

“Innovación Tecnológica como parte de la cultura empresarial: diagnóstico de la pequeña y mediana empresa tequilera”.

Technological Innovation as part of the corporate culture: diagnosis of the small and medium tequila companies.

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Resumen

En el presente trabajo de investigación se analiza información de las Pequeñas y Medianas Empresas (PYMES) tequileras, que nos permita identificar las estrategias y acciones que realizan las empresas, partiendo de la cultura empresarial de cada una, para ser competitivas en el mercado dinámico, a través de la obtención de un diagnóstico, con la finalidad de analizar las innovaciones tecnológicas que han implementado, y da a conocer los resultados que se obtuvieron en la investigación de campo, realizada en Tequila, Jalisco en una muestra de 5 empresas; tiene un carácter exploratorio-descriptivo ya que queda a nivel de diagnóstico. Se parte de la fundamentación teórica que analiza los conceptos de innovación tecnológica, cultura empresarial y lo relacionado con las PYMES en cuanto a su clasificación. Se encontró de manera general que en donde más han realizado innovación es en productos y en

mercadotecnia y en donde más han invertido en innovación tecnológica es en la adquisición de maquinaria y equipo de software. En el estudio, se concluyó que la capacidad de innovación de una empresa, es el resultado de un proceso de aprendizaje, costoso en tiempo y dinero, vinculada a las tecnologías e influidas por la cultura empresarial.

Palabras clave: innovación tecnológica, cultura empresarial, pymes.

Abstract

In the present research analyzes information of Small and Medium Enterprises (SMEs) tequila, allowing us to identify strategies and actions undertaken by firms, building corporate culture each, to be competitive in the dynamic market through obtaining a diagnosis, in order to analyze the technological innovations that have been implemented, and gives the results obtained in field research conducted in Tequila, Jalisco in a sample of 5 companies, has a exploratory-descriptive as it is at the level of diagnosis. The theoretical part of analyzing the concepts of technological innovation, corporate culture and related to SMEs in their classification. It was found in general that have been made where more innovation in products and in marketing and where most have invested in technological innovation is on the acquisition of machinery and equipment software. In the study, it was concluded that the innovative capacity of a company is the result of a learning process, costly in time and money, technology-linked and influenced by the corporate culture.

Key words: technological innovation, corporate culture, SMEs.

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1. INTRODUCTION

The current characteristics of the competitive environment refer to the globalization of markets and rapid technological change, in which innovation is key to obtaining and maintaining a sustainable competitive advantage.

Companies in Mexico must face the competition of an international market in order to develop, however, the problem is serious for small and medium-sized companies, which, in addition to their organizational and structural problems, face the challenge of global competition, which imposes new rules according to Kauffman (2001).

The importance of economic, material and human resources is well known, but there is a new resource that supports the organization and that has become relevant and it is the resource of technological innovation. The latter is necessary to compete and survive with good performance in the market. Turriago (2002)

In SMEs (small and medium enterprises) innovation is difficult to capture, changes are made in the action itself or are thought based on needs that come from a desire, a criticism or a need of a client. In addition, they require the incorporation of technology to be able to adapt to the new times. This will allow efficiency and speed in responding to customers and suppliers, offering the opportunity to be the most productive organization. Pedroza and Sanchez (2005).

The interest of this study is based on knowing, from the perspective of the entrepreneur of the Valles region, what actions or strategies in terms of technological innovation are being implemented to continue and/or remain in the market. Therefore, with this research, it is intended to contribute with a diagnosis that shows the current situation of SMEs in the Valles region, on technological innovation linked to business culture.

The work will be structured in a general way: in the theoretical framework, the different concepts and definitions of the proposed theme will be reviewed; in the methodology, we will elaborate an instrument to recover the point of view or opinions of the entrepreneurs of the region; in the results and conclusions, the information obtained will be analyzed and interpreted.

2. THEORETICAL FRAMEWORK

During the review of the literature, in terms of technological innovation and business culture, the publications that are detailed below stand out.

2.1. Technological innovation

In the current context of economic globalization, it highlights the importance of research and technological development (R&D) activities in the competitive positioning of companies. For Aranda, Solleiro and Henneberry (2008), technology is one of the main sources of competitiveness and integrates knowledge, experience, equipment, facilities and software and allows the generation of new products, processes, services and systems, as well as improvements to those that already exist. Technological development, regardless of its source, is determined by social needs or market demands and has a strong economic implication.

Escorsa and Valls (2001) comment that technological innovation supposes for the company the introduction of a technical change in the products or processes, which coincides with what is mentioned in the Oslo Manual (2006), which expresses that technological innovations comprise new products and new processes and significant technological changes in both. However, for Turriago (2002), technological innovation not only has to do with new products or processes, but also with the introduction of the installation of new machinery, new production plants, as well as the commercialization of new products.

Similarly, Ruiz and Mandado (1989), express that technological innovation includes all those scientific, technical, commercial and financial stages necessary for the successful development and marketing of new products or with better characteristics, the commercial use of new or better processes and equipment, or the introduction of a new service.

According to Veona and Pianta (2007), technological change opens opportunities for a variety of innovative strategies of companies, associated with particular competitive strategies in given markets. A competitive technological strategy, associated with a domination of product innovation, requires substantial internal innovative efforts (research, development, design, as well as investment), to the inventive activity, a stream of new products, with the aim of expanding the market share market and opening up to new markets. However, for Van de Ven and Polley (1992), the development of innovation is a highly uncertain process in which entrepreneurs

undertake activities over an extended period of time to transform a new idea into an executed reality. Several years of intensive investment and effort are often required to develop an innovation to the point where its final results are satisfactory.

Finally, it follows that technological innovation is a factor that determines the progress of a company and therefore increases its capabilities. It strengthens the key management processes of the organization and gives it its own added value, which differentiates a company from its competitors.

2.2. Corporate culture

Business culture is the set of values, beliefs, attitudes, norms, customs, rites, mentalities, motivations and behavior patterns that companies adopt, assume and put into practice in management and daily work, says Galindo (2005). According to Pedroza and Sánchez (2005), the new business culture must be based on, or at least keep in mind, five fundamental values: quality, trust, unity, solidarity and long-term vision.

The ability to undertake is associated with the appropriate personal conditions to create companies and/or make existing ones more efficient and innovative for the benefit of the entrepreneur, in light of the characteristics that successful entrepreneurs have, highlights Rusque (2005). . The entrepreneur has come to be understood, more than as a company creator, as a cultural innovator, in an interesting conception by Rusque (2005). Being an entrepreneur means putting into practice a series of values of an entrepreneurial nature (having an entrepreneurial culture assumed) and putting them into practice in the creation and development of companies, says Galindo (2005). Now, for Gordon (1991), corporate culture is seen as an organization-specific system of commitments and widely shared values that give rise to typical behavior patterns. These systems of patterns of cognition and behavior are transmitted to organizational members in formal (eg, mission statements) and informal (eg, modes of discourse) ways.

In the study by Rodeiro and Fernández (2006), they highlight that the main reasons for not innovating in SMEs (small and medium-sized enterprises) are the lack of financial and human resources. Lanzas, Pacheco and Velandia (2007) point out that the family nature of many of them and the peculiar characteristics of the organizational ecosystems in which they are integrated, favors an important degree of interaction, generating a culture that governs their decision-making and the development of their actions. It is necessary that favorable attitudes and behaviors be integrated into the business culture, such as: cooperation, openness to change, participation in decision-making processes, quality and continuous training.

3. METHODOLOGY

3.1. Design of the investigation.

The research is exploratory-descriptive in nature. Exploratory in terms of seeking information when we do not know the subject to be investigated, or when our knowledge is so vague and imprecise that it prevents us from drawing the most provisional conclusions about which aspects are relevant and which are not, according to Castañeda and Méndez (2004). , in this case, the information we intend to obtain is about the technological innovations that the tequila SMEs of Tequila, Jalisco are implementing or not. Descriptive in terms of what is sought to know and analyze by way of diagnosis, what is what companies are doing or implementing in aspects of technological innovation to face the competition. It is considered a descriptive investigation, because it allows knowing those most characteristic and particular aspects of people, situations or things, that is, those properties that make them recognizable in the eyes of others, according to Bernal (2000). According to Hernández (2006), both dimensions can be combined by integrating into a single sequence, called exploratory-descriptive, which will allow obtaining new information on very particular and precise aspects, and due to the characteristics of the study, it better responds to the nature of our study. research.

3.2. Population and sample.

There are 274 tequila SMEs in the State of Jalisco and 31 in the municipality of Tequila, according to data from the SIEM (Mexican Business Information System). To determine the size of the sample, aspects such as; the time available for field work, access to the source and the location of the company, for this reason we chose to survey 18 tequila companies, which had the best availability to respond to our questionnaire.

Classification of companies in Mexico according to size:

Número de empleados	Micro	Pequeña	mediana	Grande
manufactura	1-10	10-100	100-250	Más de 250
servicios	1-10	10-50	50-100	Más de 100

Source: Secretary of Economy, obtained on September 30.

3.3. Measuring instrument.

The instrument for obtaining information is the survey, because it allows identifying the situation that prevails in tequila SMEs, based on the types of innovations they introduce. In this last point, the Oslo manual defines four types of innovations, which include a wide range of changes in the activities of companies: product innovations, process innovations, organizational innovations and marketing innovations. The information requested in the survey refers to technological innovations, objectives of the innovative activity, sources of innovative ideas, obstacles to innovation. A space for the actions, values and attitudes carried out by the workers is also contemplated. At the beginning, the characterization of the companies is presented, such as: age of the company, family business, size of the company (small and medium), studies of the manager and his age. The reference period will be the last three years.

4. RESULTS

The characterization of the companies interviewed is as follows: 80% are small, 60% are family businesses and most are between five and twenty years old. The age of the owner or manager ranges between 35 and 55 years old and their studies are on average secondary and high school, representing 60%. Regarding the answers with options of the questionnaire, from question one to nine, it is with the purpose of

identifying the activities in technological innovations carried out by the selected companies. Table 1 shows the affirmation of all the companies that have made product and marketing innovations.

Table 1. In the period 2006-2009, have you made any kind of innovations?

	SI	NO
Innovación en Producto	5	
Innovación en Procesos	2	3
Innovación en organización	3	2
Innovación en mercadotecnia	5	

Technological innovation is defined in this survey as innovation that is based on the results of new technological developments, new combinations of technologies or the use of other knowledge acquired by the company. When questioning them, Table 2 highlights that the acquisition and modification of machinery, equipment and software are the technological innovations that they carry out the most.

Table 2. In the period 2006-2009, ¿have they carried out technological innovations?

	SI	NO
La adquisición de maquinaria, equipo y software	5	
Introducción de innovaciones en el mercado	3	2
Investigación científica y desarrollo tecnológico	1	4
Modificación de procesos, equipos o maquinaria	4	1
Uso de materias primas alternativas	1	4
Formación del personal	2	3

Regarding the objectives of innovation, which is reflected in table 3, it stands out that most companies identify and recognize the objectives they pursue with innovation activities.

Table 3. Objectives of innovation

	SI	NO
Creación o mejora de bienes o servicios	4	1
Penetración en nuevos mercados	4	1
Mayor calidad de los bienes o servicios	3	2
Mayor flexibilidad y capacidad de producción	4	1
Menos materiales y energía	3	2

Regarding the factors that hinder innovation, presented in table 4, the companies indicated, firstly, the lack of financial funds and secondly, the knowledge factors, in which they mention the lack of information about the technology. and staff trained in technologies.

Table 4. Factors that hinder innovation activities

	SI	NO
Factores de costo	5	
Factores de conocimiento	4	1
Factores del mercado	2	3
Motivos para no innovar	3	2

Regarding the sources of information, it is evident, as shown in table 5, that the options presented are important, because they are the source of innovative ideas and allow them to be aware of market changes. However, it was found that institutional sources are the least used..

Table 5. Sources of information for innovation activities

	SI	NO
Dentro de la empresa	3	2
Fuentes del mercado (proveedores, clientes, competidores y consultores).	4	1
Fuentes institucionales (universidades y organismos públicos)	2	3
Otras fuentes (ferias comerciales, revistas y asociaciones profesionales)	4	1

In table 6, it is striking that in product innovation, companies do not recognize, as part of their activity, offering services, as 80% affirmed.

Table 6. Product innovation (goods or services)

	SI	NO
¿Introdujo la empresa bienes nuevos o mejorados significativamente?	5	
¿Introdujo la empresa servicios nuevos o mejorados significativamente?	1	4

It is highlighted in table 7 that most companies rarely implement innovations in their processes, such as those related to design and technical procedures for production.

Table 7. Process innovation

	SI	NO
¿Introdujo la empresa métodos de producción de bienes nuevos o mejorados?	2	3
¿Introdujo la empresa métodos de entrega o distribución nuevas o mejoradas para sus insumos, bienes o servicios?	1	4
¿Introdujo la empresa actividades de apoyo para sus procesos, como sistemas de mantenimiento e informáticos, de compra, nuevas o mejoradas?	2	3

It is reflected in table 8, that in organizational innovation, which consists of the implementation of new organizational methods in the internal functioning of your company. As a result of the strategic decisions carried out by the management, it is shown that there are few innovations contemplated in the workplace.

Table 8. Organizational innovations

	SI	NO
¿Introdujo la empresa nuevas prácticas empresariales en la organización del trabajo o de los procedimientos de la empresa?	2	3
¿Introdujo la empresa nuevos sistemas de gestión del conocimiento para mejorar el uso de información, conocimientos y habilidades dentro de su empresa o para recopilar información externa a su empresa?	3	2
¿Introdujo la empresa nuevos métodos de organización con el objetivo de mejorar responsabilidades y toma de decisiones?	1	4
¿Introdujo la empresa nuevos procesos en formación del personal?	3	2

In table 9, on innovation in marketing, it is noteworthy that they consider as a primary action, the implementation of new strategies in the design or packaging of the product, since it is directly related to the introduction in the market, leaving in second level of importance, its positioning, as well as its promotion and price.

Table 9. Marketing innovations

	SI	NO
¿Introdujo la empresa modificaciones del diseño o envasado del producto?	5	
¿Introdujo la empresa nuevas técnicas para la promoción del producto?	3	2
¿Introdujo la empresa nuevos métodos para el posicionamiento del producto en el mercado o canales de ventas?	2	3
¿Introdujo la empresa nuevos métodos para el establecer los precios?	2	3

Finally, in Table 10, companies that have gradually integrated into a business culture, defined as the set of values, beliefs and behavior patterns that are part of a company's identity, are considered. Corporate culture is measured through several factors such as collaboration, loyalty, customer service, values, among others.

Table 10. Business culture

	SI	NO
¿Considera que está motivado e informado el personal sobre los valores y objetivos que persigue la empresa?	3	2
¿Considera que es bueno el proceso de comunicación de la empresa?	4	1
¿Considera que la imagen de la empresa se ve reflejada en los valores y políticas?	5	
¿Cree que es bueno el actuar de la empresa con respecto a la sociedad?	5	

With this information collected, it is evident that the introduction of a new or significantly improved product is an activity that is part of SMEs, since some begin to realize that the use of technological innovations contributes to the improvement of both internal processes as external to the business, so it is expected that this implementation will increase.

5. CONCLUSIONS

Currently, most of the Mexican SMEs start as a family business, some end up developing and others disappear, since the operation of these companies is influenced by a series of factors: inflation, devaluation, financial and fiscal policies, globalization, technological advance. , regulations, insecurity, etc. The companies that manage to grow, is with the help of good administration, a broad market, excellent personnel and a work team, however this is not enough, since the market is increasingly changing and above all demanding. Customers require quality products and services, so companies must adopt innovative strategies that allow them to be competitive in order to face the global market.

In terms of technological innovation, SMEs, on the one hand, lack the necessary resources to carry out R&D activities and, therefore, their capacity to create new products and processes is very limited, but on the other hand, their flexibility, ability to change and adjust and speed of reactions, together with the close relationship established between the owner and customers and suppliers,

gives it an advantage in detecting and taking advantage of opportunities and the environment, through innovation schemes very adjusted to the needs of its customers, taking advantage of its flexibility and proximity to the market to establish innovations that adjust its products to the preferences of its consumers. These innovations are achieved from the knowledge created by their own productive activity, not to mention that their family nature and the peculiar characteristics of the entrepreneurs that integrate them, generates a culture that governs their decision-making and development. and their direction.

In the end, adopting innovative technological strategies will allow Tequila SMEs to make and apply the necessary decisions to maximize relationships within the organization and be able to meet the established goals with a view to their development in a competitive environment. .

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