



Determinación de indicadores y herramientas para alcanzar competitividad empresarial

Determination of Indicators and Tools to Achieve Business Competitiveness

*Determinar indicadores e ferramentas para alcançar a competitividade dos
negócios*

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Resumen

Para que las empresas logren objetivos tales como incrementar ventas, aumentar ingresos, generar utilidades, ser líderes empresariales, entre otros, es necesario buscar estrategias de competitividad a seguir sin importar el tamaño o giro. Por lo que el objetivo de este estudio fue determinar los indicadores y herramientas que se necesitan para que las empresas logren ser competitivas.

El estudio tuvo un enfoque cuantitativo. La muestra estuvo integrada por 23 empresas que se ubican en dos municipios del Estado de México: Chalco y Valle de Chalco. La investigación se realizó en cinco fases: 1) Conceptual: se delimitó el problema y se llevó a cabo la investigación documental; 2) Planeación y diseño de la investigación; 3) Empírica: se realizó la recolección de los datos y preparación para su análisis; 4) Análisis de los datos e interpretación de resultados, y 5) Difusión.



El análisis se realizó con base en las cinco fuerzas de Porter. Entre los resultados se pudo observar que las empresas en un alto porcentaje no están preparadas para hacer frente a los actuales o nuevos competidores. Y respecto a las distintas fuerzas como, por ejemplo, los competidores directos, donde se ve la influencia de los precios, la competencia y el comportamiento del mercado, resalta que 60 % de la muestra considera que no tiene control sobre los precios; en cuanto a los productos sustitutos, 50 % de los encuestados muy frecuentemente conocen el impacto de estos en la empresa; 40 % casi nunca cuenta con una propuesta de valor para atraer al cliente; en cuanto al dominio de negociación que se tiene, y los proveedores con los que se cuenta, 40 % expresó que frecuentemente se negocia con ellos; por mencionar tan sola algunas de ellas. Una de las conclusiones a las que se arribó es que cuando las empresas conocen e identifican los indicadores de competitividad pueden lograr permanencia y crecimiento.

Palabras clave: competencia, empresa, operación administrativa, plan de desarrollo.

Abstract

In order for companies to achieve objectives such as increasing sales, increasing revenues, generating profits, being a business leader, among others, it is necessary to seek competitiveness strategies. So, the aim of this work was to determine the indicators and tools needed for companies to achieve competitiveness.

The study had a quantitative approach. The sample was integrated by 23 companies that are located in two municipalities of Estado de México: Chalco and Valle de Chalco. Also, the research was conducted in five phases: 1) Conceptual, the problem was delimited, and the documentary research was carried out; 2) Planning and design of the research; 3) Empirical, data collection and preparation for analysis; 4) Data analysis and interpretation of results, and 5) Dissemination.

The analysis was carried out based on Porter's 5 forces. Among the results, it can be identified that a high percentage of companies are not prepared to face current or new competitors. And about some of the forces: 60% of the sample consider that the company does not have control over the prices; 40% almost never have a value proposition to attract the customer; and 40% expressed that they frequently negotiate with suppliers. It can be

concluded that when companies know and identify competitiveness indicators they can achieve permanence and growth.

Keywords: competition, company, administrative operation, development plan.

Resumo

Para que as empresas atinjam metas como aumento de vendas, aumento de receita, geração de lucros, liderança de negócios, entre outras, é necessário buscar estratégias de competitividade a serem seguidas, independentemente do tamanho ou da rotatividade. Assim, o objetivo deste estudo foi determinar os indicadores e ferramentas necessários para que as empresas sejam competitivas.

O estudo teve uma abordagem quantitativa. A amostra foi composta por 23 empresas localizadas em dois municípios do Estado do México: Chalco e Valle de Chalco. A pesquisa foi realizada em cinco fases: 1) Conceitual: o problema foi delimitado e a pesquisa documental foi realizada; 2) Planejamento e desenho da investigação; 3) Empírico: os dados foram coletados e preparados para análise; 4) Análise dos dados e interpretação dos resultados e 5) Disseminação.

A análise foi baseada nas cinco forças de Porter. Entre os resultados, observou-se que as empresas em percentual elevado não estão preparadas para enfrentar os concorrentes atuais ou novos. E em relação às diferentes forças, como, por exemplo, concorrentes diretos, onde a influência de preços, concorrência e comportamento de mercado é vista, destaca-se que 60% da amostra considera que não tem controle sobre os preços; em termos de produtos substitutos, 50% dos entrevistados conhecem com muita frequência o impacto destes na empresa; 40% quase nunca tem uma proposta de valor para atrair o cliente; Em termos do domínio de negociação que é realizado, e os fornecedores com quem é contado, 40% disseram que freqüentemente negociam com eles; para mencionar apenas alguns deles. Uma das conclusões alcançadas é que, quando as empresas conhecem e identificam indicadores de competitividade, podem alcançar permanência e crescimento.

Palavras-chave: competência, empresa, operação administrativa, plano de desenvolvimento.

Introduction

The research was carried out due to the importance of micro, small and medium enterprises (mipymes) in the national and international economy, by contributing to the creation of jobs, the contribution of production and distribution of goods, as well as the provision of services. The main objective was to analyze the MSMEs in the municipalities of Chalco de Díaz Covarrubias and Valle de Chalco Solidaridad, both of the State of Mexico, to determine the indicators and tools that affect their competitiveness.

To achieve this, we started with a bibliographic analysis on the concepts related to business competitiveness -from which the growth of companies can be achieved. In addition, reference is made to competitive advantage as essential to achieve leadership in the turn or activity that is carried out, that is, it is a fundamental element for business success.

Business competitiveness has seen a growth in the economic environment due to the commitment that companies have with their customers to offer the best service or product. This can be achieved with good practices through competitive advantage. As mentioned by De la Cruz and Martínez (2013): "Competitiveness is more than anything in which an organization manages to maintain itself and remain in the market in the long term" (paragraph 4). A company, when it starts up, has a relevant intention, namely, to be competitive by seeking that added value that identifies it before the others, and thus to offer a quality product that competes efficiently in the market.

Tabla 1. Concepto de competitividad

Autor	Concepto
Cebberos (1993)	La competitividad es un proceso de creación de ventajas competitivas, donde es importante la capacidad de innovar para obtener saltos tecnológicos.
Ferraz <i>et al.</i> (2004)	Una empresa es competitiva si es capaz de formular y aplicar estrategias que la lleven a una posición de mercado sostenida o ampliada en el segmento de la industria donde opera.
Macías (2000)	Un elemento básico de la competitividad es la presencia de ventajas comparativas, que son estáticas y se basan principalmente en la riqueza del territorio; pero para que se sea aún más competitivo las ventajas comparativas se deben de transformar en ventajas competitivas.
Díaz (2006)	Menciona que los países competitivos fomentan la competitividad a través del Gobierno, sociedad civil y empresas realizando políticas y acciones con el objetivo de favorecer la cultura de competitividad.

Fuente: Zavala, Cotera, Soberanes y Chavarría (2018), Espinosa (2010).

Table 1 presents the proposal of four authors on the concept of competitiveness. All agree in having or creating a competitive advantage that offers the permanence in the market of each company. However, at the present time, several small companies have emerged and entered into the arena of competitiveness, and have managed to obtain government support through loans and, thanks to this and based on a long-term strategy, they have achieved success. Cruz and Martínez, 2013).

For Porter (1980, quoted in Luna, 2013) competitiveness is determined by productivity. And it defines this, the productivity, as the value of the product generated by a unit of work or capital. It is necessary to go to the company, and to the sector, to identify which are the factors that determine that companies generate added value and analyze if those factors are sustainable in the medium and long term.

Any company that is competitive must not lose sight of the fact that it must offer quality, reliability, flexibility, among other characteristics. It must also have certain



competitiveness strategies so that it can differentiate itself from others and position its business in front of other organizations. Therefore, it is necessary to show each of the strategies that generate a competitive advantage.

As they refer De la Cruz y Martínez (2013):

Business competitiveness is a topic of interest in today's companies; it has worked for the growth of its socioeconomic environment, comparing the strategies systems of other companies. We can also say that it is a subject that is in development, not finished and subject to various interpretations and forms of measurement; competitiveness emerged in the seventeenth century by the theories of trade on all economic aspects, the main mentor of these theory was David Ricardo, who stood out for its methodology of comparative advantages; the ability of a company to be competitive is valued in relation to its ability to maintain or increase the profitability of its assets (párr. 1).

To be able to achieve business competitiveness requires the support of each of the elements of the organization. And although many entrepreneurs do not want to put aside their traditional way of working, they must be prepared to adapt to change.

As mentioned by Medina (2013), "the generation and maintenance of competitive advantage constitutes the fundamental element for the success of organizations, especially under the phenomenon of globalization, where markets have become highly demanding" (p.2).

The economy of the countries is changing with the new strategies of differentiation. These have become an important part of the competition: in order to obtain competitive advantage, companies must carry out new forms of organization, new procedures, for example, those that bring with them the incorporation of technology.

The competitive advantage, according to Porter (1987; cited in Cervantes, Ballesteros y Hernández (2012):



It is born fundamentally from the value that a company is able to create for its buyers, which exceeds the cost of that company to create it. The value is what buyers are willing to pay, and the higher value comes from offering lower prices than competitors for equivalent benefits or by providing unique benefits that justify a higher price. (p. 3).

The concept of competitive advantages, as Bello (2018) says, "is essentially relative in terms of the time in which they can be effective. In some aspects the process is slower and they are prolonged for longer periods. In others, the erosion of the advantages accelerates" (page 18).

It is said that you have a competitive advantage when the company presents a product or service that, when performing the same functions as any other, has a differentiating element that makes the customer decide to buy this and not another.

Competitive tools

There is a wide variety of activities that companies can implement so that their business is chosen by customers. And you can talk about technology as a tool that acquires a nuclear value during its implementation. Thanks to technology, processes can be improved and sometimes even the product or service. In this regard, Moral and Orgaza (2015) ensure the following:

Since the stone age, practices and implementation of ideas have been carried out to develop a number of inventions that strengthen the capacity for technological growth. It is, then, the technology a beautiful tool that has allowed during all these years the recreation and development in many ways to the whole humanity (p. 2).

Another factor of growth for companies is innovation, which goes hand in hand with technology, since the company that manages to transform its way of behaving can achieve in a certain way to be a truly competitive business, transforming the dynamics in which it is offered. service or product. So the ability to compete is highly significant for companies, because this is derived from economic growth and, consequently, jobs and the improvement of the population's standard of living.

Competitiveness is what allows the company to be successful in the country in which it operates. A company is competitive when it develops services and products whose production and quality costs are comparable or superior to its emulators throughout the world.

Competitive indicators

To determine that companies are competitive there is a series of indicators or indices. As refieren Pérez and Bermúdez (2012):

Competitiveness indices are the factors that explain a country's ability to produce goods and services with international technology and quality standards in an efficient manner, and as a consequence achieve high levels of productivity and income level (p. 2).

A model to determine the competitiveness of small and medium-sized enterprises (SMEs) is the one proposed by Martínez, Sánchez, Santero and Marcos (2009; citados en Larios, 2016):

The key indicators that affect competitiveness are the external indicators that have to do with the business environment, technology and innovation that is measured in the ability to launch new products to the market, quality, human resources management, management skills in the use of new management tools, internationalization understood as the ability to reach external markets and financing as a necessary source for their permanence (p. 188).

Another of the efforts that exist to measure the competitiveness of companies originates in the World Economic Forum (WEF) and its Global Competitiveness Report. In this report several criteria are established to determine if a company is competitive. It basically considers the following pillars of competitiveness: efficiency in the labor sector, the sophistication of the financial market, technological preparation, market size, business sophistication and innovation. It should be noted that Mexico is located in place 58 in said report.

Finally, another of the indicators that exist is the Porter diamond (cited in Vázquez and Reyes, 2014, Botero, 2014). It is composed of a series of steps to achieve competitiveness. According to the model, the steps are involved in the following:

- The national strategy, structure and local rivalry: it tries to find the characteristics of organization and vision of the actors involved in the economic activity.
- Situation of the conditions of the demand: it seeks to examine the evolution in the markets and behaviors of consumption patterns of the product.
- Situation of the factors of production (conditions of supply): describes productive factors and their efficiency (productivity).
- Related and support activities (related industries and support): inquire about economic agents, such as transporters or financiers, for example, who have interests related to the activity of the main agents.

Ramírez, Montoya and Montoya (2012) they express that the five forces of Porter's classic model are the following: 1) direct competitors, 2) customers, 3) suppliers, 4) substitute products and 5) potential new competitors; and take into account a sixth force called complementarities (the State and the Government).

In addition to the above, when assessing the competitiveness of a sector, analysts feel the need to study several of its attributes. Porter (2007, cited in Then et al., 2014) considers four general attributes: 1) growth rate of the sector, 2) Government, 3) technology and innovation and 4) the role of complementary products and services.

This tool is considered to be really effective due to the evaluation that it carries out with respect to the aforementioned points, taking into account the strategies, the situation of the demand, the activities that are carried out, the fortuitous phenomena and the situation of the factors of production, practically every indispensable element that the company must take into account.

Mipymes in Chalco and Chalco Valley

According to the Mexican Business Information System [SIEM] (2016), there are a total of 711 451 companies throughout the country. In the State of Mexico there are 60 322: in the municipality of Chalco there are 3336 companies, of which 62 are dedicated to

industry, 2811 to commerce and 463 to services; In the municipality of Valle de Chalco there are 1559, of which 29 are dedicated to industry, 1364 to commerce and 166 to services (see table 2).

Tabla 2. Empresas en el municipio de Valle de Chalco

<i>Tamaño</i>	<i>Industria</i>	<i>Comercio</i>	<i>Servicios</i>	<i>Total</i>
<i>Micro</i>	27	1335	160	1522
<i>Pequeña</i>	1	29	4	34
<i>Mediana</i>	1	0	2	3
	29	1364	166	1559

Fuente: Elaboración propia con base en el SIEM (2016)

The information contained belongs only to the companies registered in the SIEM and not to all those existing in the country. The date of the submitted information corresponds to June 8, 2016.

The research presented here was carried out through a quantitative study. At first, 39 companies from the two mentioned municipalities were contacted to identify which ones would be interested in participating in the investigation. Subsequently, the study was conducted to the 23 interested companies.

The results of the application of the instruments are presented through graphs to visually identify the considerations of the entrepreneurs who answered the instrument. Another factor that is considered important here is to identify those tools necessary for competitiveness, such as the use or implementation of technology in processes and activities during the sale of the product or service. And a factor that is in tune with this is innovation, as already mentioned above, because the company that manages to transform their way of conducting can achieve competitiveness.



Method

The research is quantitative. Because, through statistical tools and the use of mathematical language, the technique of measuring and quantifying the information obtained through a questionnaire applied to a sample of a large population is used. This technique refers to massive probes.

Likewise, it is a cross-sectional investigation due to the fact that the exploration is carried out in a specific time, in the short term. Obviously for this it is necessary to have a sample of the general population, as determined here, because it is not possible to work with the total number of companies.

Process

The study consisted of the five phases proposed by Monje (2011, p.19) for quantitative research:

- 1) Conceptual phase: the problem was delimited and the documentary research was carried out. It was necessary to have theoretical information about some concepts of interest on competitiveness to build the theoretical framework.
- 2) Planning and design phase: it was necessary to analyze different tools and instruments to identify competitiveness in micro and SMEs. The instrument for gathering information was prepared and the participants were determined. The sample consisted of 23 companies. The type of sampling was for convenience: it focused on MSMEs in Chalco and Valle de Chalco: 3 microenterprises (1 industrial and 2 commercial sector), 17 small (15 dedicated to the service sector and 2 to the industrial sector) and 3 medium commercial enterprises.
- 3) The instrument to obtain information about the forces of Porter is composed of 25 closed questions. And the answers are aligned according to the Likert scale: a) very frequently, b) frequently, c) sometimes, d) almost never, and e) never. The validation of the instrument was carried out using the Cronbach's alpha and its classification by means of the mean and the standard deviation coding each one of the items. The time used to answer the instrument was on



average between 40 and 60 minutes. This questionnaire was answered in the following way: 69% by the employer (owner) and 31% by the general administrator.

- 4) Empirical phase: the information was collected and then the data was prepared for analysis.
- 5) Analytical phase: consisted in the analysis of data and interpretation of results.
- 6) Dissemination phase: in this stage the observations must be communicated. The way to do it was through an executive report to each of the companies under study and, later, the writing of this article to disseminate the findings.

Results

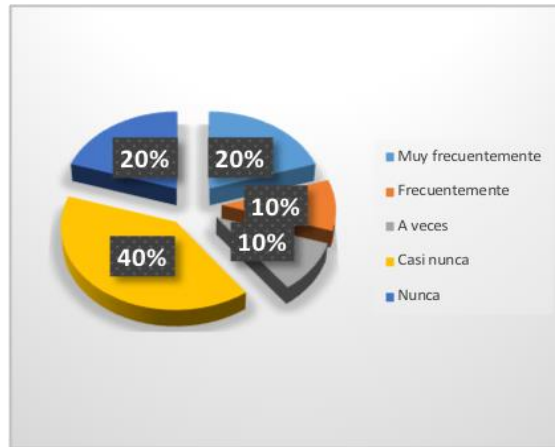
While it is true that for companies to be competitive they must adapt to the changes that arise in the environment, it is more important to focus on internal factors, such as those involving the five competitive elements of Porter, or five competitive forces. Thus, results were obtained in each one of them, which can be synthesized in the following way.

The direct competitors

This force analyzes the level of rivalry in the sector. Mainly considered parameters such as the positioning of competitors, fixed costs that surround the sector, how many competitors there are, the possible price competition, among others that define the level of rivalry of the sector. Some of the results are presented in figure 1. Regarding the question of whether the company has control over the prices of the products, it can be seen that 20% said that very frequently and 10% frequently; while 10% indicated that sometimes, 40% than almost never and 20% never. In general, it can be identified that 60% depends on other aspects, but the business does not have control over the prices of the product.



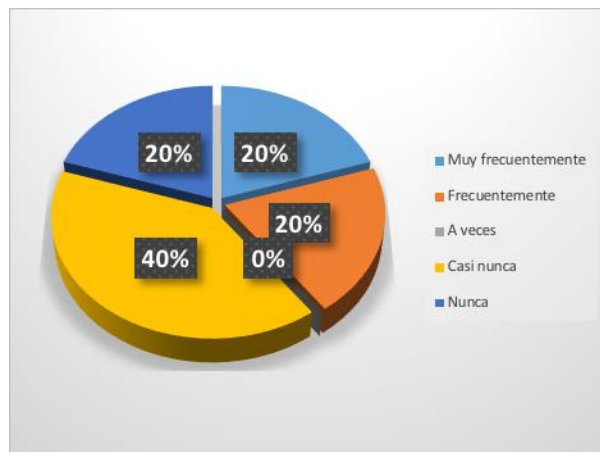
Figura 1. Gráfica del control sobre los precios del producto



Fuente: Elaboración propia

Figure 2 shows the percentages on the knowledge that companies have of the level of competition that exists before the product they offer: 20% recognizes it very frequently, another 20% answered that frequently, 40% sometimes and 20% never can identify the level of competence.

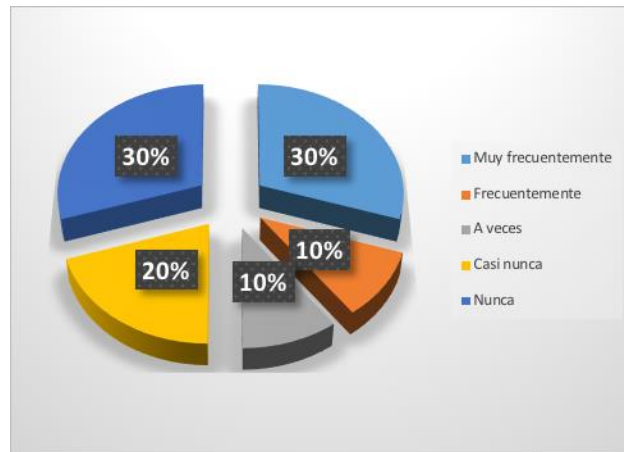
Figura 2. Gráfica del nivel de competencia



Fuente: Elaboración propia

Figure 3 shows the percentages of answer to the question about whether they know the number of competitors that you have and the behavior of the market. It is to call the attention that they have the same percentage, 30%, the answers of very frequent and never. Also, 10% responded that frequently and the same percentage as sometimes. Finally, 20% said that almost never, situation which shows a very marked difference in this aspect of the companies.

Figura 3. Gráfica del número de competidores y comportamiento del mercado

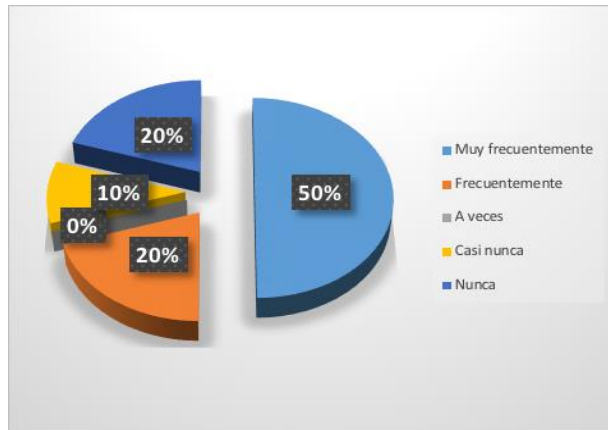


Fuente: Elaboración propia

Substitute products

The alternatives of the products that could replace those already offered by the sector are analyzed. Regarding the assertion of sizing the impact of substitute products, Figure 4 shows that 50% very often know the size and impact of substitute products, while 20% said that frequently and with the same percentage as almost never; Finally, 10% said never. As you can see, no company expressed that sometimes.

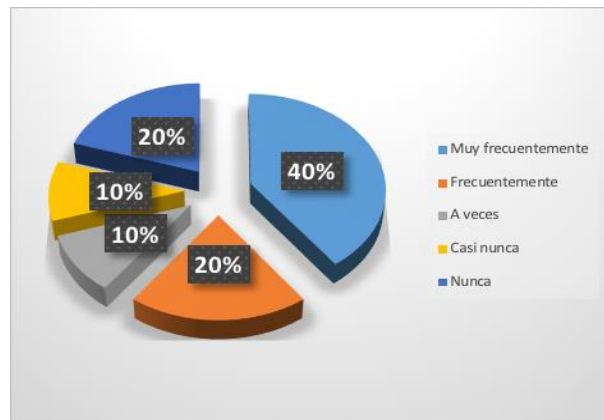
Figura 4. Dimensionar el impacto de los productos sustituto



Fuente: Elaboración propia

Figure 5 shows that 40% said that they have very often considered substitute products, 20% frequently and 20% more than ever. With the same percentage of 10% responses were recorded sometimes and almost never, which means that a little more than half have considered it.

Figura 5. Consideración de productos sustitutos

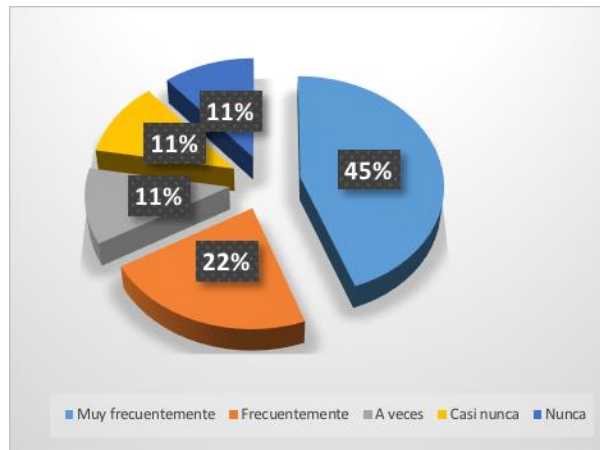


Fuente: Elaboración propia

Potential new competitors

Looking at Figure 6 it can be noted that 45% of respondents very frequently consider the possibility that their business is likely to have new competitors and 22% that frequently; while 11% sometimes, 11% almost never and 11% never.

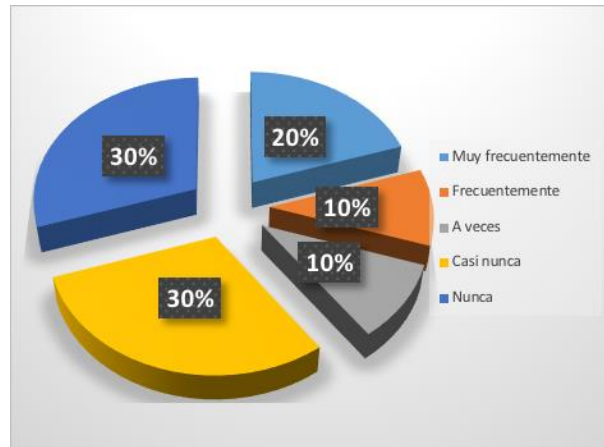
Figura 6. Gráfica sobre si la empresa es susceptible de tener nuevos competidores



Fuente: Elaboración propia

Figure 7, on the other hand, indicates that 20% of companies consider very frequently to be prepared for the emergence of new competitors, 10% assure that frequently and the same percentage that are sometimes trained; unlike 30% of the sample that expressed that almost never and never would be able to counteract new business.

Figura 7. Capacidad para combatir a la competencia

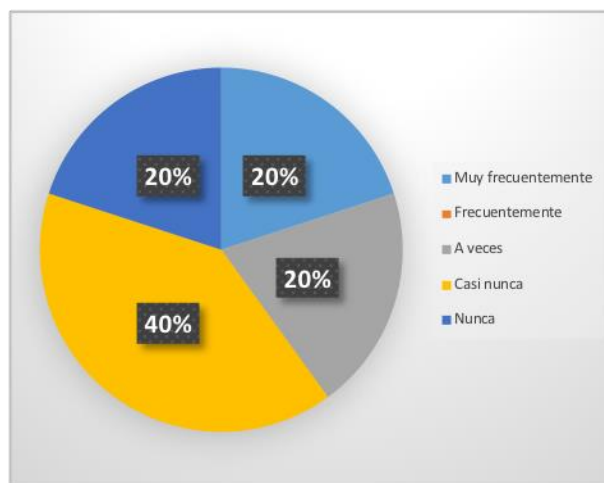


Fuente: Elaboración propia

The clients

As can be seen in Figure 8, 20% answered that very often they generate a value proposal to attract the client, 20% frequently and 20% more than ever, while 40% indicated that almost never.

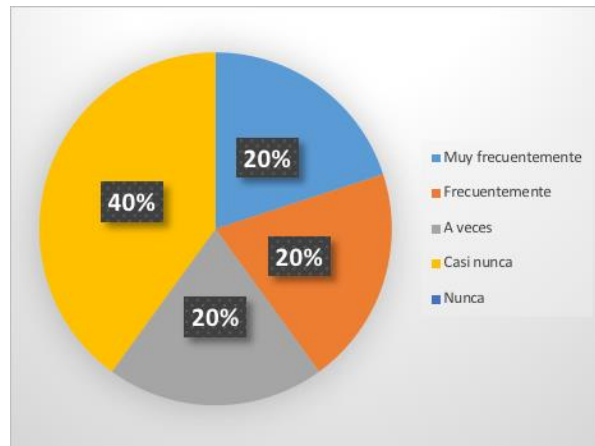
Figura 8. Propuesta de valor para atraer al cliente



Fuente: Elaboración propia

With regard to knowing what customers want, Figure 9 indicates that 20% answered very frequently. And with the same percentage, 20%, that frequently and sometimes; while 40% said almost never. The important thing to emphasize here is that none of them expressed that they never know what their clients want.

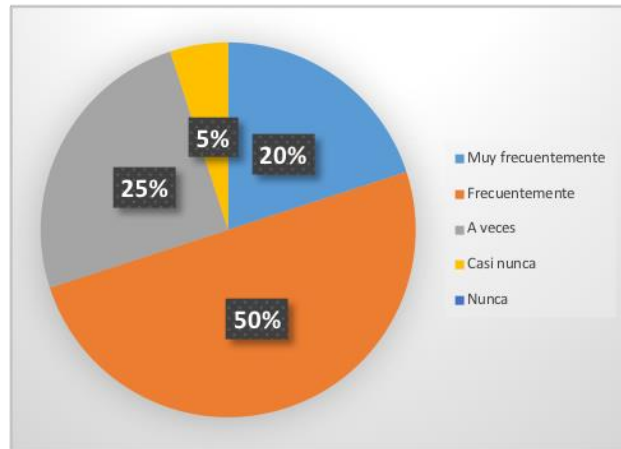
Figura 9. Gráfica sobre si la empresa conoce lo que el cliente quiere



Fuente: Elaboración propia

Figure 10, meanwhile, shows what percentage of the companies satisfy the demands of the clients: 20% said that very frequently, 50% that frequently, 25% that sometimes and 5% that almost never. None of the respondents mentioned that never.

Figura 10. La atención de las demandas de los clientes

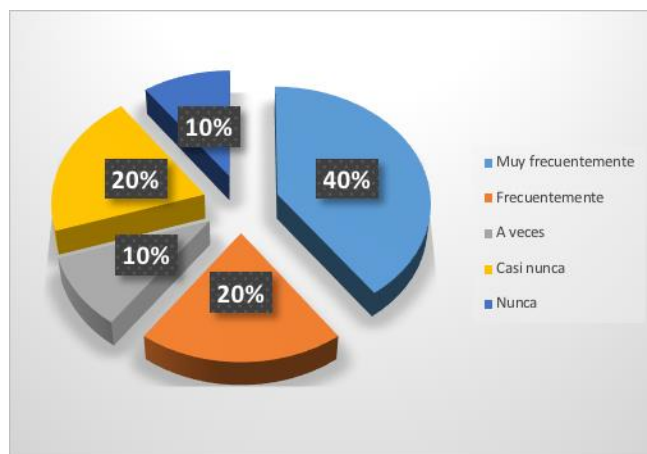


Fuente: Elaboración propia

Power of the provider

In figure 11 you can see the answers about the negotiation power to obtain the product and generate the competitive advantage. Thus, 40% and 20% of entrepreneurs expressed that they are very frequent and frequently negotiated, respectively. While 10% that sometimes, 20% that almost never and 10% remaining that never have the possibility of negotiation.

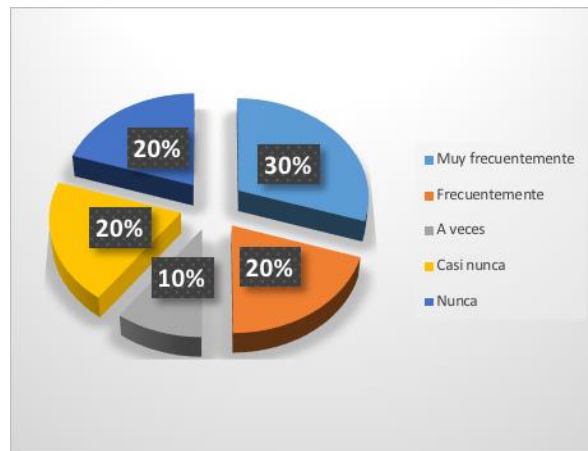
Figura 11. El poder de negociación de las empresas



Fuente: Elaboración propia

Figure 12 shows that 30% said that very often the different suppliers are known to supply the product. The answers frequently, almost never and never obtained the same percentage, 20%; finally, 10% said that they have sometimes met or considered different suppliers that can supply the product.

Figura 12. La diversidad de proveedores en las organizaciones



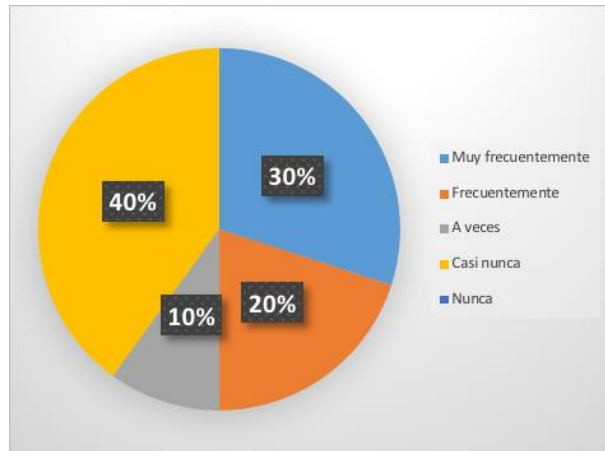
Fuente: Elaboración propia

Complementary

The decision was made to consider another force, the so-called complementary, which includes the incorporation of technology and have a model or business plan. In figure 13 it can be seen that 30% said that very frequently it makes use of technology to improve the processes of the company, 20% that frequently, 10% that sometimes; while 40% almost never and nobody expressed that ever.



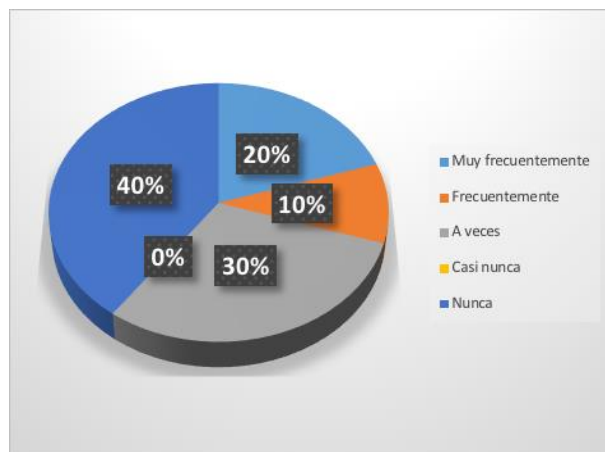
Figura 13. Sobre el uso de la tecnología para mejorar los procesos de las empresas



Fuente: Elaboración propia

Figure 14 shows, on the other hand, that 20% say that they very often consider that innovation drives the company by promoting learning, 10% mention that frequently, 30% sometimes, and finally 40% consider that never Innovation is promoted in your company.

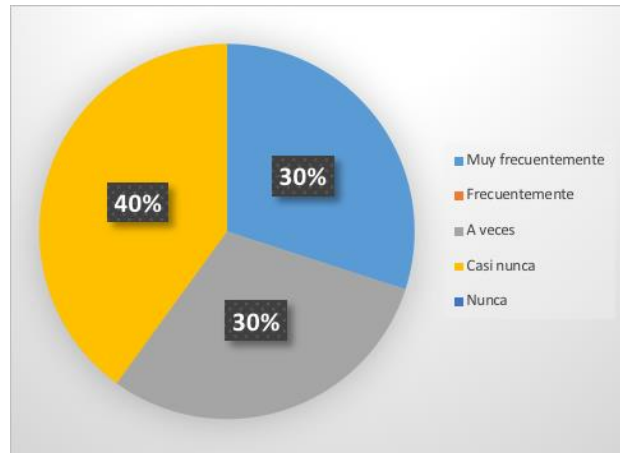
Figura 14. La innovación promueve el aprendizaje en la empresa



Fuente: Elaboración propia

Figure 15 shows that 30% very often consider that it is capable of evolving when taking into account technological advances. On the other hand, 30% feel that sometimes and finally 40% that almost never considers the technological advances in the company.

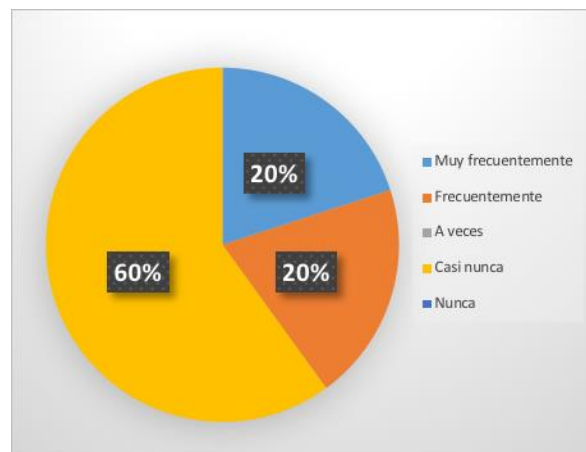
Figura 15. Gráfica sobre la consideración de los avances tecnológicos en la empresa



Fuente: Elaboración propia

Figure 16 shows that 20% very often consider that the business model is updated at least every 5 years, 20% that frequently and 60% refer to it almost never.

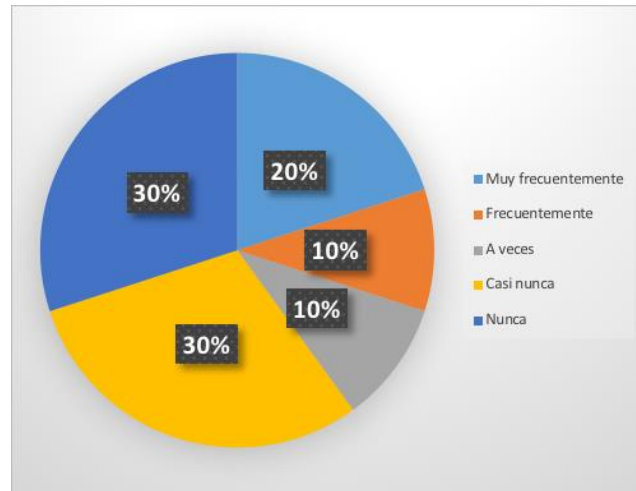
Figura 16. El modelo de negocios es modificado por lo menos cada cinco años



Fuente: Elaboración propia

Finally, regarding the question of whether it is frequently improvised because there is nothing planned, in Figure 17 it is observed that 20% and 10% consider it very frequent and frequently, respectively; while 10% feel that sometimes, 30% consider that almost never and another 30% never.

Figura 17. Sobre la improvisación de no planificar las empresas



Fuente: Elaboración propia

Once the information obtained by the questionnaire was analyzed, an executive report was developed for each of the companies under study, which includes the findings and areas of opportunity.

Discussion

There are several strategies that SMEs can use to achieve competitiveness. In this case it is considered that with the five forces of Porter this objective can be achieved. In this regard, in the first force, in which direct competitors are analyzed, starting with price control, it is observed that there is no power over them.

In terms of the number of providers and their behavior, meanwhile, it is appreciated that the opinion is divided, although it is seen that there are more people who do not notice this attitude. Regarding the level of competence, it is considered that this factor must be a priority for the trader.

On the other hand, there are substitute products, where the alternatives of the products that could replace those already offered by the sector are analyzed. It is necessary to observe the impact that this point has and that not everyone takes it into account, as well as the consideration in these products before others.



The entry of new competitors is another factor that must be stopped. Since not everyone realizes if your company is likely to have them; and for this reason, most do not have the capacity to fight competition.

Clients are the most important factor because the business was created in the first instance to satisfy some need. In this factor it is observed that not all generate a value proposal that makes them differentiate themselves from the other companies, and they do not give themselves to the task of seeing what the client really wants and to meet said demands.

With regard to the power of the supplier, which reflects the strength of the company's negotiation, it is not taken into account that there is a wide range of suppliers willing to negotiate. Although they are frequently aware of the various suppliers for the supply of the product, not all of them have knowledge of the suppliers.

One strategy involves complementary products. Although it is not part of Porter's forces, the decision was made to consider it here because the entry of new technologies creates the indispensable complement for companies to achieve competitiveness and improve processes, promoting learning and the development of business models; For the most part, the companies surveyed here never do so. By extension, by not having a plan, improvisation is provoked.

The strategies and tools necessary to achieve competitiveness were identified. Business models or creativity, technology and support in employees to make them innovate can be essential tools to achieve the goal. It also coincides with that expressed by Flores and González (2009), who recommend training business managers in current administrative tools to increase the competitiveness of their products and open new lines of research.

The need to have a business plan is not exclusive to Mexico or the MSMEs of the eastern region of the State of Mexico. It can be implemented before starting functions by the company or, if applicable, if it had not been developed during the march, the important thing is to have it to contribute to its competitiveness in the market of influence of the companies.

Through research carried out in the municipalities of Chalco and Valle de Chalco Solidaridad, it was identified that less than 12% of the companies interviewed have a business plan. It is necessary to highlight, based on the analyzed, the importance of having one that



allows to present training strategies, market experience, sales and even in the business project and business planning before investing, in addition to Continuous training in business skills.

In this sense, the causes presented by Rodríguez (2010) regarding the failure of SMEs, which are lack of experience in the field, lack of administrative experience and in some cases unbalanced experience, are validated. All this is identified mainly in the analyzed community because there is no business plan, therefore, they do not identify those factors that can be decisive to achieve their objectives.

Another aspect is the use of information technologies. According to Villafranco (2017), only 6% of SMEs in Mexico take advantage of their use in their processes. This is despite the fact that there are different technological tools that an SME should have and that, as has been pointed out, are currently essential to grow and thus be competitive, for example, the use of enterprise resource planning systems (ERP, by its acronym in English) and customer management (CRM, for its acronym in English). It was possible to identify that custom software technologies, in these cases, are required in 13 of the 23 companies analyzed. It will depend on the requirements of the business to establish which are the most appropriate, allowing growth. Specifically, it depends a lot on how much the company has invested or has been wanted to update in some cases.

The findings of Dibrell, Davis and Craig (2008) confirm that the companies that understand the power of information technology and relate this power to successfully support their key competences, may have a competitive advantage. According to these authors, investments in information technologies improve the relative performance of the company in two dimensions: profits and growth. The lack of investment in these, over time, can cause the company to be unable to support the client's requirements.

Another element that is important to consider is expressed by Lai, Ong, Yang and Wang (2008) and by Gutiérrez (2012): that managers must prepare employees to handle the organizational change derived from a technology implementation. Administrators should educate employees on the importance of the system, as well as explain the new policies derived from the changes that will be made and how the change is planned for employees. The above will serve to reduce the resistance coming from the negative beliefs of the



employees, such as fears, anxiety and uncertainty. Proper communication will also reduce negative impacts on employees.

The incorporation of information technologies in the companies analyzed entails not only automating the processes of existing businesses, but also the accounting processes to increase productivity and efficiency; and achieve with this to be more competitive and generate the growth of these. There must be constant communication in the company regarding who proposes the adoption of information technologies, both the owner / administrator and the staff, always considering the preparation of an adoption plan to be successful.

Conclusions

In most cases, entrepreneurs do not have the necessary characteristics to be competitive companies, and with the results of the research that was carried out, some factors were found in which the main attention must be paid.

As can be seen, with the results obtained from the questionnaire that was applied to employers, MSMEs do not clearly identify each of the forces that Porter proposes to achieve competitiveness, although empirically they pass through each one of them. Because there is indeed the entry of new competitors and, therefore, it must be pending so that the competition does not absorb the current work of the company, given that 60% said that the company does not have control over prices of the product. At the same time, the rivalry that may exist between organizations should be taken into account, since 30% of the sample said that they are not able to counteract new business.

Subsequently, it is essential to have efficient or cordial relations between suppliers and customers. At this point, new suppliers should be expanded or considered, given that 10% have never estimated it. Finally, it is necessary to take into account the threats on the products that could be substitutes, because 10% indicated that they have never analyzed alternatives of other products. So any company that observes these characteristics, must take into account the strategies that are being followed and those that must be followed in order to improve or change the product and have a competitive advantage.



A future work can be the application of the model of adoption of information technologies to the companies surveyed here that have not incorporated it formally (40%); By being willing to do so, they can see the investment as such and not as an expense. Also the revision or development of a business plan or model for 40% of the companies that they consider is improvised in the decision making process.

References

- Bello, C. R. (2018). *La gran transformación: la integración hacia adentro*. Biblioteca Virtual. Recuperado de <http://www.eumed.net/cursecon/libreria/crb-lgt/723.htm>.
- Botero, L. (2014). Internacionalización y competitividad. *Revista Ciencias Estratégicas*, 22(32), 187-196.
- Cervantes, V., Ballesteros, L. y Hernández, C. (2012). Programas para elevar la competitividad de las empresas en México. *Observatorio de la Economía Latinoamericana*, (167). Recuperado de <http://www.eumed.net/cursecon/ecolat/mx/2012/vlc.html>.
- De la Cruz, O. M. y Martínez, C. D. (2013). Competitividad Empresarial: Labor de Recursos Humanos en las Organizaciones. *Observatorio de la Economía Latinoamericana*, (185). Recuperado de <http://www.eumed.net/cursecon/ecolat/mx/2013/competitividad.html>.
- Dibrell, C., Davis, P. and Craig, J. (2008). Fueling Innovation through Information Technology in SMEs. *Journal of Small Business Management*, 46(2), 203-218.
- Espinosa, A. E. (2010). La competitividad del sistema agroalimentario localizado productor de quesos tradicionales. (tesis doctoral). Universidad Autónoma del Estado de México, Estado de México. Recuperado de <http://www.eumed.net/tesis-doctorales/2010/eea/Competitividad.htm>.
- Flores, B. y González, F. (2009). La competitividad de las Pymes morelianas. *Cuadernos del CIMBAGE*, (11), 85-104.
- Gutiérrez, P. L. (2012). *Efecto de guías metodológicas en administración de proyectos para Pymes*. (tesis de maestría). Instituto Tecnológico de Monterrey.



- Lai, J. Y., Ong, C. S., Yang, C. C. and Wang, C. T. (2008). Assessing and managing employee readiness for embracing e-business. Paper presented at the 2008 ACM SIGMIS CPR. Charlottesville, April 03-05, 2008.
- Larios, E. (2016). La gestión de la competitividad en la mipyme mexicana: Diagnóstico empírico desde la gestión del conocimiento. *Revista de Administração da Unimep*, 14 (2), 177-209.
- Luna, J. E. (2013). *Influencia del capital humano para la competitividad de las pymes en el sector manufacturero de Celaya Guanajuato*. (tesis doctoral). Recuperado de <http://www.eumed.net/tesis-doctorales/2013/jelc/ventaja-competitiva.html>.
- Medina, R. I. (2013). La ventaja competitiva como elemento fundamental de la estrategia y su relación con el sector servicios de la actividad turística. *Observatorio de la Economía Latinoamericana*, (191). Recuperado de <http://www.eumed.net/cursecon/ecolat/mx/2013/ventaja-competitiva.html>.
- Monje, C. A. (2011). *Metodología de la investigación cuantitativa y cualitativa. Guía didáctica*. Neiva, Colombia: Universidad Surcolombiana. Recuperado de <https://www.uv.mx/rmipe/files/2017/02/Guia-didactica-metodologia-de-la-investigacion.pdf>.
- Moral, C. S. y Orgaza, A. F. (2015). La tecnología como herramienta estratégica en las empresas de Santiago de los Caballeros. *Revista Caribeña de Ciencias Sociales*. Recuperado de <http://www.eumed.net/rev/caribe/2015/08/tecnologia.html>.
- Pérez, A. y Bermúdez, M. A. (2012). Índices de competitividad internacional. *Observatorio de la Economía Latinoamericana*, (170). Recuperado de <http://www.eumed.net/cursecon/ecolat/mx/2012/psba.html>.
- Ramírez, A., Montoya, I. y Montoya, A. (2012). Análisis del potencial competitivo del bioetanol en Colombia: Un enfoque desde las 5 fuerzas competitivas de Michael Porter. *Gestión y Ambiente*, 1(2), 117-129.
- Rodríguez, J. (2010). *Administración de pequeñas y medianas empresas*. México: Cengage Learning Editores.

- Sistema de Información Empresarial Mexicano [SIEM]. (2016). *Sistema de información empresarial mexicano*. Recuperado de <http://www.siem.gob.mx/siem/estadisticas/EstadoTamanoPublico.asp?p=1>.
- Then, L., Pimentel, S., Olivero, P., Soto, A., Luna, A., Cruz, G., Peguero, M., Jáquez, C. y Lluberes, J. (2014). Análisis de las fuerzas competitivas de Porter en el sector de promoción inmobiliaria del Gran Santo Domingo. *Ciencia y Sociedad*, 39(3), 441-476.
- Vázquez, A. y Reyes, M. A. (2014). Fundamentos sobre la competitividad para el desarrollo en el sector primario. *Tlatemoani*. Recuperado de <http://www.eumed.net/rev/tlatemoani/14/competitividad-desarrollo.html>.
- Villafranco, G. (2017). Sólo 6% de Pymes aprovecha las tecnologías de la información. *Forbes México*. Recuperado de <https://www.forbes.com.mx/solo-6-pymes-aprovecha-las-tecnologias-la-informacion/>.
- Zavala, M., Cotera, E., Soberanes, A. y Chavarría, E. (2018). La calidad como factor de competencia en las empresas para lograr la satisfacción del cliente. *Academia Journals Celaya 2018*, 10(8), 6127-6131.

Rol de Contribución	Autor (es)
Conceptualización	Esperanza «principal», Anabelem «que apoya».
Metodología	Anabelem «principal», Esperanza «que apoya».
Software	Esperanza y Anabelem «igual»
Validación	Esperanza y Anabelem «igual»
Análisis Formal	Esperanza y Anabelem «igual»
Investigación	Esperanza «principal», Anabelem «que apoya».
Recursos	Anabelem «principal», Esperanza «que apoya».
Curación de datos	Esperanza y Anabelem «igual»
Escritura - Preparación del borrador original	Esperanza «principal», Anabelem «que apoya».
Escritura - Revisión y edición	Anabelem «principal», Esperanza «que apoya».
Visualización	Anabelem y Esperanza «igual»
Supervisión	Anabelem y Esperanza «igual»
Administración de Proyectos	Esperanza y Anabelem «igual»
Adquisición de fondos	Anabelem «principal», Esperanza «que apoya».