

Determination of the Organizational competence of the footwear industry of the Plaza Azul, San Mateo Atenco, State of Mexico

Determinación de la competencia organizativa de la industria del calzado de la Plaza Azul, San Mateo Atenco, Estado de México

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Abstract

The manufacture of footwear in the State of Mexico is an activity of the utmost importance, since it represents an important source of income for the community of San Mateo Atenco; in the last ten years just over 40% of family workshops have closed. Plaza Azul has also been affected with a considerable decrease in sales volume, a situation that today is considered critical. The purpose of this research is to determine the organizational competence of the footwear producers of the Plaza Azul and from this, design strategies that allow them to increase their competitiveness. The present study is descriptive transectional type. To determine organizational competence, 5 variables are evaluated. Based on the results obtained, which show that the highest optimization factor is power structure and the highest risk factor is strategic direction. Proposals for strategies are presented to the variable of strategic management and information systems and thus optimize organizational competence and improve the overall competitiveness of footwear companies.

Resumen

La fabricación de calzado en el Estado de México es una actividad de suma importancia, toda vez que representa una fuente de ingresos importante para la comunidad de San Mateo Atenco; en los últimos diez años poco más del 40% de los talleres familiares han cerrado. La Plaza Azul igualmente se ha visto afectada con una disminución considerable del volumen de ventas, situación que hoy día se considera crítica. Esta investigación tiene como propósito determinar la competencia organizativa de los productores de calzado de la Plaza Azul y a partir de esto, diseñar estrategias que permitan elevar su competitividad. El presente estudio es de tipo transectional descriptivo. Para determinar la competencia organizativa se evalúan 5 variables. A partir de los resultados obtenidos, los cuales muestran que el factor de optimización más alto es estructura de poder y factor de mayor riesgo es dirección estratégica. Se presentan propuestas de estrategias para atender la variable de dirección estratégica y sistemas de información y así optimizar la competencia organizativa y mejorar la competitividad en general de las empresas de calzado.

Organizational competence, strategic balance, footwear industry

Competencia organizativa, balance estratégico, Industria del calzado

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Introduction

In this research paper we propose to determine the competitive potential of the organisational variable of the footwear industry Plaza Azul, Mexico, through the theory of resources and capabilities, which is based on the fact that these are what lead the organisation to select the opportunities for which it is best equipped and allow it to define a sustainable competitive advantage based on its competences.

The first part describes the background of the footwear industry at national and regional level, as well as the impact of Covid-19 in this sector, then the theoretical foundations of the competitive potential, the SWOT situational analysis and the problem that underpins this research are described, which refers to the importance of knowing the organisational competitive position of the footwear manufacturing industry in order to increase its sales.

The methodology used is of the descriptive transactional type because, through the analysis, the description of the variables task design, routines or methods, power structure, management and information systems that establish the core competencies of the manufacturers was carried out, for which primary data are obtained.

By means of the SWOT situational analysis it was possible to determine the strategic balance for each of the variables described; finally, conclusions are presented on the position of Plaza Azul de San Mateo Atenco and strategies are proposed to support the improvement of its organisational strategic competitiveness. It should be noted that this article is the product of a research project focused on the Plaza Azul footwear industry in San Mateo Atenco, Mexico, which was completed this year.

For this reason, the background of this sector described in the frame of reference was taken from the article Zenteno et al (2019), Estrategias de la Mezcla de Mercadotecnia de la Industria de Calzado en San Mateo Atenco Plaza Azul, due to the fact that it is the same facts that are reported. This article is mentioned in the reference sources section.

Frame of Reference

The first antecedents that we have regarding the manufacture of footwear in Mexico correspond to the seventeenth century, in the state of Guanajuato, the oldest data that the Municipal Historical Archives records concerning the manufacture of footwear in the Villa de Leon is the year 1645. Andrés González Cabildo is the name of the oldest shoemaker, according to information from the archive of the Chamber of the Footwear Industry -of the State of Guanajuato (CICEG).

It is important to revisit the history and evolution of the footwear industry in Mexico by highlighting some facts from the CIGEC archive. In 1719, the first census of the Villa de León was carried out, in which the existence of 36 houses in which shoes were manufactured by Spaniards, Indians and mulattos was recorded. Later, in 1869, there were 50 "shoe factories", i.e., workshop houses in which families formed units of artisan production. The first formal shoe factory on record began work in 1872. By 1900, 17% of León's economically active population worked in the shoe industry, making it, along with the textile industry, León's most important economic activity.

Small-scale manufacturing establishments were the pivot for the development of footwear manufacturing in Mexico between 1920 and 1930. The demand led to the rapid creation of production workshops, where local capital played the main role in turning these areas into the main regions of the national footwear industry. On May 24th 1926, the Union of Footwear Manufacturers of Leon was constituted, whose founding president was Mr. Jose Padilla Moreno and the first secretary was Mr. Ignacio L. Hernandez.

In the 1950's, the mechanisation of the production process began and the technical principles brought from abroad were integrated. Shoe manufacturers promoted their products individually. At the end of the decade, the directors of the National Chamber of the Footwear Industry started to organise a product show, following the example of the North American model of trade fairs. The first national exhibition was held in Mexico City in 1956.

In 1966, at a time when it was necessary to reactivate the sale of footwear, the X National Footwear Exhibition was held in León, already known as the Mexican Footwear Industry Exhibition, an event that the local press announced as the one that would show "all its industrial potential in the most ambitious exhibition held until then". The event, the fruit of the efforts of several visionaries, ceased to be held due to differences between the representatives of the different Chambers. However, the model was so successful that the Leonese producers decided to continue it.

In addition, the manufacturers of the Jalisco State Footwear Chamber started their "National Spring Exhibition" in 1977, with the city of Guadalajara, Jalisco as the venue. Five years after the Salón de la Piel y el Calzado (SAPICA) opened its doors in León, ANPIC was born in 1979, the first international trade fair for the supply of leather and footwear products.

Thanks to this progress and the structure that was established over the years, the Guanajuato State Footwear Industry Chamber planned and programmed the implementation of a special department to support the activities that the committee in turn decided to carry out. Based on this programming, in 1980, the first steps were taken to incorporate human and material resources that would constitute the department in charge of the exhibition. Thus, from the 8th SAPICA Event onwards, the Chamber already had the foundations to achieve its objective. It was in 1982 that SAPICA was called the National Footwear Trade Fair.

The acceptance of this product in the national market was such that the National Chamber of the Footwear Industry (CNIC) reached its maximum historical level of production with 317 million pairs of footwear, of which 7.5% were exported to the US market. However, the national crisis in the 1980s irremediably affected this sector and according to Zarur (1993) "While in 1980 per capita consumption was estimated at 5.6 pairs per year; in 1989, at the end of the decade it was 2.5 pairs of shoes, as a result of the loss of consumer purchasing power while footwear prices rose sharply, given the increases in production costs".

In 1999, on its 25th anniversary, SAPICA expected 10,000 buyers with visits from 25 countries around the world, and signed an agreement with CUOROMODA, then the first fair in Latin America, with the aim of publicising the two fairs in neighbouring countries and in their own.

According to figures from the National Institute of Statistics, Geography and Informatics (INEGI), at the end of the 90's, 70 million pairs of shoes - were produced per year and 73,439 workers were directly employed. In order to position the sector as a globally recognised producer, actions had to be taken to promote it, which businessmen, chambers, research centres and the government tried to carry out. Because of this, and because it is a basic consumer item and an important source of employment in the country, the footwear industry was given priority in the National Industrial Development Plan of the Federal Government 2000-2006, during the period of President Vicente Fox Quezada.

The 2009 economic census (INEGI) recorded 7,398 economic units dedicated to footwear manufacturing, representing 1.7% of total manufacturing industries, which employed 112,727 people, accounting for 2.4% of total employment in the manufacturing sector. Micro establishments in this sector accounted for 78.5%, employing 19% of total personnel and generating 6.2% of total gross production, compared to large enterprises, which only accounted for 1% and employed three out of every ten employed persons and generated almost 40% of production. As for the total footwear production, 87% was destined for private consumption and the rest was for intermediate demand (domestic or foreign) referring to commerce, freight transport, fabric manufacturing, footwear manufacturing itself, paint manufacturing, coatings, adhesives and sealants, among others.

During 2013, 2014 and 2015, the footwear industry only generated revenues in the amounts of \$17,436, \$17,462 and \$18,013 (million pesos) and in terms of employed personnel, the figures were 93,291; 92,877 and 94,601, respectively. This shows a drop in their contribution to GDP, which averaged 0.6% in those years. According to data provided by the federal government.

The slowdown in the economic figures generated by the footwear industry is evident, and some situations can be observed that have contributed to this. The first important fact is China's entry into the World Trade Organisation (WTO) at the end of 2001 and the other is Mexico's entry into the Trans-Pacific Economic Cooperation Agreement on 4 February 2016, known as the Trans-Pacific Partnership (TPP).

Referring to China and its entry into the WTO, this country has managed to make inroads and maintain significant advantages in sectors such as footwear, textiles, electronics, toys, information technology, among others. According to Kerber (2002), the strategy generated by this country "[...] in the case of labour-intensive industries, it often focused on learning the modus operandi to replace foreign producers with domestic producers in the medium term and then displace them from the markets they dominate. This is the case in the footwear industry where Chinese brands have been progressively incorporated". Other data that are highlighted are as follows.

According to Esquivel (2015) "China is the world's leading footwear producer, manufacturing 5.5 billion pairs of shoes and exporting 3.1 billion pairs annually. In order of importance, China ranks first in foreign sales, followed by India with 682 million, Brazil with 520 million, Italy with 425 million, Indonesia with 318 million, Turkey with 270 million and Mexico ranks seventh with 170 million. Ten years ago Mexico imported only 3.0% of its domestic footwear consumption, now that consumption has increased to 20% of the total."

However, Olvera (2018) emphasises that "Trade between Mexico and the United States fell from 81 percent in the 1990s to 63 in 2016, a year after Republican President Trump issued a protectionist speech since the campaign. In contrast, Mexico's trade with China rose from -1 percent to 10 percent in 2016, according to the National Autonomous University of Mexico's Centre for China-Mexico Studies, which has researched the trilateral US-China-Mexico relationship." And it adds that in 2017, while China sold us 67 billion 741 million dollars (computer and communication technology products, clothing, footwear, electrical appliances), Mexico only exported 6 billion 61 million dollars (computer, electronic, communication and auto parts products).

As for the TP (Trans-Pacific Partnership Agreement), initially made up of the following countries: Australia, Brunei, Canada, Chile, the United States, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam. These countries accounted for around 40% of world GDP and 25% of international trade, and aimed to create a new economic bloc in the Pacific by reducing approximately 18,000 customs tariffs. The aim was to change the rules on the exchange of goods and services. However, at the end of January 2017, the United States withdrew. This led to a reshuffling of the treaty and on 8 March 2018, it was signed again, now under the name of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), with the remaining eleven countries.

In an interview with Mr. Alejandro Gómez, executive president of the Chamber of Industry of the State of Guanajuato, in February 2018, *Expansión Magazine* said "We are much more concerned about the CPTPP, because as it is drafted it will allow Vietnam to produce footwear using inputs from China (which are up to 50% cheaper than those available in Mexico), and export them to the Mexican market free of tariffs. Moreover, wages in Vietnam are up to 50% lower than those paid in the sector. We will not be able to compete with this mix of cheap inputs and low wages".

In addition, the article highlights that Vietnam is the second largest footwear manufacturer globally, after China, and the bulk of its production is for export. So far, Vietnamese footwear pays a tariff to enter Mexico, which balances out the low costs. But once the CPTPP is signed, Vietnamese footwear will enter a phase of tariff relief. This has Mexican manufacturers worried, as the Asian product could displace the 235 million pairs sold by Mexican manufacturers in Mexico.

Despite this, Ernesto Acevedo Fernández, Mexico's Undersecretary of Industry and Trade, stated at a conference (25 February 2019) that in view of the adverse situation facing the footwear industry, the following actions were immediately proposed: the signing of two Presidential Decrees temporarily establishing a tariff of 25 or 30 per cent on footwear imports. This was published in the Official Journal of the Federation on 10 April 2019.

After this background information that has impacted the footwear industry at the national level and in order to know the competitiveness of companies in this sector at the regional level, we proceed to describe the object of study of this research, which is composed of 366 manufacturers and traders of footwear established in the Plaza Azul, in the municipality of San Mateo Atenco, State of Mexico.

The State of Mexico is divided into 125 municipalities, of which only 6 contribute to the economic sector of footwear, these are home to 81% of establishments and 80% of employment. These municipalities are Cuautitlán, Cuautitlán Izcalli, Naucalpan, Tlalnepantla, San Mateo Atenco and Toluca, being the most important of them by the number of companies and the level of employment it generates: San Mateo Atenco. According to the Ministry of Economy 87% of the companies in the footwear industry in the State of Mexico are classified as micro-enterprises, almost 7% as small enterprises, 4.55% are medium-sized and 1% are large. San Mateo Atenco is home to just over 40% of the footwear industry in the State of Mexico.

This municipality has a population of approximately 73,000 inhabitants and 75% of the families are dedicated to the manufacture of shoes, both artisanal and industrial. The history of the shoe industry in this jurisdiction is divided into three periods:

1. 1900-1912, manufacturing was generated manually.
2. 1913-1931, mechanical machines were used: the first, to sew the cut, the second, to sew the sole, and the third, a machine with a pedal.
3. 1932-1959, electric machines were used and the first shoe factories were established.

San Mateo Atenco has also suffered from the events described above concerning China and treaties with other countries. The impact can be seen in the serious drop in sales. The president of the San Mateo Atenco Footwear Producers' Association (Procasma), Mr. Luis Gonzaga González Tapia, at the end of June 2019 declared to the media that the footwear industry in this municipality is at risk due to flooding in the area and the sale of pirated footwear from China, which has led to the closure of 20% of shoe workshops.

"It has been very complicated to shield a border so that shoes do not enter clandestinely because, with the tariff measures, if they entered legally, prices would rise, but it is smuggling and unfair competition, because we struggle with the payment of taxes, insurance affiliations and other obligations as taxpayers," said the Procasma representative.

Regarding the contingency situation caused by SARS-CoV-2, which causes the COVID-19 disease, the representative of Plaza Azul, Ismael Gutiérrez Sánchez, pointed out that, despite all the sanitary measures imposed by the Mexican Ministry of Health, business is still not picking up because attendance is "lukewarm" and many visitors arrive and leave without making a purchase despite prices that are even bargain prices (Pérez, 2020). (Pérez, 2020).

In addition to this, the leader added: "The situation will not improve in the short term, there is no improvement in the attendance of buyers and the sale of products", so they are still waiting for the local council to deposit the money it promised to make 4,500 pairs of shoes for Atenco pre-school, primary and secondary school pupils as part of this pandemic to reactivate the economy of shoe workers and other traders in the municipality. The Plaza Azul vendors are responsible for the manufacture of these four thousand five hundred pairs of shoes out of the almost ten thousand that the mayor's office requested from other manufacturers at a uniform cost of 350 pesos per pair; despite this, the prolongation of the start of classes indefinitely until now has also led to the postponement of the deposit to the shoemakers. So the outlook is looking rather bleak.

In a globalised world where services and products are highly diversified and available in virtual markets, companies compete in the search for those differentiating elements that allow them to generate a competitive advantage and thus continue to be preferred by customers. Some studies on the subject are listed below.

Publishing, Marketing, (2007) "In order to survive in a competitive market, companies must necessarily outperform their competitors and, therefore, they need to create and consolidate sustainable competitive advantages".

For this author, competitiveness comprises three aspects: economic rationality, capacity for coordination and adaptation to the environment, and management and organisational capacity. Finally, being competitive implies permanently creating barriers to competitors, taking the initiative and taking the necessary steps to achieve high levels of productivity and efficiency in the management of resources in order to reach high levels of competitiveness.

For Hamel & Prahalad (2005) precursors of the resource theory, in their article "Strategic Purpose" mention that competitive advantage is the need to accelerate organisational learning in order to outperform competitors in building new advantages. They emphasise that the strategist's goal is not to find a niche within the industry, but to create a new space that suits the company's particular strengths and resources, i.e. a space not yet explored. It is a process of mastering core competencies and leapfrogging the barriers of the environment to achieve an advantage that will allow you to achieve your goals, even though these may be longer term.

According to Garcia, Prieto, & Sanz (2014) in their article Factores de competitividad organizacional: su gestión para la sostenibilidad empresarial, they analyse the factors that impact on the competitiveness of organisations, using hermeneutics through literature review, which allowed them to determine the elements that strengthen competitiveness, concluding that the human factor, innovation, financial resources, information and communication technology, environmental management and differentiating factors, constitute competitiveness factors whose proper management strengthens the sustainability of companies over time.

However, the same authors cite Sarmiento, Sánchez and Cruz (2009), who define competitiveness as the company's ability to penetrate, consolidate or expand its market share. This capacity is expressed in skill, administrative action, timely use of installed capacity, adequate management of financial, human and material resources, but above all in the perception of market signals, which, when implemented in a timely manner, allow the company to identify consumer needs, resize the scale of production or service offerings, and redesign market strategies for positioning.

However, Hodge (2007) emphasises that the division of labour, and the associated increase in productivity, is one of the main sources of modern business. The division of labour within the company leads to specialisation that improves productive efficiency, since each of its members can dedicate themselves to those tasks for which they have more competences and skills, which can lead to a reduction in execution times, errors, etc. However, all these specialised tasks must be coordinated in order to achieve the organisation's objectives. The result of this division and subsequent coordination is the aim of the management function to organise the company. Thus, it results in the so-called organisational structure defined as the sum total of different tasks and their subsequent coordination, in which an organisation divides its workforce.

Sáez de Viteri (2000) in his article "The competitive potential of the firm: resources, capabilities, routines and value-added processes" presents a dynamic model for the study of competitive advantage, based on the theory of resources and capabilities, which postulates that the sustained competitive advantage of firms lies in the generators of value, understood as resources, capabilities and routines that support core competences.

These distinctive core competencies must be sought both internally and externally. Introspection to see what the company knows how to do and how, and from the customers' appreciation of the value the company is adding. Sometimes the customer's appreciation of the company's products does not match what the company believes is a source of differentiation or technological excellence. The concept and component of distinctive core competencies are shown in Table 1.

Strategic Competence	
Concept	Components
Management and coordination of value drivers to build a competitive strategy that meets stakeholder demands and creates added value for customers in multiple markets.	<ul style="list-style-type: none"> - What the company wants to be and where it wants to go = Vision, mission and objectives. - What it is and what it knows how to do = Resources. - What it is capable of being and doing= Capabilities - Management and coordination of value drivers

Technological Competence	
Concept	Components
The ability to design, buy, manufacture and sell	- Stock of technologies - Know-how to apply them - Capacity for innovation
Personnel Competence	
Concept	Components
The organisation's Etos, the set of people's capabilities, known or not and used or not.	- Skills or knowledge - Craft or skills - Attitude or behaviour
Organisational Competence	
Concept	Components
Coordination of value drivers through the company's organisational structure	- Task design - Routines or methods - Power structure - Production and information system

Table 1 Concept and components of core competencies
Source: Adapted from Sáez de Viteri (2000)

The author also mentions that value generators must be valuable in such a way that they can exploit an opportunity or neutralise a threat, rare in the sense that they are not possessed by other companies, inimitable because they have been shaped internally within the organisation and therefore unique and irreplaceable.

Furthermore, taking into consideration Sáez de Viteri's (op. cit.) proposal regarding distinctive core competences, this research focuses on organisational competences, the components of which are broken down below and which will serve as the basis for the design of the data collection instrument:

Task design

Hellriegel & Slocum (2009) It is the functional grouping of employees, it is the most widely used and accepted way of dividing by departments. This design has advantages and disadvantages. On the positive side it allows clear identification and allocation of responsibilities and is easily understood by employees. However, people performing similar tasks and facing similar problems work together, thus increasing the possibilities for interaction and reciprocal support, where tasks are organised by divisions based on the product or geographic markets in which the goods or services are sold.

Routines or methods

Nelson & Winter (1982) When the firm's capabilities to define what needs to be done and how to do it are developed, routines are designed which together form the activities of designing, buying, manufacturing, selling and supporting these activities.

In addition, people's skills become capabilities at the service of the company through regular, predictable and coordinated sequences of activities, as defined by Nelson and Winter (idem) when they are called organisational routines, adding that these fulfil two missions: to incorporate endogenous mutation elements within the organisation and to guarantee stability through imitation and replication.

Power structure

Gray & Vander (2014) There are three types of power in all organisations, three forms of leadership, three structures. The first structure that we find in companies is the formal structure, governed by hierarchy and the one that is most clearly visualised in most companies in their organisational chart. The second is the social structure, governed by influence, and the third is the value creation structure, the most important of all, governed by reputation and on which business success is built. We could say that the formal structure is plagued by positions, while the value-creating structure is plagued by roles. However, Niels (op. cit.) advocates investing 70% of organisational energy in this third network and the rest to be divided between the formal and informal structures.

Management system

Its main function is to take responsibility for the overall goals of the company and to channel the efforts of the company's members towards them. Although the concepts of management and leadership are sometimes used as equivalents, they have different meanings.

The purpose of the management function is to integrate and coordinate the efforts of the members of an organisation so that activities leading to the achievement of objectives can be carried out.

Moreover, management is a function that involves all members of an organisation endowed with formal authority, and it is precisely the holding of formal authority that differentiates management from leadership. It has to be understood as a kind of influence by which the members of an organisation can be made to cooperate willingly and enthusiastically in the achievement of organisational goals. The person who exercises this kind of power is the leader. The leader is a person who can influence the attitudes and opinions of the members of a group, as well as influence their actions and decisions, without being endowed with formal authority. The leader will only be able to influence their actions and decisions, and this only because of his or her formal authority.

Information system

Dominguez, Jesús, Garrido, & Aurelio (2002) An information system is formed by a set of integrated and interrelated elements that pursue the objective of capturing, purifying, storing, recovering, updating and processing data in order to provide, distribute and transmit information wherever and whenever it is required in the organisation.

An information system for the organisation is of utmost importance as it facilitates the organisation and standardisation of information, thus allowing the status of data, information on markets and competitors, project statistics, suppliers and other relevant information for organisational management and decision making to be known.

It is an extremely important process, as the information obtained through it has a quantitative and qualitative influence on the improvement of the quality of services and products.

In the methodological part, the SWOT matrix will be used, so it is necessary to refer to its origin. Betancourt Guerrero, (2014) refers that the basic model proposed in the early sixties by a group of professors at Harvard Business School, in a first phase, the formulation of strategies rests on the well-known SWOT model, which records the alignment that should exist between the strengths and weaknesses of the organisation, derived from its internal evaluation, and the opportunities and threats of the environment, derived from its external evaluation.

In the words of the proponents of this model, the economic strategy will be considered as the fit between the qualifications and the opportunity that positions a company in its environment. Once the strategy has been evaluated and selected, the next phase corresponds to its implementation or putting into practice, in accordance with the resources allocated in the preceding phase.

Therefore, for a competitive advantage to be truly useful, it must also be sustainable, i.e. the company must be able to maintain it for a reasonable period of time. To achieve this, the advantages identified must meet two criteria: a) they must have their origin in a strength or strong point of the company, not in a temporary circumstantial event, and b) they must have such characteristics that it is difficult for the competition to imitate in the short term.

Problem Statement

The first data on footwear manufacturing in Mexico dates back to the 17th century. With a presence of more than 4 centuries, footwear manufacturing in Mexico is an important commercial activity in our country, which generates a highly competitive supply chain, made up of around 7,400 producing establishments. According to data published by the Ministry of Economy, 94% of the value of footwear production is concentrated in four Mexican states: Guanajuato 70%, Jalisco 15%, the State of Mexico 5% and Mexico City 3%. Most of the footwear manufactured in Mexico is for domestic consumption, which represents 87% of total production.

The footwear industry in Mexico has been seriously affected by different events, such as the crises of 1982 and 1994, as well as the entry into force of various international trade agreements, being one of the productive sectors that suffered the most from the process of trade liberalisation in Mexico, which caused both its installed capacity and its production to fall. This situation has worsened in recent years.

On the other hand, the COVID-19 pandemic has had a negative impact on the country's economy. Alegría, (2020), published that the footwear sector has suffered an economic loss of 2.8 billion pesos during the two months of the forced stoppage due to the coronavirus pandemic.

The footwear industry in San Mateo Atenco has not been excluded from such an affectation, a worrying situation for manufacturers as it is one of the main drivers of the economy. Today it is important to know more specifically how you can take advantage of the opportunities that arise in the environment using the strengths of the company, taking into account the weaknesses and threats. In order to do this, it is necessary to carry out a strategic balance of the company, in this case of Plaza Azul. Therefore it is necessary to evaluate the competitiveness, taking into account 4 variables: Strategic Competence, Technology, personnel and Organisational Structure.

The objective of this research is to evaluate the organisational competence considering the 5 factors mentioned in the method. By evaluating the impact of these factors, it will be possible to determine the real conditions of each variable, to determine the optimisation and risk factors, and from these, to establish strategies that will help to increase organisational competitiveness and improve its position in the market. It is worth mentioning that the majority of footwear manufacturers have an empirical management.

Methodology

In this paper the research design is descriptive transectional type because, through analysis, the description of the variables that determine the strategic competitiveness of footwear manufacturers of the Plaza Azul in San Mateo Atenco will be carried out, for which primary data are obtained. According to Hernandez, Fernandez and Baptista (2010) the type of study corresponds to the so-called descriptive which seeks to specify the properties, characteristics and profiles of individuals, groups, communities or any other phenomenon that is subjected to analysis. In turn, descriptive cross-sectional designs that aim to investigate the incidence of the modalities or levels of one or more variables in a population are purely descriptive studies. The procedure consists of locating one or several variables in a group of people, living beings, objects, situations, contexts, phenomena, communities, etc. and providing their description. As for the references or primary sources, these provide first-hand data, such as interviews or surveys.

From the study problem posed and in correspondence with the state of the art, the principles proposed by Ramirez (2009) will be followed, this procedure does not include the necessary elements to give statistical validity to the research, elements that are incorporated in this research. In addition to the determination of the strategic balance, the SWOT matrix is elaborated in which the proposed strategies are developed in order to increase the organisational competence of the footwear manufacturers of Plaza Azul.

In order to facilitate understanding and practical application, the detailed procedure that was carried out is shown below:

Identification of the analysis criteria. According to Sáez de Vieri (op. cit.), the strategic competitive position is the result of comparing the key competences demanded by the competition (external analysis) with the key competence that the company possesses (internal analysis). Organisational competence is defined as the result of the following 5 variables:

1. Strategic management
 2. Managerial skills
 3. Task and method design
 4. Power structure
 5. Information systems
1. Determination of the actual operating conditions in relation to the internal and external variables of the analysis.
 - a) Delimitation of the field of action.

The study was carried out taking as its universe the footwear producers of the Plaza Azul in San Mateo Atenco. It was determined that there are currently a total of 324 manufacturers, information that was provided by Mr. Ismael Gutiérrez Sánchez, president of the Plaza Azul Association in an interview with a member of the research group.

- b) Sample size determination.

Since the number of footwear manufacturers in the Plaza Azul in San Mateo Atenco is known, the formula for determining the sample size of a finite population was used (Munch & Ángeles, 1998).

$$n = \frac{k^2 * p * q * N}{(e^2(N-1)) + k^2 * p * q} \quad (1)$$

Where:

N = 324

k = 1.96 Value of Z for a confidence level of 95%

p = 0.5 likelihood of success (determining Strategic Competitiveness)

q = 0.5 likelihood of failure (determining Strategic Competitiveness)

e = 0.05 maximum permissible error

$$n = \frac{(1.96)^2 * (0.5) * (0.5) * (324)}{((0.05)^2(324-1)) + (1.96)^2 * (0.5) * (0.5)} = 176.01 \quad (2)$$

Given the impossibility of carrying out the surveys previously calculated due to the current conditions of the Covid 19 pandemic caused by the SARS-CoV-2 virus, it was decided to work with a confidence level of 90% and accept an error of 20%. It was decided to work with a confidence level of 90% and to accept an error of 20%.

Thus, the sample size was determined as follows:

$$n = \frac{(1.645)^2 * (0.5) * (0.5) * (324)}{((0.20)^2(324-1)) + (1.96)^2 * (0.5) * (0.5)} = 16.12 \quad (3)$$

n = 16

Where:

N = 596

k = 1.645 Value of Z for a confidence level of 90%

p = 0.5 probability of success (determining Strategic Competitiveness)

q = 0.5 probability of failure (determining Strategic Competitiveness)

e = 0.20 maximum permissible error

c) Collection of information

The structured interview technique was used, for which a questionnaire was designed consisting of a set of strategically planned questions regarding the variables to be measured (Hernández, Fernández, & Baptista, 2010). The interviews were conducted by telephone.

Given that the list of strengths (F), weaknesses (D), opportunities (O) and threats (A) can be very extensive, it was limited to consider only the most relevant in each section.

For the selection of the elements that make up the sample (footwear manufacturers), convenience sampling was used, in which the elements to be sampled are selected because they are accessible through existing contacts (Munch & Angeles, 1998).

2. Assignment of a weighting for each of the strengths, opportunities, weaknesses and threats. For each of the factors mentioned in point 1, respondents were asked to assign a rating of 1, 3 or 5: where 5 denotes the highest level of performance, 3 the medium level and 1 the lowest level. In this way, the differences between them can be established in order to rank them in order of importance.
3. Calculation of the results. Based on the average score obtained for each variable, a matrix was drawn up with the totals and the individual contribution of each variable.
4. Determination of the strategic balance. The strategic balance (BE) is the ratio between the optimisation factor (FO) and the risk factor (FR).

The optimisation factor indicates the organisation's favourable position with respect to its competitive assets and the circumstances or events that can potentially be a source of competitive advantage in the near future.

The risk factor shows an unfavourable position of the organisation, i.e. it shows a competitive liability coupled with conditions that limit the organisation's competitive position.

$$FO = F + O$$

$$FR = D + A$$

$$BE = FO - FR$$

An organisation's strategic balance sheet is better as long as the difference between the optimisation factor exceeds the risk factor.

5. Development of the SWOT matrix and presentation of proposals. The answers of the interviewees were concentrated in a matrix and then plotted. Based on the previous results, the SWOT matrix was elaborated and from it conclusions were drawn regarding the general situation of the footwear industry with respect to organisational competence, as well as the individual contribution of each of the variables studied. Finally, the SWOT matrix is the basis for the development of proposals for competitive strategies to enhance organisational competence to contribute to the success of the footwear industry in Plaza Azul, San Mateo Atenco, State of Mexico.

Results

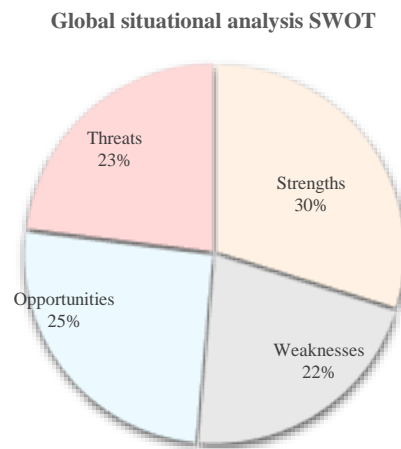
The findings presented in this section describe the organisational variables that represent a risk or an opportunity for the future and impact on the organisational competence of the footwear manufacturers of Plaza Azul in San Mateo Atenco, which make up the study sample. The results presented are the product of the information obtained through the structured interviews. The results matrix was prepared based on the average score obtained for each variable. Table 2 shows the total weighting of the strengths, weaknesses, opportunities and threats.

Strategic variables	F	D	O	A
1. Strategic direction	46	36	60	80
	21%	16%	27%	36%
2. Managerial capacity	68	30	32	18
	46%	20%	22%	12%
3. Task and method design	44	66	66	40
	20%	31%	31%	19%
4. Power structure	66	32	44	18
	41%	20%	28%	11%
5. Information systems	66	46	46	68
	29%	20%	20%	30%
TOTAL	290	210	248	224
	30%	22%	25%	23%

Table 2 Overall situational analysis and by variable
Source: Own Elaboration

The information in table 2 is analysed horizontally, showing the percentage of participation that the internal and external conditions of the company have for each of the 5 variables that determine organisational competitiveness. For example, for variable 2. Managerial capacity, its strengths represent 46%; its weaknesses 20%; opportunities represent 22% and threats 12%.

On the other hand, if the analysis is carried out vertically, the strengths, weaknesses, opportunities and threats of the company can be determined in a general way, as shown in graph 1 below.



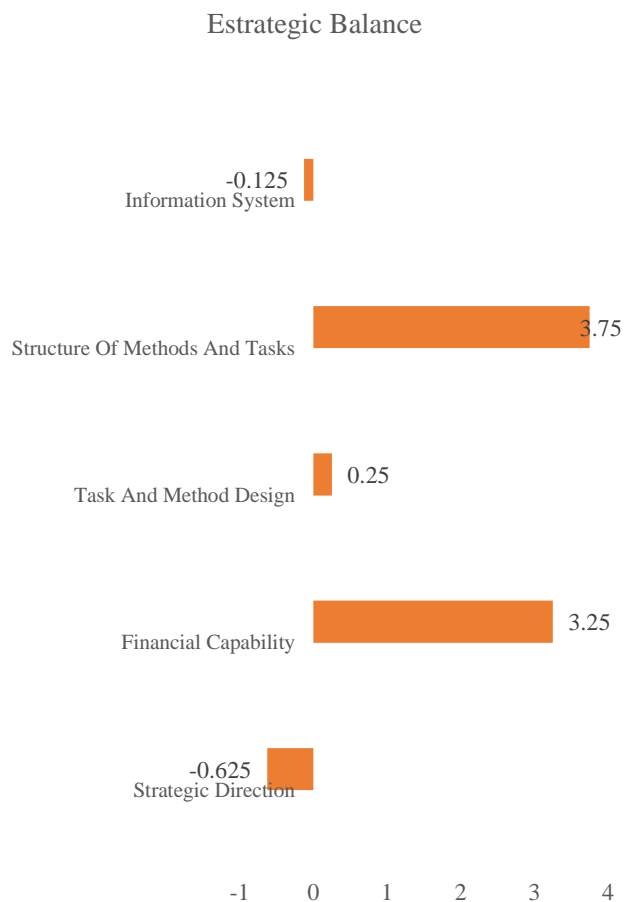
Graph 1 Global SWOT situational analysis
Source: Own Elaboration

Subsequently, the overall and per variable strategic balance (BE) was determined, which is the ratio between the optimisation factor (FO) and the risk factor (FR). The results are shown in table 3.

Strategic variables	Optimisation factor (FO)	Risk factor (FR)	Balance (BE)
1. Strategic direction	6.63	7.25	-0.625
	47.7%	52.3%	-4.5%
2. Managerial skills	6.25	3.00	3.250
	67.6%	32.4%	35.1%
3. Task and method design	6.88	6.63	0.250
	50.9%	49.1%	1.9%
4. Power structure	6.88	3.13	3.750
	68.8%	31.3%	37.5%
5. Information systems	7.0	7.13	-0.125
	49.6%	50.4%	-0.9%
TOTAL	33.63	27.13	6.5
	55.3%	44.7%	10.7%

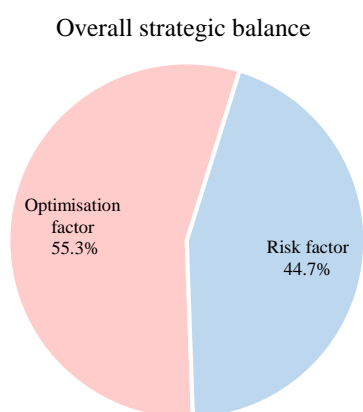
Table 3 Overall strategic balance and by factor
Source: Own Elaboration

Graph 2 shows the impact of the strategic balance by variable and its contribution to the overall strategic balance, on the right side of the graph those variables with a positive strategic balance and on the left side of the graph those variables that represent a risk with a negative strategic balance.



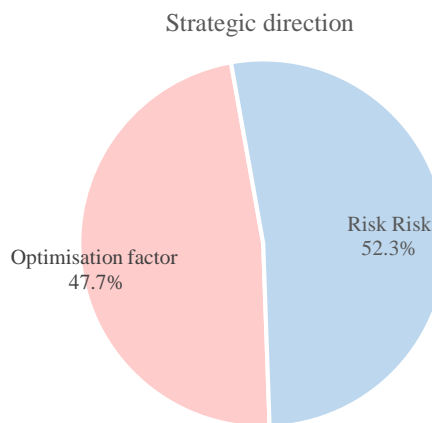
Graph 2 Strategic balance impact by variable
Source: Own Elaboration

Graph 3 below shows the overall strategic balance, in which the optimisation factor is higher than the risk factor, however, it is important to identify which variables are the determinants of these results.



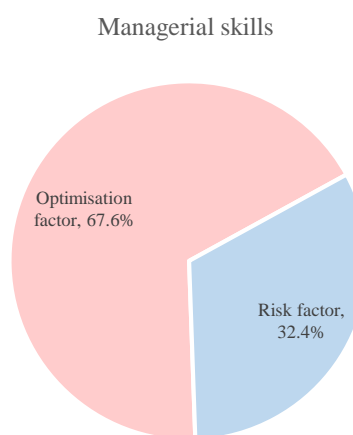
Graph 3 Overall strategic balance
Source: Own Elaboration

Strategic management is the risk factor with the highest vulnerability in the overall balance of organisational competitiveness of footwear manufacturers in San Mateo Atenco, Plaza Azul.



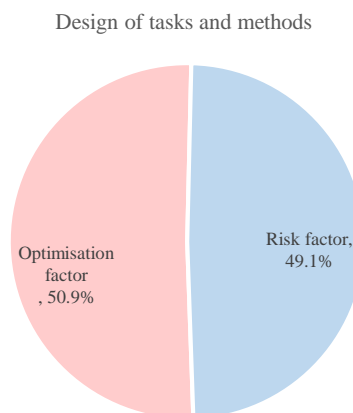
Graph 4 Risk factor with the highest vulnerability
Source: Own Elaboration

On the other hand, the results of variable 2. Managerial capacity show significant positive results reflected in the optimisation factor, as shown in graph 5 below.



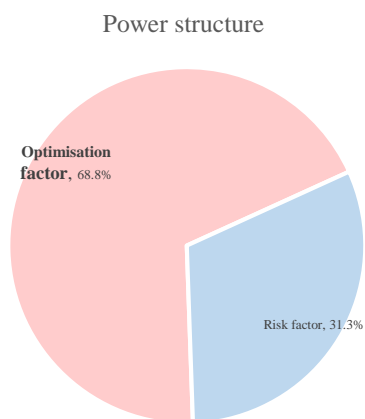
Graph 5 Balance of the Managerial Capability variable
Source: Own Elaboration

With respect to variable 3. Design of tasks and methods, a balance between the risk factor and the optimisation factor can be observed, as can be seen in graph 6.



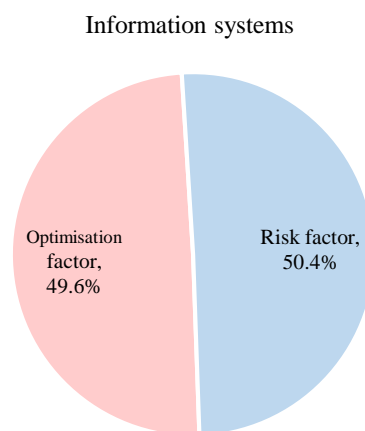
Graph 6 Design balance of tasks and methods
Source: Own Elaboration

According to the information presented in the graph below, the strategic variable with the greatest impact on the analysis is the power structure, in this, the optimisation factor is 68.8% in relation to the risk factor of 31.3%. It is important to note that, for the footwear manufacturers of the Plaza Azul de San Mateo Atenco, the variable 4. Power structure represents the strongest points of their organisation.



Graph 7 Variable with the highest optimisation factor
Source: Own Elaboration

Variable 5. Information systems, it can be seen in graph 8 that it presents risk factors that must be addressed, although the impact compared to the optimisation factor does not show great differences, it does not mean that there is no conflict, it means that importance must be given and the positive aspects must be increased so that at the same time the risk factors decrease.



Graph 8 Balance of Information Systems
Source: Own Elaboration

Finally, the SWOT Matrix, table 4, shows the most representative elements of the situational analysis based on the results obtained.

Internal factors	Strengths	Weaknesses
	S1. Constant innovation S2. Leadership S3. Design and development areas S4. Organisational structure S5. Input, process and output systems.	W1. Strategic staff without knowledge and skills W2. Inefficient empowerment and delegations W3. Habit-based thinking. W4 Lack of competencies in senior management. W5 Outdated social networks..
External factors		
Opportunities	Maxi-Maxi	Maxi-Mini
O1 Alliances with companies that can improve competitive capacity. O2. Competition with little experience. O3. Free training for workers O4. Closure and/or bankruptcy of competition in the market (few competitors in the area). O5. Increased information and advertising on social networks.	Quadrant I S1-O1 Create alliances with companies by leveraging their product innovation. S4-O2 Focus the power structure on value creation.	Quadrant II W1- O3 Take advantage of government training for the preparation of management personnel. W2- O3 Establish more efficient systems of methods and processes, requested to support the educational institutions in the area.
Threats		
T1. Constant changes in the environment derived from COVID-19. T2. Complaints and/or problems with suppliers. T3. Constant change of methods due to lack of resources. T4. International competition (footwear imports). T5. IT-dominant competition	Mini-Maxi Quadrant III S1- T1 Making products that adapt to new needs S5-T2 Improve the information system with suppliers by taking advantage of existing software	Mini-Mini Quadrant IV W5-T5 Hire trained IT staff.

Table 4 SWOT matrix
Source: Own Elaboration

Conclusions

By applying the proposed procedure and using the described techniques, it was possible to determine the position of the organisational competence of the footwear producers of Plaza Azul. The overall strategic balance with 90% confidence and 10% error, is found to have an opportunity factor of 55.3% and a risk factor of 44.7%.

In this case, it can be observed that the strategic balance with a difference of 10.6% indicates that the footwear manufacturers are optimising the use of their organisational capacities. The analysis by variable showed that the potentialities present in the highest optimisation factors are to be found in: managerial capacity and power structure.

On the other hand, the negative balance of the variables strategic management and information systems is striking, where it is clear that there is a very important area of opportunity, because consideration should be given to developing an adequate re-engineering where competitive strategies are established to counteract these negative aspects.

As for the task design variable, which is almost in balance with 50.9% and 49.1%, this does not mean that it is optimal, but rather that it is on alert and it is necessary to determine how to increase the optimisation factor.

To raise the organizational competence of the footwear industry Plaza Azul de San Mateo Atenco, Edo. de Mexico proposed strategies set out in the SWOT matrix, based on the results of this research.

In what corresponds to the first quadrant of the matrix "Max-Max". Where the strengths are used to take advantage of the opportunities found in the market. In this case it is proposed to create alliances considering the power structure, orienting it towards product innovation to take advantage of the little experience of the competition.

In the second quadrant, Maxi-Mini proposes strategies to take advantage of the opportunities that exist in the market, overcoming the weaknesses, for example, taking advantage of the training programmes offered by the government to improve strategic management. Considering also training agreements with educational institutions to improve information systems.

In the third Mini-Maxi quadrant, strategies are proposed using the strengths to overcome the threats. It is recommended to use computer programmes to establish an efficient information system with suppliers and to be able to respond to market demand by improving prices and quality.

In the fourth quadrant Mini-Mini, strategies are recommended to reduce weaknesses and avoid threats. In this case, it is recommended to hire a specialist to help establish relevant information systems in the enterprises, also considering the preparation on strategic management to improve the strategic balance of the enterprise.

The implementation of the strategies described above will increase the organisational competence of the footwear manufacturers of Plaza Azul in San Mateo Atenco, Edo. de México.

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