, reglas y recursos competitivos de familia empresarial para sostenerse en el futuro.	
Cuenta con un Modelo de Negocios definido usualmente en la mente del Director pero no es entendido por los demás integrantes.	Se cuenta con un estilo de liderazgo proactivo, orientado a las personas y los resultados.	Se promueve algunas veces la generación de nuevas ideas y la preocupación constante por la calidad y la mejora continua no es una prioridad.	Los puestos en distintos niveles en su mayoría no son ocupados por personas competentes para la posición.	Puede existir un plan de sucesión, o un proceso de administración del conocimiento entre generaciones, pero no ambos necesariamente, y la	
No existe un plan estratégico.	En donde se fomenta la libertad para tomar decisiones, el trabajo en equipo y el reconocimiento distintos niveles.	emprendedora de la EF es media al aprovechar algunas veces las oportunidades que se presentan y se es defensivo competitivamente hablando.	No existen sistemas de administración y de tecnologías de información que ayuden una buena gestión.	La comunicación y el trabajo en equipo entre los miembros de la familia es algunas veces sano y armónico	

Table 13 Diagnostic X-ray of the family business

Source: Own

Act

1. Modify the processes according to the conclusions of the previous step to achieve the objectives with the initial specifications, if necessary.
2. Implement further improvements, if errors have been detected in the previous step.
3. Document the process.

Elaborate and document the requirements according to the analysis of the model.

Strategy

Elaborate a strategic plan for the business

Institutionalisation

Elaborate the organisational structure of the business and establish rules and regulations. The mission, vision and values as a corporate image help us to commit to meeting objectives and satisfying needs.

Develop an information system to help improve the management and storage of knowledge, which contributes to the growth of the company. This should contain: information on prices, product, product stock, percentage of profits, suppliers, customers.

Perform daily analysis of business performance

Continuity

- Propose how to develop a succession plan
- Develop the competitive advantages of the integral part of the model with three factors
- Economic factor
- Product factor
- Customer factor

Product factor

Product display per block. This means that it is necessary to take into account the brand and the characteristics of the product that are similar, this will help the customer to easily identify the areas of the products. Hydrating drinks area, cleaning products, sweets, etc.

Clutter makes the customer think that the product is not available in addition to the bad image it conveys.

Complementary products for necessities

In the product management of the Carmen grocery shop, this scheme was analysed and applied in order to cover a customer need in the best way possible.

By complement: this means that the sum of several products must be available to satisfy one or more needs.

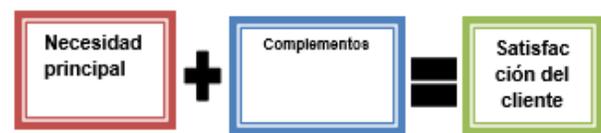


Figure 5 Diagram of client's needs plus complementary products

For a cure, basic commodities such as band-aids, alcohol, adhesive tape, syringes, painkillers, hydrogen peroxide are needed.

Economic factor

In the grocery shop an analysis of daily sales was applied which shows very important information, a database was designed where we can observe the cash flow of every day, results are shown that can be observed and analysed by all members of the business.

The development of the economic factor was based on the following formula:

$$\text{Cost (\$)} + \text{Profitability (\%)} = \text{selling price(\$)}$$

80% reinvestment
 10% economic buffer
 10% Remuneration

TOTAL	\$ 159,836.00	\$ 146,299.00	\$ 151,779.00
PROMEDIO	\$ 5,156.00	\$ 4,876.63	\$ 4,896.10
REINVERSION 80%	\$ 127,868.80	\$ 117,039.20	\$ 121,423.20
UTILIDAD 20%	\$ 31,967.20	\$ 29,259.80	\$ 30,355.80
AMORTIG. ECON.	\$ 15,983.60	\$ 14,629.90	\$ 15,177.90
REMUNERACION	\$ 15,983.60	\$ 14,629.90	\$ 15,177.90

Table 14 Economic performance grocery shop

Customer factor

Customer perception test: Analyse and Improve your performance to get a better perception. In the grocery shop the following test was carried out to improve personal performance, attitude and with others, which are reasons that the customer is always aware of and put into practice to develop competitive advantage.

A NIVEL PERSONAL		SI	NO
» Tiene buen humor y sonríe con frecuencia		+	
» Cuida su apariencia personal		+	
» Trabaja duro pero sin olvidar a su familia y amigos		+	
» Gusta de las ventas: esta contento con lo que hace y eso lo notan los clientes		+	
» Se considera socio de los proveedores. Aprovecha su información comercial, innovaciones y promociones para incrementar las ventas		+	
» Valora su trabajo. Sabe la importancia de poner al alcance de sus clientes los productos y servicios que ellos necesitan		+	
» Conoce su mercancía		+	
» No habla mal de sus competidores con sus clientes		+	
CON LOS DEMAS		SI	NO
» Conoce a su clientela. Sabe con quien promover una venta		+	
» Tiene una buena relación con sus clientes .es paciente con los indecisos y rápido con los que llevan prisa		+	
» No tiene clientes pequeños. Atiende igual a un niño que a un adulto, a compradores ocasionales que a clientes frecuentes, a quienes gastan mucho y a quienes gastan poco		+	
EN CUANTO A SU ACTITUD		SI	NO
» Tiene una mente positiva. No se queja de los problemas ; trata de resolverlos .		+	
» No es conformista. Una buena temporada de ventas no lo paraliza; por lo contrario lo motiva a esforzarse mas		+	
» Es realista. Se conoce a si mismo, esta consiente de sus alcances y limitaciones		+	
» Aprende de sus errores		+	

Table 15 Customer perception test

Final result obtained after applying the continuity model for family micro-businesses

After modifying the processes according to the findings of the previous step:

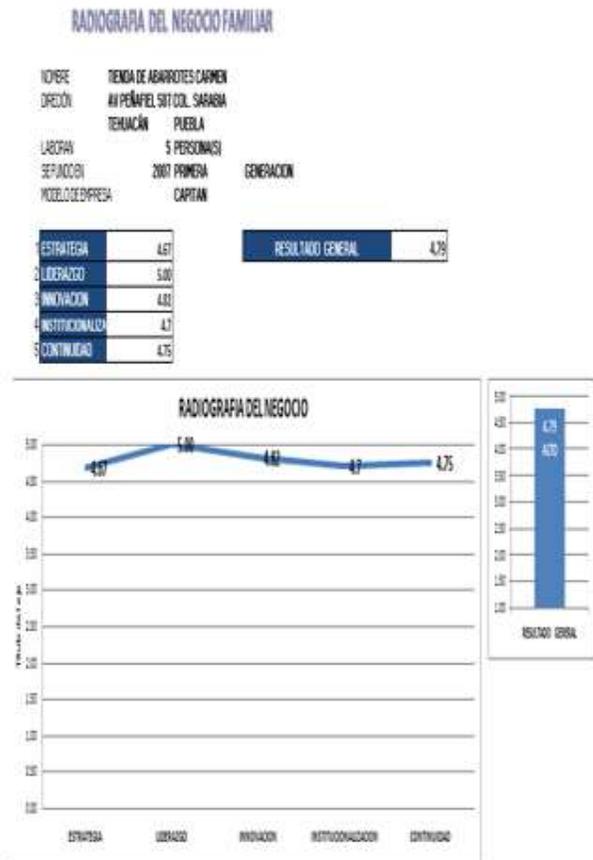


Figure 6 X-ray of the micro-business, grocery shop after applying the model

The previous average was 3.23 which meant that we were at a medium level. Now it is 4.79 after the application of improvements which means that we are now at a high level. The current average gives us the following conclusions:

Bajo <= 1 a 2.99		Medio = 3 a 4.29		Alto = 4.3 a 5	
ESTRATEGIA	LIDERAZGO	INNOVACION	INSTITUCIONALIZACION	CONTINUIDAD	
ALTO	ALTO	ALTO	ALTO	ALTO	
DIAGNOSTICO	DIAGNOSTICO	DIAGNOSTICO	DIAGNOSTICO	DIAGNOSTICO	
Significa que el negocio familiar cuenta con una estrategia que ha impactado positivamente a la organización.	Significa que el liderazgo en el NF ha impactado positivamente el crecimiento de la empresa.	Significa que la NF fomenta la innovación y esta ha impactado positivamente a los objetivos de la organización.	Significa que el NF cuenta con órganos de gobierno (consejo de familia, de empresa y de dirección) que funcionan bien.	Significa que el NF cuenta con los planes, reglas y recursos competitivos de familia empresaria para sostenerse en el futuro.	
El Modelo de Negocios está definido con claridad y es entendido por la gerencia media.	Se cuenta con un estilo de liderazgo proactivo, orientado a las personas y los resultados.	Se promueve la generación de nuevas ideas y hay una preocupación constante por la calidad y la mejora continua.	Los puestos en distintos niveles son ocupados por personas competentes para la posición.	Existe un plan de sucesión, un proceso de administración del conocimiento entre generaciones y la incorporación de nuevas	
Existe un plan estratégico que funciona y es revisado continuamente.	En donde se fomenta la libertad para tomar decisiones, el trabajo en equipo y el reconocimiento distintos niveles.	La orientación emprendedora de la NF es alta al aprovechar las oportunidades que se presentan y ser agresivo competitivamente.	Existen sistemas de administración y de tecnologías de información que ayudan a una buena gestión en el NF.	La comunicación y el trabajo en equipo entre los miembros de la familia es sano y armónico.	

NF= negocio familiar

Table 17 Final diagnosis of radiography after improvements

Source: Own

The transgenerational potential analysis is carried out again after the business needs have been realised and the results obtained are observed:

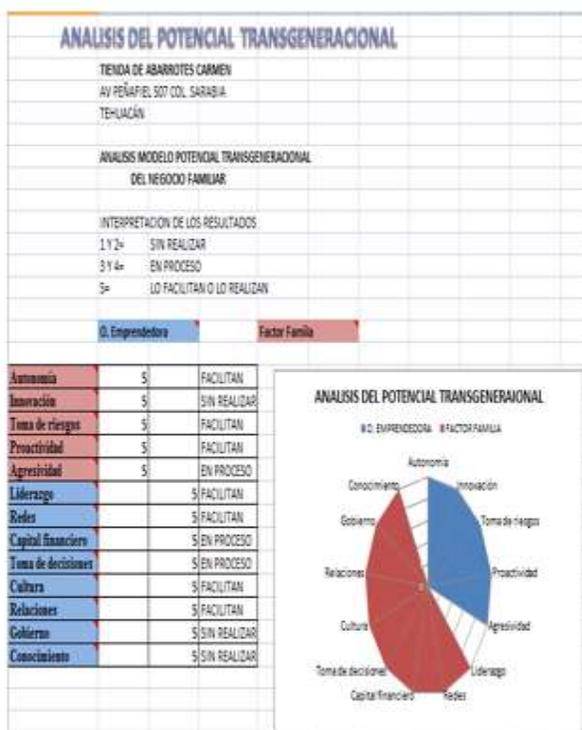


Figure 7 Final result of the transgenerational potential after applying the continuity model for micro-businesses

In this business there is a governance structure, and the leader has captured and documented the knowledge and can share it with all members.

It has an aggressive business strategy to face its competitors.

It maintains a good relationship with its external (networks) which will help it to solve future contingencies.

Its cash flow is stable and maintains its economic stability.

The new results indicate that the continuity of the family business is facilitated.

Conclusions

Thanks to the 100% practical application of the proposed continuity model for family micro-businesses, it helps us to identify problems, make a diagnosis and carry out the necessary improvements or implementations to achieve the objectives set, thanks to the final results we obtain a high degree of satisfaction with the functionality of the model.

The application of the model results in the fulfilment of each of the objectives set out in the project.

The finished project presents a proposal for a "continuity model for family micro-businesses that only use empirical procedures" to improve their performance and management.

It helps to identify, through an x-ray, the current situation of the business and to work on the most vulnerable points.

It provides an at-a-glance and interactive document with all the data necessary for the proper functioning of the business through the application of developed strategies.

It helps to differentiate the problems that arise in the two systems of a family business - company-family relationship.

Improves communication between family members and employees inside and outside the business.

Making a strategic plan for the family business in the most important areas.

Establishes a governance system of the family business documented in outlines (organisation chart) together with its policies and regulations, through a prior analysis of the needs of the business.

It explains the importance of innovation to improve the functioning of the business.

The model supports with a recommendation of a succession plan for the next generations.

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Design of a Local Development Model for the Textile Industry of the Tulancingo Region in the Tulancingo Polytechnic University-Business Link; based on the knowledge network approach

Diseño de un Modelo de Desarrollo Local de la Industria Textil de la Región Tulancingo en el Vínculo Empresa-Universidad Politécnica de Tulancingo; basado en el enfoque de red de conocimiento

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Abstract

This paper proposes a model for Local Development of the Textile Industry in Tulancingo region in order to make a link between Company-Universidad Politécnica de Tulancingo; under the approach of knowledge network. The research methodology is exploratory, descriptive type with nested design, including the steps of collecting data with SPSS and ATLAS Ti software. The overall objective is to design a model for local development of Textile Industry of the Tulancingo region with a focus on knowledge network between the textile industry in the region and the Universidad Politécnica de Tulancingo as organizational structure, based on the condition of the employer Tulancinguense; for the competitiveness of the industry. For this study establishes the following objectives: develop a business assessment to identify those organizational factors that facilitate learning of the textile industry, to identify common interests of entrepreneurs, shaping the collaborative networking of knowledge in the relationship business-university. The dynamic of the model is targeted at exchanging various aspects of knowledge, strategies, technologies and skills that will build local learning, and the development of the textile industry in Tulancingo region.

Textile industry, link Company-University, Knowledge Network, Organizational Factors

Resumen

El presente trabajo de investigación propone un Modelo de Desarrollo Local de la Industria Textil de la Región Tulancingo en el Vínculo Empresa-Universidad Politécnica de Tulancingo; bajo el enfoque de red de conocimiento. La metodología de la investigación, es de tipo exploratoria, descriptiva con diseño anidado, incluyendo las etapas de recolección de datos con los programas SPSS y ATLAS Ti. El Objetivo general es diseñar un Modelo de Desarrollo Local de la Industria Textil de la Región Tulancingo bajo un enfoque de red del conocimiento entre la industria textil de la región y la Universidad Politécnica de Tulancingo como estructura de organización, basada en la condición del empresario Tulancinguense; para la competitividad de la industria. Para el estudio se establece los siguientes objetivos: elaborar un diagnóstico empresarial que permita identificar aquellos factores organizacionales que faciliten el aprendizaje de la industria textil, identificar los intereses comunes de los empresarios, conformar el trabajo colaborativo en red del conocimiento en la relación empresa – universidad. La dinámica del modelo va dirigida al intercambio de diversos aspectos del conocimiento, estrategias, tecnología y habilidades que permitirán acumular el aprendizaje local, así como el desarrollo de la industria textil Región Tulancingo.

Industria textil, Vínculo empresa Universidad, Red de conocimiento, Factores Organizacionales

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Introduction

The process of globalisation of the economy, with the necessary changes in production, distribution, exchange and consumption, with the growing presence of knowledge and information, has significantly affected the organisational, productive, strategic and management model of companies (Vilaseca and Torrent, 2005). Gradually, organisations are becoming more flexible, decentralised and specialised in the generation and management of a certain type of knowledge and activities, and cooperative relationships and alliances with different agents in the environment are becoming increasingly important. The creation of value ceases to depend directly on the organisation and is distributed along the chain, the dependence between members increases and organisational structures in the form of a network begin to appear (Achrol and Kotler, 1999).

This research consists of determining the factors that facilitate the creation of a model for the development of the entrepreneurial capacity of the textile industry in the Tulancingo region, in the company-university link. An exploratory nested design study was carried out, which made it possible to identify and describe the common interests identified in the first and second phases of the research; in the third phase, the factors of the structure of the learning company; the methodology applied allowed the manifestation of the congruence between the results identified in the qualitative phase with the quantitative results with respect to the common interests and the needs of the sector.

The transformation industry is one of the most important economic sectors in the State of Hidalgo and the Hidalgo Textile Small and Medium Enterprise (SME) in the Tulancingo Valley is no exception. Therefore, Cuautepéc de Hinojosa, Santiago Tulantepec and Tulancingo de Bravo represent a vital economic activity that is reflected in the State's economic output (Economía, 2005). Despite the above, the participation of this sector in the aforementioned municipalities has shown a downward trend in recent years, which means that there is a priority need to identify the problems and determine alternatives that will allow this industry to resume its course towards sustained growth, since it is a fact that it is an important industrial zone in the country, as are Moroleón and Jilotepec, in the same line of business.

The textile and clothing industry is the fourth largest manufacturing activity in Mexico, however it has been affected by the excessive entry of legal and even illegal foreign products with which Mexican knitted fabric products have to compete, as well as facing problems derived from unfair and illegal trade practices by Asian countries such as: dumping, smuggling, piracy, under-invoicing and triangulation of merchandise (Ministry of Economy, 2005). The municipalities of Tulancingo de Bravo, Cuautepéc de Hinojosa, Santiago Tulantepec and Singuilucan occupied the first place in the number of employed personnel in the region with 48.4%, dedicated to textile production (Ortega, 2000).

The textile industry in the region of Tulancingo presents deficiencies in relation to its structure, the entrepreneurs have not managed to establish a suitable and functional organisational structure in line with the demands of the environment, there is a lag in organisational culture, and the entrepreneurs have at most secondary schooling, the management that they carry out is empirical.

The specialisation is inherited from generation to generation, there is no specialised design staff, they design their own garments based on magazines specialised in the sector, the machinery comes from Italy and Japan and in the middle of the year it is left idle due to seasonal production (Pérez and Ríos, 2005). In this sense, the entrepreneur acts as the orchestra man, as he purchases raw materials, participates in the elaboration, design, commercialisation and direct sale of the product. Sánchez, Terrones and Domínguez (2012), defined the business structure of the textile industry in the region as being made up of family MSMEs, mainly dedicated to the manufacture of knitted garments and, to a lesser extent, flat fabric clothing, cashmere and underwear, which from their origin are placed in conditions of unequal competition with large companies and also among themselves, whose objective is to survive rather than grow successfully; they identified 10 substantial problems that affect this business sector, which are the following: lack of a regional market place, social insecurity, inefficient and unsafe communication routes, high cost, low quality of inputs, deficiency in design training, unfair competition, lack of business training, inadequate technology, lack of organisation and inadequate sectoral public policies; which in turn show their own causality.

Considering the information presented above, it is important to strengthen and potentiate these points of opportunity in a structure that allows the exchange of knowledge and innovation where a structure emerges with the conscious participation of actors from governmental and non-governmental institutions. If the textile company of Tulancingo is to enter into the global current of economic modernisation, it is first of all necessary to investigate what type of entrepreneur is available to undertake modernisation. Everything indicates that small and medium-sized companies are still anchored in old methods whose central axis is acting alone, and it is not known if working in networks can increase competitiveness and economic efficiency.

A Model of Local Development is proposed that allows the development of the textile industry in link with the Polytechnic University of Tulancingo of common interests; the model specifies the mutually advantageous aspects for the progress of the studied industrial sector, in the synergy directed to solve the interests in common with the knowledge of the academy and the experience of the producer of the industry; with the firm conviction of the academic commitment and the reinforcement of the features of the cosmopolitan leadership and structure of the company as a strategy for the birth of the company-university alliance in favour of the development of the sector.

Based on the above it is possible to formulate the following research problem given through the research question:

How to develop the entrepreneurial capacity of the textile industry in the region of Tulancingo, in a collaborative learning environment with the Polytechnic University of Tulancingo (UPT) to raise its competitiveness; raising the following research hypothesis, H1: 50% of entrepreneurs infer that they would like to belong to an association to work jointly and in turn linked with the Polytechnic University of Tulancingo. Therefore a research proposal is presented to determine the relationship between the company and the university as well as the use of higher education institutions as a catalyst for knowledge management, it is imperative to establish the generation of knowledge within companies for the creation of value that establishes more solid foundations to cope with the sudden changes of the time.

This article has been structured in three sections, in the general theoretical framework the first shows a summary of the theoretical references of the research, the second section refers to the methodology of the research, which is located to be an exploratory, descriptive research with nested design, including the stages of data collection with SPSS and ATLAS Ti programs.

In section three, the results of the qualitative-quantitative-qualitative phases are analysed and interpreted; the proposed basket of common interests model is described.

Finally, the Local Development Model for the industry is presented, a proposal made according to the results of the research.

Theoretical framework

The Textile Industry of the Tulancingo Region

According to Lira (2010), the Textile Industry of the Tulancingo region has its background since colonial times, it was the political and administrative centre of the region, in the seventeenth century its economy was based on agriculture and livestock; in the eighteenth century began to emerge in Tulancingo the textile industry, which already had an important tradition since pre-Hispanic times, he also says that in 1791.

The subdelegate of Tulancingo describes it as a flourishing textile centre with more than 200 weavers, years later it increased to 300 weavers, this boom was due to the mining in Pachuca and Real del Monte. By 1826 the weavers were still the majority in the city of Tulancingo, which were called open house weavers, that is to say with workshops and premises open to the general public. In the 19th century, several factories were established in the region, founded by foreigners, such as the Fábrica de los Ángeles, who took advantage of the extensive textile tradition of the city.

The industry's production systems are characterised by production orders, that is to say that although a written order is not made, a sample garment is made and it is proposed to the client so that he/she can give the indications of the change and the model of the garment.

The products produced are as follows:

Knitted garments, jumpers and other garments for women, men and children.

The production of trousers, trousers (sportswear), bedspreads, shirts and jackets.

For knitting, the high production season is from July to December, and the low season from January to June, in these months some are dedicated to the production of light clothes made of non-heated fibre for the hot season, others undertake alternative businesses. Therefore their production cycles are governed by the decisions made with the seasonal changes.

In high season, textile industry producers have a weekly production of 5000 garments, and in low season 500 garments (Montiel, 2015).

Business-university linkage

According to Santos, cited by Morales (2007), linkage is the set of relationships established between universities and the productive sector, a set of activities aimed at producing goods and services that are the result of agreements, decisions, alliances and cooperation and agreements between productive sector organisations and research centres.

The company-university linkage is an obligatory phenomenon of the current processes of productive flexibilisation, which requires the sectors of the economy to adjust to the parameters of solving problems of technological adaptation and innovation; the knowledge networks give a new vision of the linkage with universities, sectors of the economy and the government, creating an environment of interaction beyond themselves. (Mendoza, 2008). Linking not only facilitates access to science and technology, but also makes possible the application of expert knowledge to solve problems.

Knowledge networks and their success factors

Martinez and Corrales (2010), comment that the construction of knowledge tends to develop within the framework of new forms of organisation, more flexible and dynamic.

In which new configurations emerge in which not only scientists and academics participate, but also those who through research and the application of knowledge seek solutions to specific problems together with this, the internationalisation of science, enhanced by the large-scale application of information and communication technologies, constitute the general framework in which knowledge networks have been born and have developed.

In the same vein, they define that networking is the result of the adoption of flexible and participatory forms of organisation, implemented when creating and applying knowledge to problem solving, in which many characteristics are combined, such as the presence of actors from different backgrounds who relate to each other in order to address specific problems and propose solutions, bringing their capabilities into play and seeking to complement them by this means.

In an innovation network, the generation and transfer of knowledge must take care of its dimensions:

- The epistemological: what is its nature?
- The ontological: what is its origin?

This in order to establish the appropriate channels of communication that allow the proper flow in the network through all the agents participating in the network such as: the individual, the group, the organisation and the organisational relations. (Méndez, 2008).

The success of the network may be due to:

- Interest by each of the network participants.
- Common interest in actions that put their sector at risk.
- Partners should have different characteristics and knowledge sharing skills.

Good relations, i.e. good management among its members; integrating as networks allows them to increase the possibilities of competition in the sector, having greater opportunities to increase their collective learning, be it in technological and organisational knowledge. (Barrón, Araiza and Cuesta, 2006).

Factors of a learning organisation

A learning organisation comprises the following factors:

Strategy - The company's strategy, its implementation, evaluation and improvement processes are a source of learning. That is, it enables the development, formulation and revision of strategic business plans as they evolve; the decisions of CEOs and managers are seen as conscious experiments, rather than as a set of solutions.

Participatory politics - incorporates the opportunity to involve every individual in the processes of formulating strategic and company policy. There must be a deliberate policy to encourage diverse input, recognising that a guided debate is fruitful as long as it can address tensions or even conflicts between various social values of different people defending their own benchmarks. In the same vein, Pedler, Burgonie and Boydell cite three basic references:

All groups have the right to participate in such a way that their social values are taken into account. This is the ethical dimension of business.

Diversity is valuable because it leads to more creativity, ideas and innovative solutions.

The effort to satisfy all groups involved in the company must result in higher quality given the high demands of the market and in an internal learning climate that provides greater satisfaction for a job well done.

Information Technology

Objectives:

To disseminate as much information as possible to all people.

To empower people to understand the company's systems and processes.

To discover systems and their influence on results. Investigate special causes that can lead to out-of-control situations.

Internal exchange. The purpose is to think about the internal customer. For this the dialogue must be constant about expectations, negotiations, new contracts for goods and services. The concept of quality is active for the whole company from suppliers to customers in its double dimension: internal and external. Collaboration and cooperation are encouraged instead of competition between departments in order to favour learning models that should lead to an optimisation of performance.

Flexibility in rewards

In line with the aspiration to achieve higher levels of participation, new ways of rewarding employees should be explored. Money should not be the only reward. We should ask ourselves what are the basic assumptions of variable financial compensation.

Encourage hard work and dedication

Discourage employees from leaving for competitors.

Encourage the application of their skills on the job.

Satisfy internal fairness and equity needs.

In companies in a constant learning process, the premises of their social variables must be explained, shared, analysed and new alternatives experimented with, otherwise the old models are no longer efficient.

Structures that facilitate the development of people and business. Flexible functions, in accordance with the needs of customers and suppliers, allowing for personal growth and new forms of structures. Departments as temporary and flexible structures in response to change. Their purpose is to create an organisational architecture that meets current needs and responds to new changes.

External workers as sensors of external reality

External collaborators relate to the company in a process of constant learning through their professional services, participating orders and shared and disseminated information.

Inter-company learning

The main features are: cross-departmental training, collaboration in research and development activities; exchange of jobs and suppliers to learn from both companies. We also facilitate learning from other companies that we are competing in similar markets. Mutual learning as companies in order to win/win on technological advances, standards of respect and fairness for the design of new products.

Learning climate

In learning companies managers see their new main task as facilitating innovation activities and learning from new experiences for their employees. Managers encourage employees to question their own ideas, attitudes and social values. Unintentional mistakes are allowed, so that they try out new experiences and new ideas. External groups are studied to analyse differences and their diversity, in order to help in the formulation of participatory policies. The idea of continuous improvement is simplified when we facilitate constant learning.

Personal development for all

Physical and intellectual resources are available to all individuals and employees at all levels, up to and including external agents. Career guidance, performance feedback systems and professional development. Workshops, seminars, self-learning materials, development groups, trainers, mentors and career advisors. Databank with information on people who are working in project development (Gore, 2006).

Methodology to be developed

The first phase was carried out by organising an academic business forum according to the principles of participatory action research. An instrument was used to initiate the exploratory study that would show us the benefits that can be obtained from the business-university link through participation in a knowledge network, to solve problems and identify common interests and observe the attitude of the entrepreneur to collaborative work.

The second phase (quantitative) consisted of the application of the instrument to a sample of 87 entrepreneurs, to identify common interests and the convenience of joining a group of entrepreneurs of the same line of business and the Polytechnic University of Tulancingo, in collaborative work to unite strengths and abate threats and difficulties in order to contribute to the growth of the textile industry and the instrument to know the type of relationship between entrepreneurs of the same industry and higher education institutions. In a third phase, an open interview was applied to 6 entrepreneurs of the textile industry in the region of Tulancingo who have the most experience in the sector, an instrument to identify the organisational factors that allow learning in the textile industry of the region in a knowledge network. The organisational factors were: shared vision, individual learning, group learning, adaptive culture.

Results

Variable "Common Interests" of the Textile Industry of the Tulancingo Region. This variable is approached qualitatively and quantitatively. The results of the application of one of the instruments of the qualitative methodology are presented below, with the holding of the Academic Business Forum with the textile industry of the Tulancingo region, in which 40 entrepreneurs from the region participated.

The discussion of each of the working tables was based on the guiding question: What benefit can be obtained from the business-university link through participation in a knowledge network? The businessmen together with the students and academics gave their answers and opinions in relation to the awareness of the current problems experienced by the industry in congruence with the themes of the working tables, in each table was an academic specialist (moderator) in the theme of the working table, the diagnosis of the needs and common interests of the industry was obtained which is as follows:

In terms of the production process, the following is required: training in specialised technical support, tailoring, design and pattern making, timing and movements, implementation of quality systems, the need to have a supply of quality inputs and to abolish the monopoly of inputs.

In relation to the infrastructure of the company, they need design software, they need specialised personnel for technical support, the machinery and equipment they use is obsolete as it is machinery with technology from the 1960s.

In terms of marketing and sales, they argued that there is a lack of security for the distribution and sale of their products, therefore they propose to establish a distribution and design centre in the region to market their products. They note that they need training in the use of information technologies for the promotion of their products, they require training for the sales force, and they require effective government support to remain in the market.

In the same vein, the entrepreneurs participating in the technological development and innovation roundtable noted the need for a diagnosis of innovation needs and the creation of strategic alliances to reduce costs.

In terms of design and avant-garde, they commented that it is necessary to create a regional design centre for training.

In terms of information systems, the use of information technologies is necessary, as companies do not have them and do not use them.

In terms of exports, the sector's entrepreneurs are unaware of the barriers to exports, they need to import quality materials in order to export quality products, and they need to create export plans.

In the second quantitative phase, an instrument was applied to identify the "common interests" of the industry, applied to a sample of 87 entrepreneurs, obtaining the following result.

As points of opportunity in this case, are those "common interests" that represent greater relevance with respect to the average and those situations expressed by the entrepreneur, the priority to these aspects will allow the collaborative work between the entrepreneur and the UPT; of which the results of the average were the following:

I want to know how my product can be more competitive 8.54, I would like to know about the aspects that will allow me to effectively manage my company 8.33, I am interested in knowing about programmes and organisations that support my company with financing (PROINNOVA, INNOVAPYME, INNOVATEC) 8.24, I want to know about management practices so as not to put my business at risk 8.03 , I need to know about the benefits and how to apply new information technologies 7.9, I want to know how to integrate and optimise the technology I have to my production processes 7.89.

The statistical analysis of the variable common interests shows the calculation of the mean of each of the items. If we observe the behaviour of the mean, we can see that all the items have a value higher than 6.97, which indicates that the category with the highest frequency within the variable common interests is the one that corresponds to Greater

Relevance

With regard to the third qualitative phase, the variable structure of the learning company was analysed with the Atlas Ti programme, analysing the following categories: Shared vision of the learning company, individual learning, group learning and adaptive culture, taking up the aspects of recognition, availability to change, communication of errors, from which the following results were obtained:

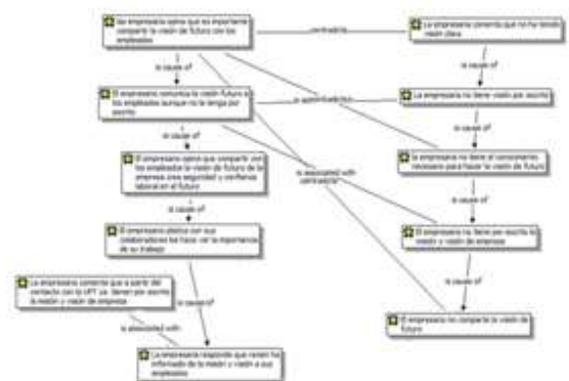


Figure 1 Shared vision of the company

With regard to the shared vision of the company, it was found that some employers do not have a written mission and vision, arguing that they do not have the necessary knowledge to elaborate them, and for this reason they do not share the vision of the future.

Arguments were identified in which they think that it is important to share the vision of the future with the employees, they communicate it even if they do not have it in writing and this makes the employee feel secure and confident at work.

One of them talked about his experiences of the forum and the contact with the Polytechnic University of Tulancingo and commented that since he has been in contact with the UPT, they already have a written mission and vision of the future, which their employees already know (Figure 1).

There is an urgent need to raise awareness among entrepreneurs of the importance of having the ability to create visions that inspire action to find common cause in the objectives that will improve their company and the industry.

He is also aware that he is not irreplaceable, so he prepares from childhood the family member who will replace him in the future, generally preparing the eldest son to take his place (Figure 2).

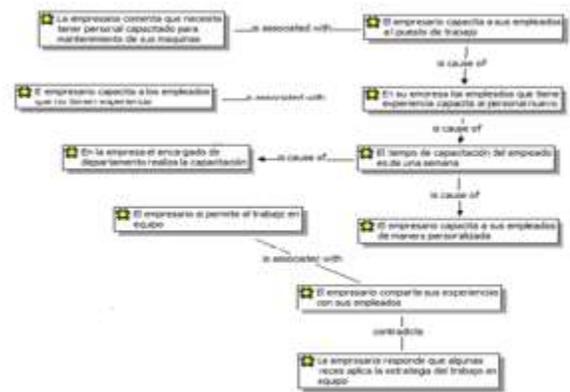


Figure 3 Group learning

Managers need to encourage group learning, promoting self-directed, or cross-functional, teams so that they can share the range of skills and abilities to solve problems (Lussier, 2005). Continuing education is one of the enablers of organisational learning; it is the ongoing commitment to education at all levels; supporting the growth and development of members (Gibson, Ivancevich, Donnelly, and Konopaske, 2006).

According to the experiences of the entrepreneur, teamwork is a strategy to get things done in his company, therefore he sometimes allows it, he talks to his workers making them see the importance of their work in the company, he shares his experiences with them so that they can apply them to their work area. The industrialist comments that he hires personnel with experience in the industry and that sometimes allows the worker to perform in his area with the other colleagues.

They have to work in coordination with each other because they share their experiences and if the person in charge is not available at a given moment, the training for the new employee is carried out by the one who has more experience.

When an inexperienced worker arrives in the company, training is preferably carried out directly by the employer; on-the-job training lasts one week. (Figure 3).

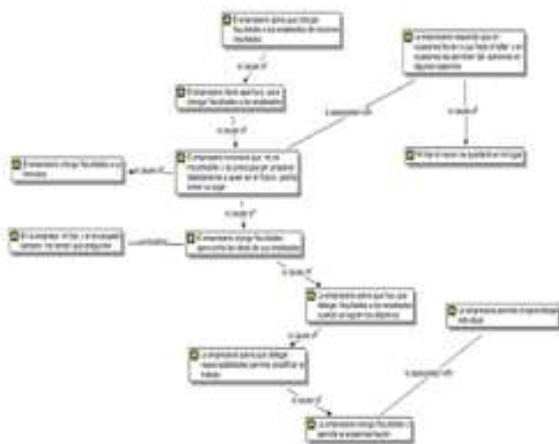


Figure 2 Individual learning

In learning organisations the leader delegates authority to employees to solve problems and to find better ways of doing their work (Lussier 2005).

One of the important points of the information provided is how the entrepreneur allows individual learning and experimentation in his company, he is of the opinion that empowering employees gives better results; therefore he is open to delegate authority to his collaborators, he is of the opinion that giving responsibility allows him to fulfil the objectives, to take advantage of the ideas of his employees and to simplify the work; in very delicate situations the manager or family member has to ask him.

It can be seen that group work is allowed in the training, as the worker or the person in charge gives the go-ahead when the new employee is ready or not to be left alone on the job. Adaptive culture For the analysis of the adaptive culture dimension, the following concepts were taken up:

Adaptive cultures value innovation, encourage and reward experimentation and risk-taking by managers (Jones, 2008).

Forés and Camisón (2008); mention that one of the characteristics that the organisational culture must possess is a positive orientation of workers towards innovation and learning, commenting that without the commitment of employees to this innovation, the process of adapting the company to the external environment would be a failure.

The employer argues that empowering employees leads to better results and that by rewarding employees fairly and objectively, employees do their work better, he says, according to his experience, it is a strategy to achieve better results by creating an atmosphere of harmony and collaboration. Recognition is given verbally and in kind. (Figure 4).

When it comes to correcting errors, the entrepreneur looks for the root of the error, communicates it in a serious, discreet and respectful manner (Figure 6); therefore a climate of openness and accessibility is observed, debate and conflict are accepted.

Figure 4 shows that there are contradictions in relation to the vision of the future, because not all entrepreneurs have the vision in writing, they think that it is important for employees to see the company as a whole, but they had not given importance to having these aspects in writing and sharing it with employees. He says that he does talk to his employees about the fact that if they do their job well, they will have a better future.

It is observed that the entrepreneurs want to initiate changes (Figure 5), they are willing to establish other changes for their company in relation to learning to plan the future aspects of their company, starting with the drafting of the mission and vision, they comment that as a result of the forum they have the concern to start working on these aspects with the U PT.

In this sense, it is observed that entrepreneurs in the textile industry, simply because they are Micro, Small and Medium Enterprises, have the characteristic of being able to adapt more easily to the surrounding environment; it is observed that they value innovation in the employee and this is another of their competitive advantages to be able to adapt to the environment.

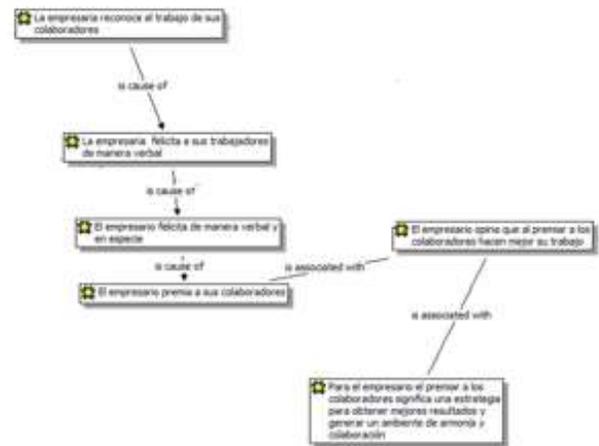


Figure 4 Recognition

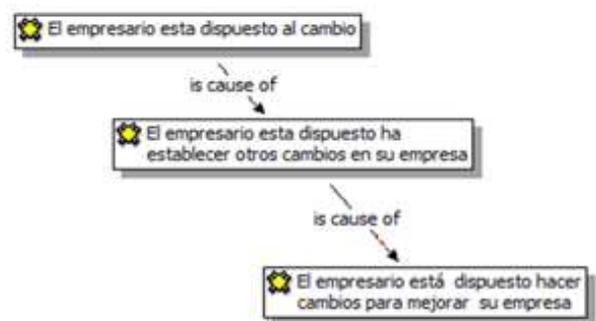


Figure 5 Readiness to change



Figure 6 Error Communication

It can be concluded from the results of this figure that the textile industry in the region of Tulancingo, Hidalgo presents traits of having an adaptive culture.

In order to deepen the results of this mixed research with nested design, triangulation was carried out.

The results obtained were:

There is congruence between the results identified in the academic business forum with the quantitative results regarding common interests, which can be the basis for acceptance of collaborative work for the formation of the network between the textile industry and the Polytechnic University of Tulancingo.

The entrepreneurs present traits of a learning company culture, which were presented in each of the phases of this research; another important aspect for the conformation of collaborative work in the network between the company-university.

From the moment that the business people came to the UPT, they showed an interest in establishing links with the institution.

In the forum, they argued that they had no links with higher education institutions, but expressed the need for the intervention of the UPT in order to develop solutions focused on their common interests.

Based on the analysis of the results obtained, a Model of Local Development of the Textile Industry of the Tulancingo Region in the Tulancingo Polytechnic University-Business Link is designed; based on the knowledge network approach; with the identification of the common interests for the conformation of the knowledge network, which assumes the results found in this research; it is observed that both entities can contribute knowledge aimed at the solution of the interests found.

The dynamics of the model is aimed at the exchange of various aspects of knowledge, strategies, technology and skills that will allow the accumulation of local learning.

As well as the development of the textile industry in the Tulancingo region, the model specifies the mutually advantageous aspects for the progress of the sector, in the synergy of solving common interests with the knowledge of the academy and the experience of the producer.

The technical and research experience of academics in their discipline of knowledge is the basis for growth and development in technology and innovation in an organisation; it is necessary for UPT academics to be open to developing hybrid research projects that are applicable to companies, aimed at technology innovation, and for the entrepreneur to reinforce the aspects of organisational learning that will allow the permeability of knowledge for the benefit of his or her company.

The synergy and follow-up of these aspects will allow the development and local impulse of the textile industry in the region (Figure 7).

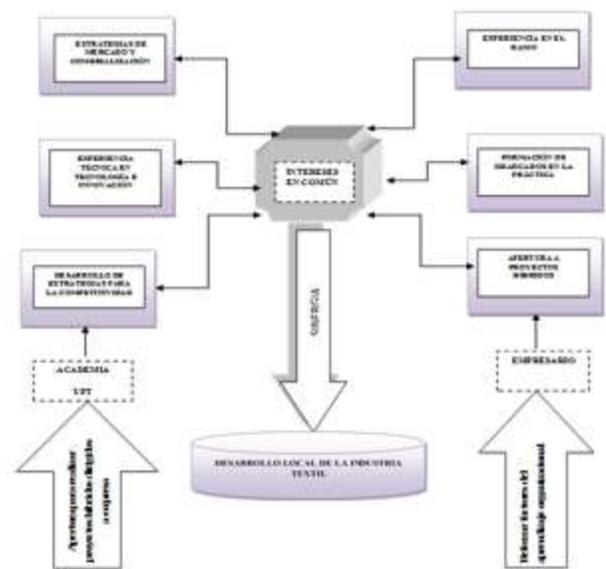


Figure 7 Local Development Model of the Textile Industry in the Tulancingo Region.

Acknowledgements

Thanks to the entrepreneurs of the Textile Industry of the Tulancingo Region, for trusting in the Polytechnic University of Tulancingo and for the openness in carrying out this study.

Conclusions

According to Barrón, Araiza and Cuesta (2006), the success of the network is defined by the following aspects: Particular and common interests of network participants, participants must have different characteristics and skills, good relationships.

These aspects, they comment, are characteristic of the possibility of forming networks; by integrating as networks, they allow the possibility of competition in the sector in question, having greater opportunities to increase their collective learning, in technological and organisational knowledge.

A first attempt at organisation was made with the textile industry entrepreneurs in the region, in the first of the action participation phases of the research, the entrepreneur had the experience of working for the first time in a collaborative manner with the academy, where the particular and common interests of the participants were identified, it was observed that they worked as a team in each of the tables, breathing an atmosphere of trust and collaboration; these aspects rebounded with the results of the quantitative phase, where what was expressed in the forum and the application of the instruments coincided.

It is worth mentioning that the application of the interview technique and the ATLAS Ti tool resulted in the following aspects:

Entrepreneurs argue the need for business-university collaboration for problem solving, the entrepreneur presents traits for collaborative networking, the guild is organised in cooperative society.

These features are points of opportunity for the UPT, through the academy, to follow up on the signs of collaborative work with the textile industry in the region.

Lara (2007), explains that the main factors behind the poor development of knowledge networks in Mexico are: the culture of researchers to do individual work that leads to little interaction with their peers, the lack of government support as a bridging agent for the link between academia and the productive and social sectors, and the low economic resources allocated for the development of science and technology.

The expectation of change in the country is placed in the public policies of CONACYT which guide the financing of research networks that have links with industry and public sectors for the production, dissemination and integration of knowledge.

In the same vein, the contact and relationship achieved with the region's entrepreneurs is a point of opportunity for the conformation and formal creation of a model that allows the development of the region's textile industry in a knowledge network; therefore, it is necessary to make the academy aware of the imperative need to generate strategic research that has a positive impact on the creation of regional innovation systems, generating learning spaces in the creation of a knowledge network for the promotion of the industry.

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† Researcher contributing as first author.

Introduction

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General explanation of the subject and explain why it is important.

What is your added value with respect to other techniques?

Clearly focus each of its features

Clearly explain the problem to be solved and the central hypothesis.

Explanation of sections Article.

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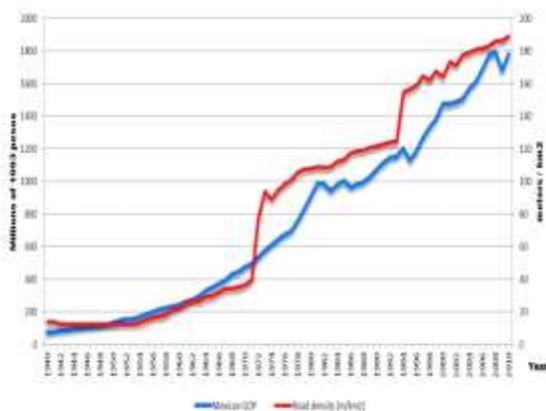
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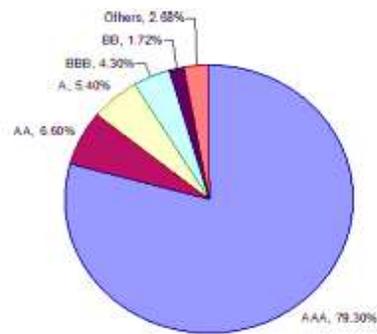


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	favourable economic conditions to meet its commitments
CC	Borrower is highly vulnerable
C	Borrower may be in bankruptcy but is still paying its obligations
D	Borrower has defaulted on obligations and CRA believes that it will generally default on most or all obligations
MOODY'S scale varies slightly	
Investment Grade	From AAA to BAA3
Speculative Grade	From Ba1 to C, (C being in default)

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For the use of equations, noted as follows:

$$Y_{ij} = \alpha + \sum_{h=1}^r \beta_h X_{hij} + u_j + e_{ij} \quad (1)$$

They must be editable and number aligned on the right side.

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Develop give the meaning of the variables in linear writing and important is the comparison of the used criteria.

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The results shall be by section of the Article.

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