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## INTRODUCTION

As competition in marketing becomes more aggressive, small and medium size enterprises (SMEs) must develop key strategies for success in order to compete with larger companies. SMEs play a critical role in the economy in creating jobs and wealth and in ensuring prosperity. Countries like Italy, France, Sweden, and the U.S. have been gifted with SMEs which are active in the national market and in the global marketplace. It is impossible to imagine development without SMEs. In Mexico, and Latin America in general, SMEs have come to play a vital economic role, in recent decades, setting the stage for sound development. This special issue focuses on the role of SMEs in the economy and their strategies in confronting threats and enhancing performance.

In “The Effect of Guerrilla Marketing Strategies on Competitiveness: Restaurants in Guadalajara, Mexico,” the authors examine how Guadalajara, the second largest city in Mexico, is facing challenges from international service brands, such as restaurants. In order to meet these challenges and overcome the lack of comparable financial resources, local restaurants in Guadalajara are becoming creative in their marketing techniques and evaluating what factors are most efficient when confronted with international companies.

Enhancing supplier management can improve competitiveness and keep a business in good shape. The authors of “Supplier management as a Tool for Enhancing Competitiveness in the Municipality of Florencia, Caquetá Department, Colombia” surveyed 375 companies from the service sector in Caquetá in order to ascertain which aspects of supplier management must be controlled to perform most effectively. They found that, through strategic alliances and agreements, companies can maintain competitiveness, stabilize prices and improve the quality of the products they are able to offer Colombia

SMEs are vital for the economic development of all countries, each of them having their own identity and corporate culture. To identify which main areas in business culture must be developed or improved on is an important task for managers. In “An Analysis of Quality Culture in SMEs in Matehuala, San Luis Potosi,” the authors analyzed the quality culture of 56 SMEs in Matehuala, a mid-size city in San Luis Potosi. This municipality faces water scarcity and residents leaving the city. It was found that implementing common strategies may boost the region’s economic development by improving the productivity of small businesses, attracting more investment and increasing the number of jobs in the region.

As Mexico’s economy is moving to service sectors, the importance of financial performance is paramount in order to guide efforts towards improving investments and operational activities to achieve strategic objectives in the market and for profitability. “Operation and Investment Strategy and Financial Performance in the Service Sector in Mexico” shows the results of investment strategies in the operation and fixed assets of organizations in the service sector in Mexico. Determining the mathematical relationship that current assets and fixed assets have over financial performance as a result of strategic management is essential for directors of public and private organizations.

All companies that offer goods or services must make a constant effort to ensure that the quality of their products satisfies their customers and exceeds that of their competitors. “Automation and its Effect on Quality” looks at the correlation between product quality and automation in small businesses in Aguascalientes, a city in the center of Mexico. Results of the study show that automatization can lead to reduction of errors and increased efficiency. However, the authors remind us, production processes still require a substantial amount of human labor and skilled workers to produce desirable results.

The importance of a skilled workforce leads to competitiveness and is the basis of all organizations. The article the “Development of the Hospitality Industry in Tlaxcala;The Impact of Workforce Skills According to the Balanced Scorecard” discusses how Tlaxcala, the smallest state in Mexico, which has ranked last among all Mexican states in tourism competitiveness, has lately developed a hospitality industry. The authors used Balanced Scorecard to analyze the impact of workforce skills on the development of this industry from four perspectives to ascertain competitiveness: Learning and Growth, Internal Processes, Customer Focus and Finance.

SMEs are important for maintaining the healthy growth of a country and for providing employment for the population, but their existence depends on competitiveness. These six research articles show us different methods implemented by small businesses to remain competitive and, ultimately, profitable.

Jose Sanchez-Gutierrez, Ph.D.

**THE EFFECT OF GUERRILLA MARKETING STRATEGIES ON  
COMPETITIVENESS: RESTAURANTS IN GUADALAJARA, MEXICO**

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**ABSTRACT**

With traditional advertising methods losing effectiveness, many companies have started to implement strategies known as “guerrilla marketing.” These strategies are characterized by creativity and ingenuity, and they are designed to minimize the use of financial resources. The objective of this paper is to analyze the influence of guerrilla marketing strategies and their effect on business competitiveness in the food and beverage industry in Guadalajara, Mexico.

To accomplish this, a structured questionnaire was administered to the people in charge of restaurant marketing during September and October 2016. The results permit us to conclude that the “diffusion effect” is the most influential factor in developing restaurant competitiveness, followed by the “low cost effect” and the “surprise effect.”

**Keywords:** Guerrilla Marketing, Competitiveness, Restaurants, Structural equation model

**INTRODUCTION**

Traditional marketing strategies are becoming less effective for two main reasons (Hutter & Hoffmann, 2014): 1) the saturation of consumer information, with consumers being exposed to

more than 3,000 advertising messages per day; and 2) the general similarity of advertisements, which significantly diminishes the likelihood that an advertisement will make an impact on or influence the viewer. For these reasons, many authors have underscored the importance of eye-catching marketing that surprises consumers in order to gain their attention (Hutter & Hoffmann, 2011; Baltes & Leibing, 2008).

Accordingly, over the last decade, there have been proposals to implement distinctive and more impactful marketing strategies, such as marketing 3.0 (Kotler et al., 2012), which targets consumers at a personal level and focuses on their aspirations and values (emotional marketing), as well as other innovative and unconventional proposals such as guerrilla marketing, which is characterized by the use of innovative advertising tools. In times of economic crisis, or when companies have low purchasing power, guerrilla (Andrade, 2009) marketing is often used due to its low cost and high impact, which help companies grow their business at a low cost.

It is likewise crucial that an organization's competitiveness be based on a sustainable competitive edge, which helps companies offer solutions to customers and increase profits (Sáez de Viteri Arranz, 2000). This method employs strategies and techniques that are not used by any present (or potential) competitors. These strategies generate value for consumers and cannot be imitated in any way.

The overall objective of this paper is to analyze the influence of guerrilla marketing strategies on developing restaurant competitiveness in the Guadalajara (Mexico) metropolitan area, specifically in the municipalities of Zapopan and Guadalajara. This sector was chosen mainly due to the increase in competition observed in this area over the last five years. For these reasons, while the annual growth rate of restaurant establishments continues to rise (according to data from the National Institute of Statistics and Geography, 2017), the food and beverage industry has faced several obstacles that have forced its decision makers to focus on marketing efforts based on distinctiveness and visibility, through innovative gastronomic proposals and developing management skills, new capabilities and expertise (García, 2008).

To achieve this goal, this paper is organized into six sections. In sections two and three, the concepts "guerrilla marketing" and "competitiveness" are defined, the main elements that bring these two concepts together are highlighted and the hypotheses are presented. In the fourth section, the proposed model and the methodology used in the investigation are presented to defend the obtained results presented in the fifth section. A final section is included, with conclusions, limitations and future lines of research.

## **GUERRILLA MARKETING**

The term guerrilla marketing is considered to be related to the military term, since marketing can be creatively viewed as a battlefield or military operation, where the objective is to lure or win over the consumer (Baltes & Leibing, 2008). This term was popularized in the 80s by Levinson

(1984, 1994, 2009), who is considered the founder and forerunner in this type of strategy and marketing tactic. Subsequently, many definitions have been proposed for the concept, notably by Hutter and Hoffmann (2011): “a general term for unconventional advertising campaigns that are intended to expose a large number of recipients to your advertising message at a relatively low cost, with an element of surprise and an element of diffusion (...) guerrilla marketing campaigns are highly efficient, in terms of the relative costs and the benefits these campaigns offer.” The main differences between traditional marketing and guerilla marketing are shown in Table 1.

**TABLE 1**  
**Traditional Marketing vs. Guerrilla Marketing**

<b>Traditional marketing</b>	<b>Guerrilla marketing</b>
<ul style="list-style-type: none"> <li>• Requires money</li> <li>• Designed for large companies with big budgets</li> <li>• Measured by amount of sales</li> <li>• Based on experience and conjecture</li> <li>• Increases production and diversity</li> <li>• Grows with the number of clients</li> <li>• Eliminates competition</li> <li>• Uses individual marketing weapons</li> <li>• Counts its sales</li> <li>• “My” marketing; look at “my company”</li> <li>• Wrapped in mystique</li> <li>• Effective marketing is expensive</li> <li>• Oriented toward one sale at a time</li> <li>• Does not make use of technology</li> <li>• Aims messages at large groups</li> <li>• Unintentional</li> <li>• Uses marketing to make sales</li> <li>• Tries to catch the client</li> </ul>	<ul style="list-style-type: none"> <li>• Requires energy and imagination</li> <li>• Designed for small companies with big dreams</li> <li>• Measured by earnings</li> <li>• Based on psychology and human behavior</li> <li>• Creates excellent focus</li> <li>• Grows through existing clients and references</li> <li>• Cooperates with other companies</li> <li>• Marketing combinations are more effective</li> <li>• Counts connections</li> <li>• “Your” marketing; “How can we help you?”</li> <li>• Eliminates mystery and increases control</li> <li>• Good marketing is free</li> <li>• Follow-up oriented</li> <li>• Should be tech-friendly</li> <li>• Aims messages at individuals and small groups</li> <li>• Highly intentional</li> <li>• Uses marketing to gain the customer’s approval</li> <li>• Tries to offer something to the client</li> </ul>

Source: Based on Caudron (2001)

Thus, while guerrilla marketing highlights the importance of using non-traditional strategies at relatively low costs, it also considers other elements (also known as *drivers*) that influence its effectiveness, such as the surprise effect and the diffusion effect.

The surprise effect is one of the basic principles of guerrilla marketing (Hutter & Hoffmann, 2011). It consists of surprising consumers with unexpected activities and thereby capturing their attention to deliver the advertising message. Consumers thus have an experience with more value than a simple purchase (consumer feels captivated and excited when they acquire, use or even when they discard a good or service). Some of the indicators used to measure this effect are *Ambient marketing* (Breva, 2010; Arbaiza, 2011; Lindgreen & Vanhamme, 2003; Olivares, 2009); *Sensation marketing* (Gómez et al., 2014; Arboleda & Alonso, 2015); and *Experience marketing* (Del Loreto and & González, 2011; Fernández, 201; Schnarch, 2011). Thus, the first hypothesis developed for this research is the following:

H1. The surprise effect has a positive effect on developing restaurant competitiveness.

The diffusion effect, on the other hand, comes from the nature of guerrilla R marketing. It takes advantage of the element of surprise and the emotional effects associated with guerrilla marketing, as well as its low costs, to create viral strategies, which are a combination of techniques that use various platforms to diffuse commercial information and to increase word-of-mouth marketing (Sernovitz, Godin, & Kawasaki, 2009) and referrals from opinion leaders in the product or service category (Auletta & Vallenilla, 2008). The internet, and especially social networks, have increased the ways to interact with consumers through methods such as *Viral marketing* (Palazón et al., 2014; Guzman et al., 2013; Vallenilla, 2011); *Buzz marketing* (Auletta & Vallenilla, 2008; Jiménez, 2014; José-Cabezudo et al., 2012); *Word of mouth* (Serrano-Puche, 2016; Aguilar et al., 2014; Iuliana-Raluca, 2012); and *Stealth marketing* (Kaikati & Kaikati, 2004). Thus, the second hypothesis is:

H2. A greater diffusion effect indicates a higher degree of business competitiveness.

Finally, the low-cost effect is a fundamental characteristic of guerrilla marketing. According to Hutter and Hoffmann (2011), there are two components that augment this effect: 1) the diffusion effect enables businesses to reach a broader audience at little or no cost, because the consumers themselves transmit the advertising message; and 2) guerrilla marketing campaigns are frequently implemented to take advantage of creativity, ingenuity and imagination, and thus conserve financial resources (Zyman, 2009). These methods include *Ambush marketing* (Canseco et al., 2015; Miñano & Nikobin, 2014; Alvarado et al. 2014; Ay et al., 2010; Valenzuela-Fernández et al., 2015; Wolfsteiner et al., 2015) or *Public relations* (Navarro et al., 2014; Buil & Rocafort, 2016; Gruber, 2003; García de León, 2002; Solis & Breakeneridge, 2009). Thus, the third hypothesis set forth is:

H3. The low-cost effect has a positive influence on restaurant competitiveness.



## COMPETITIVENESS

The concept of competitiveness can be defined as a company's ability to provide goods and services at the time, place and form preferred by customers at costs better than or equal to those of competitors, while obtaining at least the opportunity cost of the resources used (Franco et al. 2014). In other words, being competitive means gaining an edge over your competitors, bringing added value to consumers and maintaining these factors over time. For this reason, the factors used to determine competitive advantage can be multidimensional (Saavedra et al., 2013), as there is no set definition for the factors, indicators and/or levels to be achieved by a company since these also depend on the context of the study.

Accordingly, the literature outlines four skillset areas a company can improve to build a sustainable competitive advantage (Ng & Londoño, 2012; Moreno et al., 2004, Rubio & Aragón, 2004): strategy, technology, personnel and structure.

Strategic skills are mainly based on the company's own vision, mission and goals. In other words, this skillset depends on the company's mission statement (the goals that the company would like to achieve), the company's resources (the nature of the company and what it knows how to do) and the company's capabilities (what the company is capable of being and doing). Thus, the business aspects related to this skillset area are innovation, marketing skills, financial resources and organizational culture.

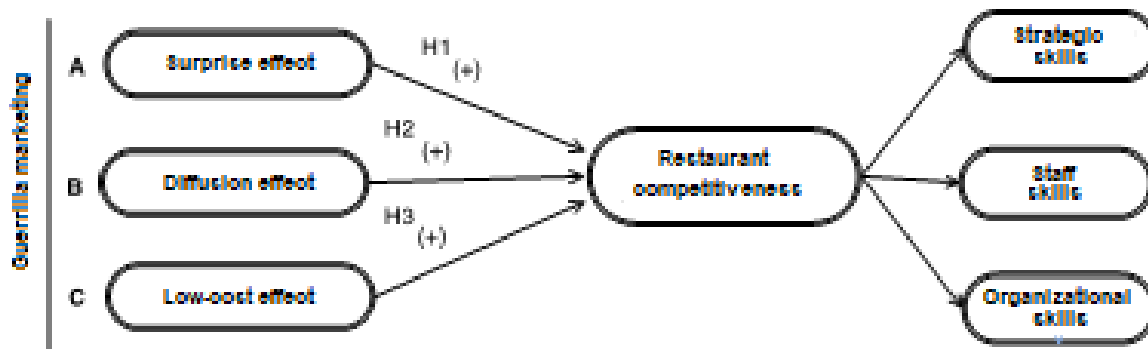
Technological skills are expressed as the company's ability to design, buy, manufacture and sell. These skills are based on the amount of technological resources available to a company, the company's ability to apply these resources and the company's capacity for innovation. The traditional indicator of this skillset is the amount of technological resources readily available. Staff skills are based on three activity groups related to the company's workforce: 1) the skills or knowledge of the company's staff—what the staff *knows how to do*; 2) trade and capabilities, what the staff *can* do; and 3) worker attitude and behavior, which refer to what the staff *wants to do*.

Finally, organizational skills refer to how businesses organize their expertise, resources and routines using an organizational business structure. The main activities associated with this skillset are task design, hierarchical power structure and the format of management and information systems. The main indicators for measuring this skillset are managerial skills and product/service quality.

**PROPOSED MODEL AND METHODOLOGY**

For the purposes of the overall objective and the proposed hypotheses, the model shown in figure 1 was proposed. We want to know the impact of guerrilla marketing and its three *effects* (*surprise*, *diffusion* and *low-cost*) on restaurant competitiveness, which is composed of strategic, staff and organizational skillsets. Although the literature includes a fourth dimension in the definition of *competitiveness* (technological resources), this dimension was not significant in our area of application, so it was excluded from the model.

**FIGURE 1  
Proposed Model**



This study focuses on micro-, small- and medium-sized restaurant businesses in the Guadalajara (Mexico) metropolitan area, where a sample of 141 companies were selected.

Data was gathered using a structured questionnaire, which was administered to the restaurants’ marketing decision-makers (the owner, supervisor or manager), over the months of September and October 2016. The items were ranked using a Likert scale (where 1 corresponds to “Strongly disagree” and 5 corresponds to “Strongly agree”). Table 2 shows the items used and their descriptions, as well as the bibliographic references on which the measurements were based.

**TABLE 2  
Description of Model Items**

Construct	Item	Description	Author(s)
Surprise effect	SE1	I believe my general advertising strategy is informative.	Hutter and Hoffmann, 2011
	SE2	My main objective when doing public advertising is to position my brand.	Breva, 2010
	SE3	To create an unforgettable restaurant experience, I believe it is essential to focus	Del Loreto and González,

			on the customer.	2011
<b>Diffusion effect</b>	<b>DE</b>	<b>DE1</b>	I see columns, articles, and comments made by the media as impersonal sources of restaurant recommendation.	Iuliana-Raluca, 2012
		<b>DE2</b>	I see social networks as impersonal sources of restaurant recommendation.	
		<b>DE3</b>	I use social networks to increase traffic for the restaurant's website.	José-Cabezudo et al., 2012
		<b>DE4</b>	I mainly conduct publicity campaigns in online environments.	Serrano-Puche, 2016
<b>Low cost effect</b>	<b>LC E</b>	<b>LC E</b>	Because of the digital revolution and the growth of social network administrators, I am interested in training team members and other employees to use social media and to use social media strategies.	Navarro et al., 2014
		<b>LC E2</b>	To improve the effectiveness of marketing campaigns, I use economic metrics to calculate advertising performance.	
		<b>LC E3</b>	To find, develop, and keep team members, I offer financial incentives and benefits for excellent talent.	
<b>Strategic skills</b>	<b>SS</b>	<b>SS1</b>	In comparison with restaurant industry averages, return on investment has been very good over the past year.	Pomar et al., 2014
		<b>SS2</b>	In comparison with restaurant industry averages, my financial performance over the past year indicates that sales have been very good.	
		<b>SS3</b>	To become better and more competitive, we have implemented a new product/service over the past year.	Franco et al., 2014
		<b>SS4</b>	To become better and more competitive, we have improved the quality of service over the last year.	
		<b>SS5</b>	We started creating written reports on the performance of each area/department within the company due to changes in the company's internal organization, or changes in management or managerial activities.	Alderete and Diez, 2014
<b>Staff skills</b>	<b>STS</b>	<b>STS1</b>	I believe in a work environment where everyone can learn, grow, and develop.	Hernández, et al., 2011

		<b>STS 2</b>	I create systems for feedback and communication between managers and employees.	
		<b>STS 3</b>	I make sure that my company complies with all labor regulations.	
		<b>STS 4</b>	I believe that customers recognize adequate human resource management.	Saiz Álvarez and Mendoza Macías, 2015
<b>Organizational skills</b>	<b>OS</b>	<b>OS1</b>	I consult the internet to improve my services.	De la Paz et al, 2008
		<b>CO2</b>	I have implemented database management software.	
		<b>CO3</b>	I explore and try out new ideas (ideas on how to improve the restaurant, for example)	Arias and Hernández, 2008
		<b>CO4</b>	I turn ideas into innovations (for example, when I have an idea to improve the restaurant, I try to implement it)	

Given the configuration of the model and the size of the sample, the method of analysis chosen is that of the structural equations through the technical Partial Least Squares (PLS), with SmartPLS® software, version 3.2.6 (Ringle et al., 2015).

## RESULTS

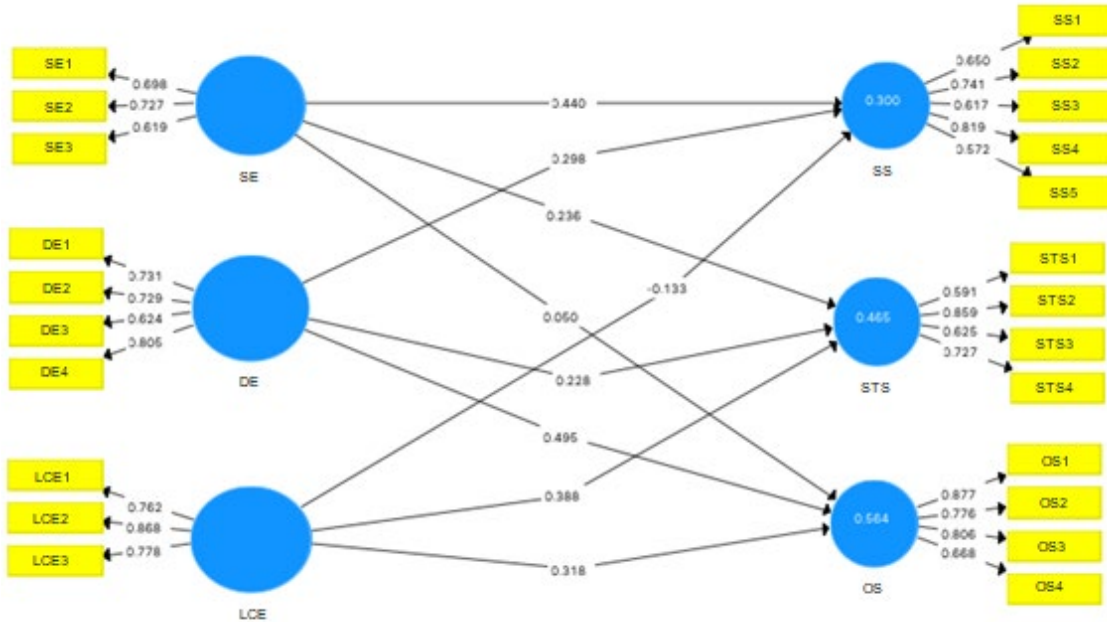
### Two-stage approach

Because of the multidimensional nature of the concept of “Competitiveness,” our model analysis was performed using a two-stage or two-step approach (Wright et al., 2012).

Following Ringle et al. (2012), in the first stage, the latent variable values (constructs or compounds) were estimated for the low-order components and, in the second stage, these values were used as indicators (manifest, observed or measured variables) in the second-order component measurement model. Thus, the higher-order component was embedded in the nomological network in such a way that other latent variables, as predecessors, were permitted to explain some of its variance (Henseler & Chin, 2010), which can result in significant relationships between trajectories.

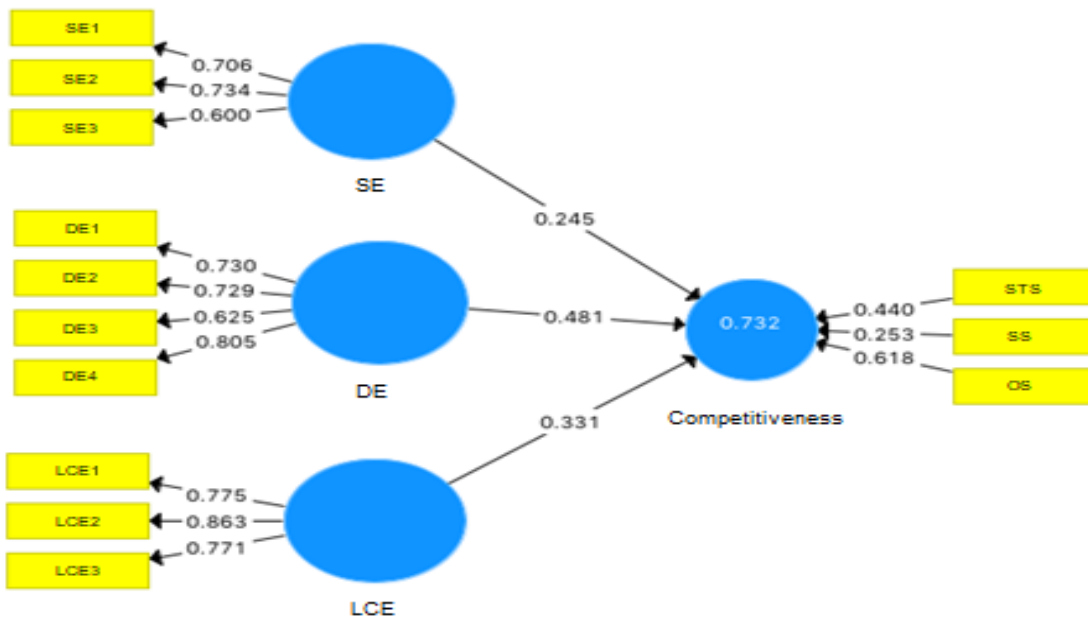
The results of the first stage are shown in figure 2. Although items STS1, STS3, SS1, SS3, SS5, OS4, DE3, SE1 and SE3 are below 0.70, these items were conserved in the model because they maximize the effect to be measured and because their values are not below 0.40 (Hair et al., 2011).

**FIGURE 2**  
**First Stage Results (Path Coefficients)**



With the obtained results, the second-stage model was calculated, using the scores of each first-order dimension instead of the original values. The results of this phase are shown in figure 3.

**FIGURE 3**  
**Second Stage Results (Path Coefficients)**



To analyze the measurement model, we assessed its reliability and validity (convergent and discriminant) of the model's constructs (Table 3).

Although items SE3, DE3 and SS are not above 0.70, they have been kept in the model, because they are not less than 0.40, according to Hair et al., (2011). As for the scale's reliability ( $\alpha$ -Cronbach and CR), it was concluded that all items are reliable. It was also possible to confirm the constructs' validity according to the criteria of Fornell and Larcker (1981), based on the average variance extracted for each construct (AVE).

After confirming the absence of multicollinearity (Table 3, FIV<5, according to Hair et al., 2014), the bootstrapping technique was then applied (with 5,000 subsamples) to assess the accuracy of the estimates made by the structural model.

**TABLE 3**  
**Properties of Model Items**

Construct	Item	Levels/ Simple correlations ( $\lambda$ )	$\alpha$ - Cronbach	CR	AVE	Collinearity statistics (VIF)
SE-Surprise Effect	SE1	0.7064	0.4296	0.7222	0.4661	1.0757
	SE2	0.7339				1.0790
	SE3	0.6005				1.0630
DE - Diffusion effect	DE1	0.7295	0.7045	0.8150	0.5260	1.3278
	DE2	0.7294				1.3063
	DE3	0.6255				1.4873
	DE4	0.8054				1.6856
LCE - Low cost effect	LCE	0.7748	0.7250	0.8455	0.6466	1.3866
	LCE2	0.8633				1.6945
	LCE3	0.7710				1.4087
Competitiveness	SS	0.4998	1.0000			1.0933
	STS	0.7779				1.2902
	OS	0.8594				1.2412

#### Assessment of the Structural Model

The results of the bootstrapping analysis (Table 4) show that the model has adequate predictive power ( $R^2$ ) and that the exogenous constructs *Surprise Effect*, *Difference Effect* and *Low-Cost Effect* modestly explain *Competitiveness* ( $f^2$ ).

**TABLE 4**  
**Indices for Assessing the Structural Model**

Index	Value	Ideal values	Reference
R <sup>2</sup>	0.7317	0.67 → Substantial 0.33 → Moderate 0.19 → Weak	Chin (1998)
f <sup>2</sup>	SE → Competitiveness: 0.1889	≥ 0.35 → Large effect	Cohen (1988)
	DE → Competitiveness: 0.5362	0.15 ≤ 0.35 → Moderate effect	
	LCE → Competitiveness: 0.2489	0.02 ≤ 0.15 → Small effect	

Finally, the statistical value between the constructs and the path coefficient sign (Table 5) permits us to confirm that the relationships in the structural model are significant and the proposed hypotheses are valid. It is also worth mentioning that the Diffusion Effect is the guerrilla marketing aspect that has the greatest influence on restaurant competitiveness in the Guadalajara Metropolitan Area, followed by the Low-Cost Effect and, finally, the Surprise Effect.

**TABLE 5**  
**Hypotheses Testing Overview**

Hypothesis	Statement	Path Coefficient (β)	t-Student Value (p-value)	Validity
H1: SE → Competitiveness	The surprise effect has a positive effect on developing restaurant competitiveness.	0.2453	3.4641 (0.0003)	✓
H2: DE → Competitiveness	A greater diffusion effect indicates a higher degree of business competitiveness.	0.4807	6.0424 (0.0000)	✓
H3: LCE → Competitiveness	The low-cost effect has a positive influence on restaurant competitiveness.	0.3308	3.9332 (0.0000)	✓

## CONCLUSIONS AND RECOMMENDATIONS

Guerrilla marketing encompasses a set of communication strategies (especially advertising), with the goal of deeply impacting the consumer at a low cost. The main feature of guerrilla marketing is that it makes ample use of creativity and the imagination in an attempt to reduce costs. The objective of this study was to understand the impact of guerrilla marketing on restaurant competitiveness in the Guadalajara (Mexico) metropolitan area, specifically in the municipalities of Zapopan and Guadalajara. To achieve this goal, a model was proposed to correlate the effectiveness of the components of guerrilla marketing and three basic dimensions of “competitiveness” in the restaurant industry: strategic skills, staff skills and organizational skills. The data was obtained by administering a structured questionnaire to decision makers in area restaurants.

The results support the conclusion that the element of guerrilla marketing with the greatest impact on restaurant competitiveness is the Diffusion Effect. This item includes advertising methods, recommendations and—most importantly—the use of the online environment (the internet and social networks) (Martínez, Martínez, & Parra, 2015). The other elements, while statistically important, have just a moderate effect on competitiveness. For Low Cost Effect, the implementation of methods to measure efficiency, staff efficiency and internal marketing practices were significant. For Surprise Effect, the advertising activities focused on positioning the brand were most noteworthy.

The main recommendation is that restaurants in the Guadalajara metropolitan area should assess and analyze their online presence to improve competitiveness, according to the results of this study. It is advisable not only for entrepreneurs to invest in online advertising and promotion, but to design, implement and monitor these strategies properly.

Finally, it should be noted that this study has its limitations, especially regarding the study sample. The sample was confined to those responsible for marketing decisions and it excluded the opinions of two groups, which are of interest in this study’s research goals: 1) the employees, through which we could obtain information about personal skillsets and the organization’s internal marketing practices; and 2) consumers, through which we could obtain information about the effectiveness of guerrilla marketing methods. Thus, two studies are suggested as future lines of research: 1) an employee-based analysis of whether these items are suitable for measuring staff skills; and 2) a consumer-based analysis to determine the impact of guerrilla marketing methods.

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**SUPPLIER MANAGEMENT AS A TOOL FOR ENHANCING COMPETITIVENESS IN  
THE MUNICIPALITY OF FLORENCIA, CAQUETÁ DEPARTMENT, COLOMBIA**

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**ABSTRACT**

This study investigates the role of supplier management in enhancing business competitiveness, as part of a company's external environment. This paper researches SMEs located in the municipality of Florencia, Caquetá, Colombia. A survey was used to collect information from a sample of 375 companies, which were randomly selected from the 15,000 SMES located in the municipality of Florencia, Caquetá. These companies perform various economic activities in the service sector and the commercialization of goods and finished products. The results show that it is necessary for SMEs to substantially improve supplier management to become competitive at a regional level.

**Keywords:** SMEs, Supplier management, Competitiveness, Goods and services

## INTRODUCTION

In recent years, globalization has caused various types of trade barriers for many SMEs (small- and medium-sized enterprises), affecting their competitiveness in comparison with large and multinational corporations. Large companies have built a closely-knit network of suppliers and have forged agreements and alliances, because of their large demands, for products and raw materials used in their goods and services, thus gaining competitive and pricing advantages over smaller enterprises.

Currently, SMEs comprise 99.00% of Colombian companies (Revista Dinero, 2015) and contribute to approximately 38% of the country's GDP. In terms of taxes and other fees required by law, the amount contributed to the state by these types of businesses is relatively low in comparison with European countries, in which small- and medium-sized enterprises contribute to up to 60.00% of state taxes for these types of enterprises.

Moreover, the unfortunate reality in Colombia is that 50% of these companies survive for just one fiscal year, subsequently succumbing to low efficiency, competitiveness issues and high production costs for their goods and services.

However, globalization also brings new trends, technological advances, new opportunities and other factors; companies must pay attention to these developments, as they can lead to business success or, in a worse-case scenario, failure.

Competitiveness can be achieved in various ways—through efficient supplier management, for example. It is common knowledge that suppliers not only deal with raw materials, but also deal with technology that enhances business processes and helps businesses avoid bottlenecks. Suppliers also possess industry information and market knowledge; marketers, for example, identify social trends, tastes and needs.

However, as mentioned above, the purpose of this study is to analyze and itemize the importance of supplier management as a business tool in a company's external environment and how this factor enhances the competitiveness of SMEs in the municipality of Florencia, Caquetá, Colombia. This analysis was conducted using SPSS software, version 21, with which 375 companies in the municipality of Florencia, Caquetá were randomly selected.

## A REVIEW OF THE LITERATURE

### Supply Management

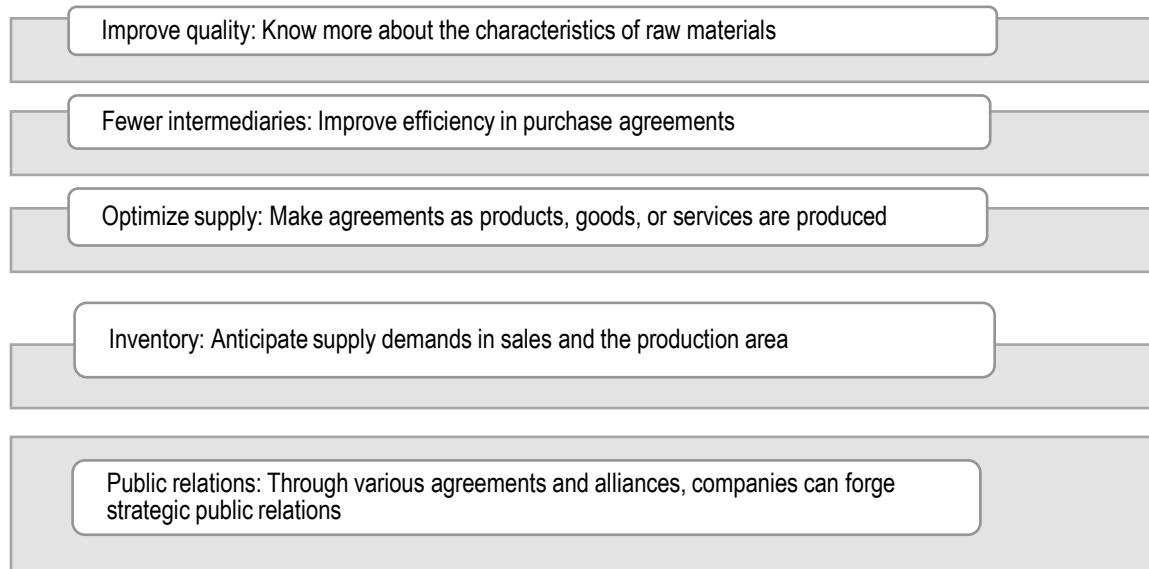
Currently, due to trends, tastes and needs of society, various segments of the market fluctuate constantly—so it is important to note that SMEs must be flexible and prepared for change, otherwise, many SMEs can face liquidation in this market (Gonzales, 2009; Berreneche, 2010).

For these reasons, hundreds of companies have adopted a business plan or growth strategy that some theorists have termed “backward vertical integration,” which is based on purchasing and acquiring suppliers and supply chains. There are several cases of this strategy in Colombia—for example, the Italian firm Grupo Casino’s successful chain, which acquires companies that sell and manufacture footwear, textiles, food, insurance, technology and other products. The purpose of this strategy is to expand the firm’s market, to reduce purchase needs and, most importantly, to eliminate future competition with other companies that sell the same products or fulfill the same societal needs (Carr & Pearson, 1999; Hernández, Aguilera, & Colín, 2013).

A well-known example in the municipality of Florencia, Caquetá is the Caquetá liquor company. Its board opted for a measure to acquire a bottle production company that makes bottles of all sizes, volumes and styles. Although the company incurred extra costs at the time of purchase, these costs will diminish in time (Aguilera, Hernández, & López, 2012; Aguilera, Hernández, & Pérez, 2015).

Supply management offers various advantages, because it affords close relationships—through business agreements—between the companies that supply raw materials, information, tools and other products and the companies that produce the finished goods or services. Figure 1 shows the advantages of these relationships, according to Hernandez (2015).

**FIGURE 1**  
**Advantages of Supply Management**



Moreover, one of the most important advantages identified is an increase in the variety of supply companies, since every production company must analyze and evaluate the various companies from which it plans to purchase goods, and it is not advisable to have just a single supplier, which can result in losses and delays that waste the production company's time and resources (Heredia, 2013).

It is also important to reduce costs in comparison with purchases (discounts). In this regard, some companies employed as outsourcers (subcontractors) use various strategies and action plans to ensure they are quickly reimbursed for the products or goods that they supply to companies that require raw materials (Monterroso, 2002).

Thus, because of this simplified purchase process, the company will not need to find or analyze other companies to supply raw materials, due to various existing agreements and strategic alliances (Grupo ENAC, 2009).

### **Competitiveness in the 21st Century**

Today, competitiveness is defined as the various social, environmental, economic, technological and other spheres in which companies aim to be better than other companies in their commercial sector.

In Florencia, Caquetá, SMEs have various ways of competing with one another. One current method of competition consists of altering product prices, so that the merchant with the lowest prices is seen as the low-quality option, with minimal product guarantees, and the merchant with the highest prices is likewise seen as the high-quality option, with fully guaranteed products.

Because of this price war, most SMEs are now marketing their products at fair prices for items of reasonably good quality that meet the basic requirements and satisfy the demands of the customer, client or user. For these reasons, SMEs seek suppliers according to product quality, production time, production efficiency and, most importantly, production costs—thus forging strategic alliances and agreements with various suppliers based in the country's interior.

Moreover, for SMEs in the municipality of Florencia to effectively manage various suppliers, it is necessary for both parties to be in open communication. For this reason, the internet has become a fundamental tool in the 21st century, enabling companies to create databases of their various suppliers, customers and partners.

Thus, this study analyzes whether supplier management—through agreements, integrated strategies and partnerships—is a key factor in influencing the competitiveness of SMEs in the services and marketing sectors in the municipality of Florencia, Caquetá Department, Colombia (Hernández, Aguilera, & Pinzón, 2015). For this study, the following hypotheses are proposed:



*H<sub>1</sub>: Better agreements with suppliers increase the competitiveness of SMEs in Florencia, Caquetá, Colombia.*

*H<sub>2</sub>: Implementing better strategies for dealing with suppliers increases the competitiveness of SMEs in Florencia, Caquetá, Colombia.*

*H<sub>3</sub>: Better partnerships with suppliers increase the competitiveness of SMEs in Florencia, Caquetá, Colombia.*

## METHODOLOGY

This study analyzes whether Supply Management—specifically through agreements, partnerships and by integrating strategies with suppliers—can significantly increase the competitiveness of SMEs in the services and marketing sectors in the metropolitan area of Florencia, Caquetá, Colombia. A research survey was administered to the managers and owners of these companies from August to November 2016. To perform this research, we consulted the Florencia, Caquetá Chamber of Municipal Commerce Database (<http://ccflorencia.org.co>, 2016). Using the provided information, the following was incorporated into the study:

- 15,000 companies in the services and marketing sectors
- Study was performed on a stratified sample of 375
- Confidence level: 95%
- Margin of error: 5%
- Quantitative research approach
- The research design was deductive, descriptive and correlational
- Data was obtained using a transversal method
- Stratified random sample

### Measuring Variables

To measure the variables in this study, the survey was divided into 2 blocks, which are described below:

1.- Block I: **Supply Management**, measured by 14 variables (Wisner, 2003) according to an operationalized Likert scale—from Low (1) to High (5) importance.

**TABLE 1**  
**Block I Variables: Supply Management**

Variable	Variable description
GP1	Ability to meet due dates
GP2	General delivery efficiency
GP3	Ready at any time

GP4	General quality of service provided
GP5	Compliance with the delivery amount
GP6	The use of methods to choose suppliers
GP7	Geographic availability / proximity
GP8	Efforts in promoting timely principles
GP9	Willingness to increase delivery frequency
GP10	Quick response time for emergency situations or special requests.
GP11	Able to respond to unexpected changes in demand
GP12	Proximity of the supplier to the client
GP13	Helping suppliers make their services more timely
GP14	On-time delivery of purchases directly to the places requested

2.- Block II: Competitiveness measured by 18 variables (Maldonado, 2008) adapted from Buckley et al. (1988) and Chang (2005).

**TABLE 2**  
**Block II Variables: Competitiveness**

Variable	Variable description
FP1	Our Return on Investment has been very good over the past three years
FP2	Our sales have been very good over the last three years
FP3	Our financial performance has been very good over the last three years
FP4	Our profits have been good over the last three years
FP5	Our debts have significantly decreased over the last three years
FP6	The loans we have contracted over the last three years have been at preferential rates
PC1	The cost of our products impacts our competitiveness
PC2	The costs of placing orders with our suppliers are low
PC3	The transportation costs of our suppliers are low
PC4	The product delivery costs of our suppliers are low
PC5	Our suppliers have low costs for raw materials and supplies
PC6	Our company has low production costs
TE1	Technological development
TE2	Product and/or service development
TE3	Production process and/or service development
TE4	Project planning
TE5	Improving machinery and equipment
TE6	IT development

**FIGURE 2**  
**Theoretical Model**

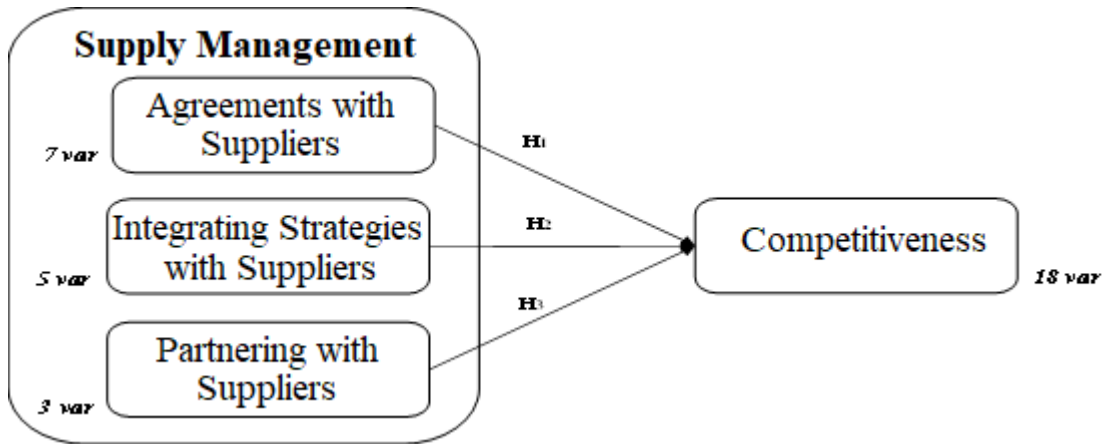


Figure 1 shows the theoretical model for this study.

Figure 2 shows the hypotheses and relationships between the constructs Supplier Management and Competitiveness.

Table 3 also shows the instrument’s reliability, according to Cronbach's alpha (Frias, 2014).

**TABLE 3**  
**Reliability Test: Cronbach’s Alpha**

Dimension	Value of Cronbach's alpha
Agreements with suppliers	0.841
Integrating strategies with suppliers	0.847
Partnering with suppliers	0.667
Competitiveness	0.782

The results in Table 3 indicate that the instrument complies with the standards specified by George and Mallery (2003), who specify that the value of Cronbach’s alpha for the variables (comprised of the dimensions) must be greater than 0.5, especially in experimental studies. The values of Cronbach’s alpha for this study are generally within the acceptable range (Nunnally & Bernstein, 1994; Nunnally, 1967; Celina & Campo, 2005). Table 4 shows the descriptive and comparative values for each of the principal factors that comprise Supplier Management and Competitiveness.

**TABLE 4**  
**Descriptive Analysis of the Block Supplier Management**

Variable	Variable description	Mean
GP1	Ability to meet deadlines	2.77
GP2	General delivery efficiency	3.58
GP3	Ready at any time	3.76
GP4	General quality of service provided	3.68
GP5	Compliance with the delivery amount	4.01
GP6	The use of methods to choose suppliers	3.28
GP7	Geographic availability / proximity	2.74
GP8	Efforts in promoting timely principles	3.46
GP9	Willingness to increase delivery frequency	3.78
GP10	Quick response time for emergency situations or special requests.	3.33
GP11	Able to respond to unexpected changes in demand	3.34
GP12	Proximity of the supplier to the client	3.20
GP13	Helping suppliers make their services more timely	3.72
GP14	On-time delivery of purchases directly to the places requested	4.00

Table 4 shows that the managers of SMEs in Florencia, Caquetá consider compliance with the quantity of products to be delivered important (4.01), as well as the delivery of goods to specific places, as agreed upon in the purchase process (4.00), and the increase in frequency of product deliveries, when needed (3.78).

**TABLE 5**  
**Descriptive Analysis of the Block Competitiveness**

Variable	Variable description	Mean
FP1	Our Return on Investment has been very good over the past three years	3.72
FP2	Our sales have been very good over the last three years	4.12
FP3	Our financial performance has been very good over the last three years	3.77
FP4	Our profits have been good over the last three years	3.94
FP5	Our debts have significantly decreased over the last three years	2.85
FP6	The loans we have contracted over the last three years have been at preferential rates	2.45
PC1	The cost of our products impacts our competitiveness	2.93
PC2	The costs of placing orders with our suppliers are low	2.86
PC3	The transportation costs of our suppliers are low	2.93
PC4	The product delivery costs of our suppliers are low	2.85
PC5	Our suppliers have low costs for raw materials and supplies	2.32
PC6	Our company has low production costs	2.20
TE1	Technological development	2.45
TE2	Product and/or service development	2.88
TE3	Production process and/or service development	2.80
TE4	Project planning	2.36

TE5	Improving machinery and equipment	2.68
TE6	IT development	2.86

As for Competitiveness, Table 5 shows that the managers of SMEs in the service and marketing sector in Florencia, Caquetá said that their sales performance and profits over the past three years were favorable (4.12) and, in this regard, that the profits in this sector have been acceptable (3.94) and, finally, that managers consider their financial results to benefit the company (3.77).

## RESULTS

When discussing the results of this study, it is important to note that, among the 375 SMEs in Florencia that were evaluated, 58.4% are managed by a relative of the owner. However, this relative is in charge of company direction and planning in only 39.7% of cases. On the topic of gender, 47.2% of the companies evaluated were managed by women, which suggests a trend towards equality in this area of business management.

Finally, on the topic of education, 24.8% of managers of SMEs in Florencia, Caquetá have a primary and/or secondary education; 50.9%, or the majority, have a high school diploma; 11.7% have business training instead of a high school diploma. Only 8% have a degree—1% hold Master's degrees, and 3.6% hold Doctorate degrees.

For this study, a correlation analysis was performed to determine the relationships between the factors that comprise Supplier Management. The value of the KMO test was 0.772, which is higher than the value of 0.05 recommended by Ferran (1996) to validate relationships between variables. The results of Barlett's test were a chi-square value of 2999.346, a gl of 91, and sig. of 0.000. Three groups were identified:

- a). - Agreements with suppliers
- b). - Integrating strategies with suppliers
- c). - Partnering with suppliers

These groups are considered independent variables alongside the dependent variables (Competitiveness factors). The results of these relationships are shown in Table 6. The Competitiveness of SMEs in the service and marketing sector in Florencia, Caquetá depends on: Agreements forged with suppliers, 40.3% (t-value: 8.494, p-value: <0.000); Integrating strategies with suppliers, 35.5% (t-value: 7.323, p-value: <0.000); and Partnering with suppliers, 7.6% (statistical values not obtained).

**TABLE 6**  
**Factor Correlation Analysis for the Theoretical Model**

Variables	Competitiveness	
	Correlation	Results
Agreements with suppliers	0.403** Robust t (8.494)	Adjusted R <sup>2</sup> : 0.160 F: 72.156 High VIF: 1.000
Integrating strategies with suppliers	0.355** Robust t (7.323)	Adjusted R <sup>2</sup> : 0.123 F: 53.627 High VIF: 1.000
Partnering with suppliers	0.076** Robust t (No Value)	Adjusted R <sup>2</sup> : No value F: No value High VIF: No value

It is important to highlight the following information from Table 6 (Hair et al., 1995):

- i) According to the theoretical method, the correlation of the relationship between Agreements with suppliers and Competitiveness is 40.3% (moderate). However, the adjusted r-squared value is not considered acceptable, suggesting that managers of Florencia SMEs do not think that having any agreements with suppliers impacts competitiveness.
- ii) The relationship between Integrating strategies with suppliers and Competitiveness shows a correlation of 35.5% according to the theoretical model (moderate), and the r-squared value is not acceptable, which also suggests that the managers of Florencia SMEs do not think that integrating strategies with suppliers leads to excellent commercial relationships.
- iii) As for the relationship between Partnering with suppliers and Competitiveness, the statistical analysis alone permits us to infer that the managers of Florencia SMEs do not think it necessary to forge and develop partnerships with suppliers.

Moreover, a regression analysis was performed for all the factors of the Supplier Management block and the Competitiveness block, with the results of each analysis evaluated according to the reference model:  $Y = \beta_0 + \beta_1 X_1 + \varepsilon$ . The results of the regression equation for the first analysis were:

$$\text{Competitiveness} = 1.875 + 0.319 \text{ Agreements with suppliers} + 0.038$$

The results show a positive relationship—for each unit that the variable Agreements with suppliers increases, a 0.319 increase in the variable Competitiveness can be expected. The second analysis showed similar results:

$$\text{Competitiveness} = 2.121 + 0.230 \text{ Integrating strategies with suppliers} + 0.031$$

The results of the second analysis also show a positive relationship. For each unit that the variable Integrating strategies with suppliers increases, the variable Competitiveness can be expected to increase by 0.230. Finally, according to the third analysis, the independent variable Partnering with suppliers and the dependent variable Competitiveness had no significant relationship, so it can be ruled out that the managers of SMEs in Florencia are not interested in forging partnerships with their suppliers, a strategy that strengthens commercial relationships and enhances competitiveness, even within the regions where these companies operate.

## CONCLUSIONS

In conclusion, supply management is a vital strategy of utmost importance for the survival of SMEs in the municipality of Florencia, Caquetá, because, through strategic alliances and agreements, these companies can maintain competitiveness, stabilize prices and improve the quality of the products they are able to offer.

In the 21st century, the Internet has become an important tool for companies, as it has improved and enhanced communication between companies and their suppliers and has simplified processes, freeing up time that is now used for other necessary business activities.

However, globalization has led to the stagnation of hundreds of companies in the municipality of Florencia, causing trade barriers due to a lack of economic resources, investment knowledge and, above all, financial education.

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**AN ANALYSIS OF QUALITY CULTURE IN SMES IN MATEHUALA, SAN LUIS  
POTOSI**

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**ABSTRACT**

This study uses a ten-component model to analyze the quality culture of SMEs in Matehuala, San Luis Potosi. The purpose of this study is to determine correlations between these components in order to identify key areas in which business culture can be improved.

To perform this study, a survey was administered to 516 employees of 56 SMEs in three economic sectors. The results show that there is a positive correlation between the 10 components that comprise quality culture. There are eighteen examples with correlation coefficients greater than 0.5, which indicates a certain amount of dependency between these components. Nine of these examples fall under the first component, Managerial Commitment and Responsibility, which indicates that it is important to focus on this area to develop business culture.

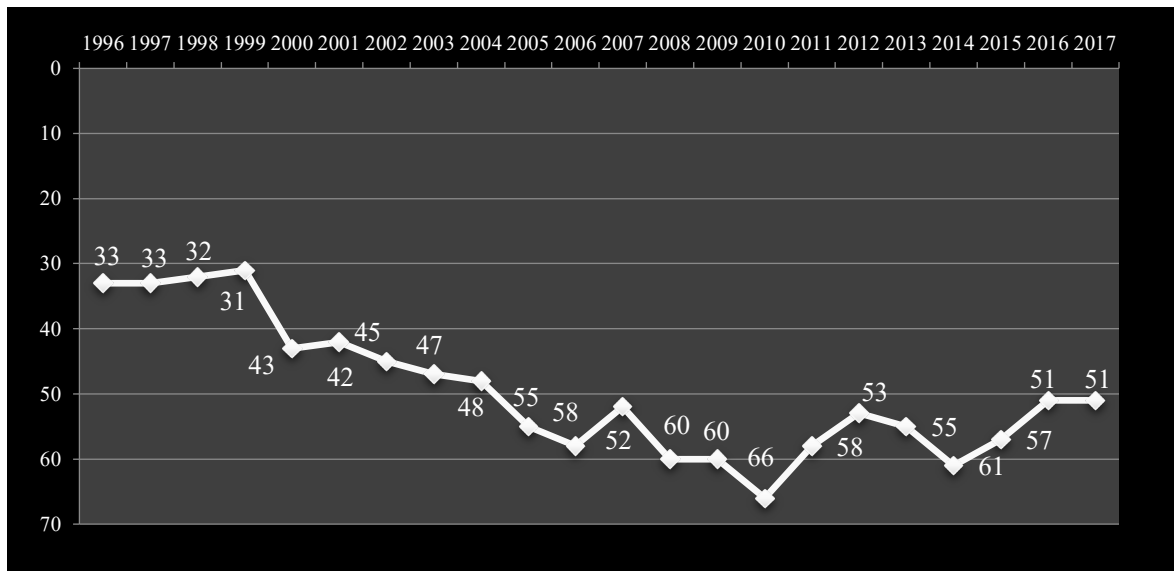
**Keywords:** Culture, Small business, Quality

## INTRODUCTION

It is urgent that we focus on our country’s competitiveness. According to the World Economic Forum (WEF, 2017); Mexico’s competitiveness has been declining in comparison with the international community (figure 1). Mexico ranks 51st in terms of competitiveness; however, its domestic market ranks 11th out of 137 countries, according to its size. This is obviously not a good situation. This deficiency is due, in part, to the low productivity of SMEs. One way to improve competitiveness for small businesses is through quality management strategies (Izar, 2004).

We must also be aware that it is highly important to implement these strategies, and we must all get involved, as the current situation will definitely affect our quality of life and that of future generations (Díaz, 2004).

**FIGURE 1**  
**The Decrease in Mexico’s Competitiveness, According to the WEF**



Source: Based on WEF data (2017)

This proposal is relevant, as it has been proven that enhancing quality has been effective in many countries—for businesses of all sizes and in all sectors (Garza, 2000).

The world is undergoing radical changes, and these changes have brought new challenges to the business world; however, many entrepreneurs seem to be unaware of these changes. The main factors affecting business strategies today are: a more informed customer base that demands high-quality products and services, frequent technological changes, the shift from a capital/raw material economy to a skills-based economy, the need to attract and retain highly-skilled employees, among others. Though some business owners often try to ignore new trends or to downplay their importance, this is the wrong approach (The Economist Intelligence Unit, 1997).

There have been several scientific studies on the topic, and the results have proven that quality management strategies enhance productivity in all types of businesses in all parts of the world (Dean & Bowen, 1994; Sirota et al., 1994; Benson, 1992; Frehr, 1997).

There have also been studies addressing the problems with quality management in certain regions of Mexico (Pérez, 2003; Tejada, 2004; Carlos, 2006; González, 2009). These reports included diagnoses and action plans to develop quality culture and to efficiently implement quality management strategies to improve small businesses. The quality culture model for SMEs used in this paper is based on these studies.

### **Justification**

The general lack of jobs and the uncertain economic environment is a major concern at all three levels of government; however, the vicious cycle of quality–productivity–competitiveness, as identified by Deming (1989), seems to have halted throughout the country. Small business owners have generally lost their bearings and are concerned about globalization’s effects on their local economies. Times have changed, and these businesses are not prepared to confront these changes (Economist Intelligence Unit, 1997). Many companies do not know where to begin. In this paper, we offer a relevant proposal.

There are, of course, many proposals for improving small business productivity, such as training business managers, researching the location and developing technology. Another proposal is to enhance quality in SMEs. It appears that many companies facing new economic challenges may be able to enhance their performance through quality management (Garza, 2000).

In order to prioritize quality in the long run, a company must also change its business culture, so that its employees are indoctrinated in the theory and value of quality.

Previous studies in the journal *Investigación y Ciencia* (2010), published by the Autonomous University of Aguascalientes, use a ten-component instrument to measure quality culture, specifically designed for SMEs. This instrument is used to assess quality culture in SMEs and, using this instrument, we can determine the degree to which the ten components are developed within the company.

However, we are faced with some questions: What gave rise to this research? Are there any correlations or relationships between any of the ten components? Should companies seeking to improve in these areas focus on the components with the highest degrees of correlation?

### **Purpose**

To determine the best courses of action for small businesses in the city of Matehuala by analyzing correlations and dependencies between the ten components of quality culture.

## **General Objectives**

To assess quality culture in Matehuala, San Luis Potosi and to analyze correlations between its components so the most important elements can be identified and developed.

## **Proposed Hypotheses**

### **Hypothesis 1:**

Ho: There is a strong and significant correlation between the 10 components that comprise quality culture in SMEs in the city of Matehuala, San Luis Potosi.

## **BACKGROUND**

### **Theoretical framework**

“Companies do not have culture: They are culture” (Karl, cited in Krieger, 2005). All cultures are composed of values, beliefs and procedures (Cantú, 2011). Quality culture encompasses company values and the way work is done within the company, concurrent with the company’s quality philosophy (Gallear & Ghobadian, 2004). Whether a company has quality culture depends on the extent to which the company has implemented these values and modes of operation.

Two UK researchers have defined quality culture as: “The way that employees do their jobs, how problems are solved, and whether clients are treated with transparency and honesty, as well as the policies upon which the company is based: its search for continuous improvement, the way decision making is delegated, the way obstacles are removed, the company’s error-reduction methods, teamwork, and fact-based decision making” (Gallear & Ghobadian, 2004). All these elements make up quality culture, and companies where these features are present are more likely to be able to make lasting changes regarding quality management.

Studies such as those of Perez (2001), Tejada (2004), Carlos (2008) and Cantú (2001) have all made clear that quality concepts should be communicated efficiently, especially as they pertain to values, beliefs and habits.

We have derived the 47-item instrument to analyze the quality culture of regional SMEs from another study (González, 2009). This study proposes that quality culture is composed of the following ten components: Management commitment and responsibility, Employee commitment and responsibility, Trust in employees, Trust in the company, Job satisfaction, Effective communication, Work organization and planning, Clear and unified vision, Teamwork and Service improvement.

The operational definitions for these ten components are as follows:

#### 1. Management commitment and responsibility

Managers set an example in the workplace, and they enjoy their work. They take on issues that

affect the company directly, without avoiding problems and overlooking the environmental impact of their actions. Because of this, employees trust these people and view them favorably. When an employee fails to make the correct decision in the workplace, the boss still supports the employee. The company does what it can to assist the employee when the employee has personal or family issues. The company's managers speak to employees about the quality of products and services and fully support their efforts to improve quality within the company.

#### 2. Employee commitment and responsibility

Employees treat clients with respect so that the clients are happy with the service they receive and will think about returning. Employees truly value and take pride in their roles within the company. They understand their daily tasks, as well as the tasks for which their teammates are responsible so that all tasks can be a community effort.

#### 3. Trust in employees

The company trusts its employees and offers them professional training. Employees can make decisions—according to their roles—and suppliers can give employees information about their products. Work teams are created to solve company problems, so that company operations are within the employees' hands. The company takes pride in striving to improve the quality of life within the community.

#### 4. Trust in the company

Employees always feel confident in detecting and reporting work-related errors, failures and problems. They would recommend the company's products to their own family, because they know the company offers quality products and services. The company never requires more from its employees than that for which they are compensated. If it were allowed, employees would recommend that other members of their families work for the company, because it treats its employees fairly.

#### 5. Job satisfaction

Employees enjoy going to work and enjoy what they do, because, when all their needs are met, employees can do a great job and produce quality products. Satisfied employees go beyond the requirements of their job description.

#### 6. Effective communication

Employees are asked for their input to improve the work environment, and their ideas are valued. Employees respect their teammates' opinions and support their teammates as they fulfill their obligations.

#### 7. Planning and organization

Employees have everything they need to do their jobs and product quality products and services, and all these resources are organized. Company facilities are clean and orderly. The company constantly evaluates the products or services it offers to its clients to avoid customer complaints and returns.

#### 8. Clear and unified vision

A company is like a sturdy boat: It is well-built and has a known destination. Companies continuously change to improve their products and services and, thus, continue growing. All work performed by the employees is evaluated so the company can keep on track with its objectives.

#### 9. Teamwork

There is good communication between all company personnel, and employees pay attention to their colleagues' suggestions with accomplishing group objectives.

#### 10. Continuous service improvement

Employees always listen to clients' suggestions on ways that services could be improved. They also receive training from individuals outside of the organization in personal or professional development. All work-related activities are planned in advance.

Quality culture should be a focal point and driving force in any certified company, and quality management departments in these companies should have their own values, practices, knowledge and tools. Quality culture is a multifactorial variable in our study—a vector composed of ten components. Quality culture is represented graphically according to the profile or contour of these components' values in a network diagram.

“According to well-known administration research authors, companies can address current challenges by implementing a focus on quality throughout their planning, management, and business-improvement operations” (Cantú, 2011, 62). This focus depends on a preexisting quality culture. Many studies have cited quality culture as a main component in implementing quality control throughout an organization (Saraph & Sebastian, 1993).

Quality management is a strategy that many companies can use when facing current challenges. Although established quality management models do not generally ensure business success, failure to implement them puts companies at risk (Corbett, Luca, & Pan, 2005). Although cultivating quality culture has proven an effective measure for many organizations, many companies have failed at its implementation, and, for this reason, we advise companies to proceed with caution. As mentioned above, many of these failures have resulted from neglecting to create a supportive business culture among company personnel beforehand—to be successful, this type of culture must be implemented in advance.

What are the results of implementing quality culture? The elimination of waste at levels of the company is possibly one of the most important results, which in turn cuts costs and leads to greater product uniformity, higher sales and increased employment, which Deming (1989) identified as a positive feedback system or chain reaction. As Ruiz (2004) explains, you can thereby enhance the three components of competitiveness: productivity, investment and employment. For these reasons, there is a growing trend among businesses today to focus on quality culture. This also explains a growing focus on quality at the management level in other spheres: trade, industry, politics and academia.

## Context

The study was conducted in the municipality of Matehuala, San Luis Potosi. Matehuala is located 180 kilometers to the north of the state's capital city. It is the principal city of the state's highland region. According to the 2005 Population and Housing Census, it has a population of 82,726. The main source of employment for those currently working is the third sector (trade, services and tourism, 53.5%), followed by the second sector (industry, mining and construction, 34.8%). The productive economy of the city is comprised of approximately 3000 SMEs. The two main factors that contribute to the city's economic development are its proximity to the industrial city of Monterrey and its position on the México-Piedras Negras Highway (Carretera 57), the main corridor of Mexico's highway network. However, the city's main problems are residents leaving the city and water scarcity.

The city's municipal government is interested in implementing a common strategy to boost the region's economic development by improving the productivity of small businesses, to be led by the Ministry of Economic Development and local business owners, represented by COPARMEX and CANACO. They have a common desire to attract more investment and to increase the number of jobs in the region.

## RESEARCH METHODS

This study is exploratory, non-experimental, quantitative, transversal and inferential. The study was performed in the following stages: 1) a review of literature, theses and books on quality culture and organizational performance; 2) reference theories were established; 3) the database was refined; and 4) statistics were analyzed to determine results.

The sampling unit to be analyzed in this study was comprised of small businesses of all three economic sectors in Matehuala, San Luis Potosi (see Table 1).

The observation unit was the employees of SMEs in Matehuala, San Luis Potosi, and the sample was comprised of managers and employees.

The random sample for this study was composed of 516 SME employees and managers from the city of Matehuala, San Luis Potosi. The study design confidence level was 95%, with a margin of error of 4.3%.



**TABLE 1**  
**Number of Companies that Participated in the Study**

<b>Size</b>	<b>Trade</b>	<b>Service</b>	<b>Industry</b>	<b>General total</b>
Microenterprise	13	14	8	35
Small business	5	5	5	15
Medium-sized business	2	1	3	6
Total	20	20	16	56

Data was collected by visiting establishments and administering a questionnaire composed of 9 biographical questions and 45 questions about quality practices. The level of quality culture was determined from the employee responses according to a 5-option Likert scale.

The statistics program SPSS v. 20 was used for data processing. Once the Kolmogorov-Smirnov (K-S) goodness-of-fit test was performed for the data, a Pearson correlation test was performed for the ten components of quality culture.

## RESULTS AND ANALYSIS

The results are presented in two sections; in the first, we explain the statistical findings for the research sample; in the second, we test the hypotheses using statistical analysis and report on the results.

### Variable Description

532 surveys were administered, and only 3% (16) surveys were invalid. Of the 516 valid surveys, 56 were completed by managers and 460 by employees. 334 of the respondents were men and only 182 (35.3%) were women. The level of participation of women in this industry is not surprising, and the participation level is higher in the service industry (see Table 2).

**TABLE 2**  
**The Sample's Descriptive Statistics**

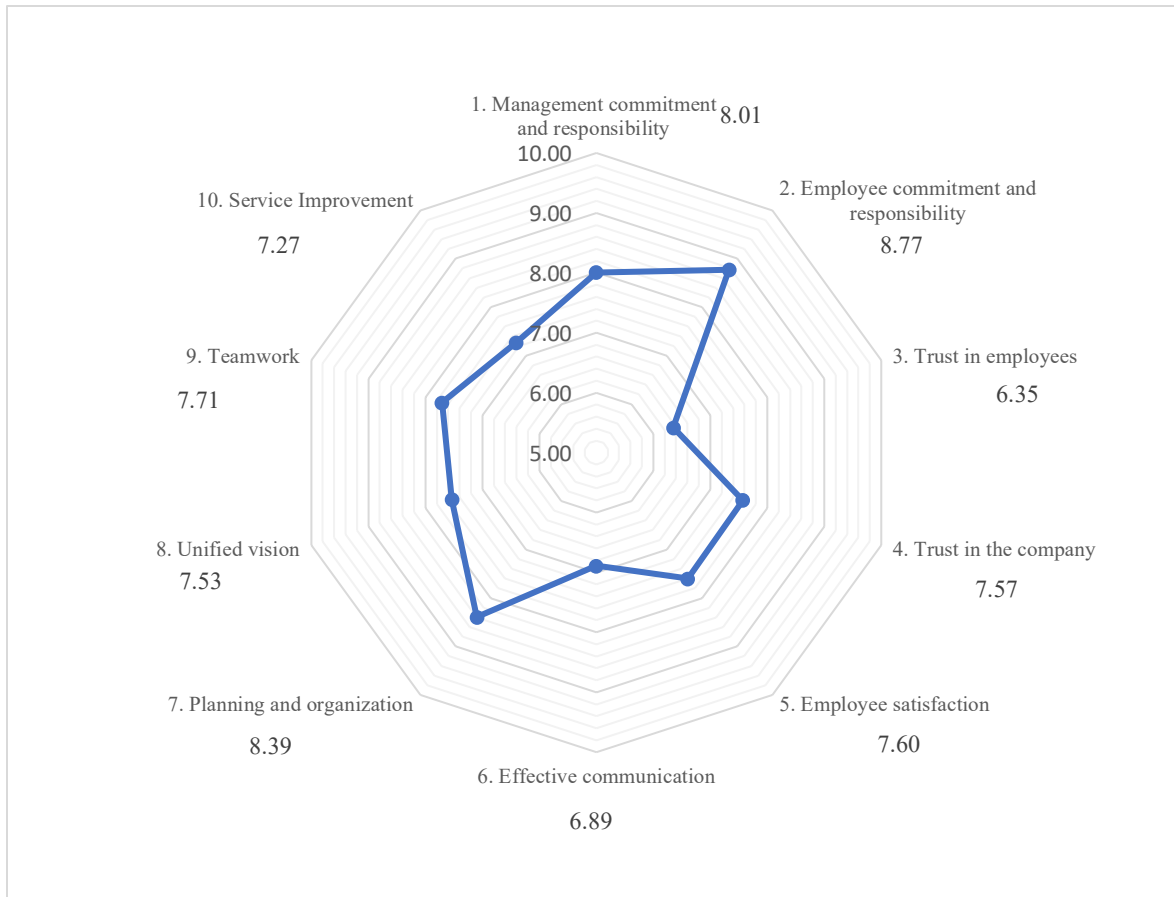
Biographic variable	Sample results						
No. Survey total	Accepted 516 (97%)		Rejected 16 (3%)			Total 532	
Gender	Male 334 (64.73%)			Female 182 (35.27%)		Total 516	
Position	Managers 56 (10.85%)			Employees 460 (89.15%)			Total 516
Age group	Young (30) 272 (52.71%)		Adult (50) 208 (40.31%)		Older adult 36 (6.97%)		Total 516
Marital status	Single 180 (34.88%)		Married 322 (62.40%)		Other 14 (2.71%)		Total 516
Seniority	Less than 1 133(25.77%)		Less than 5 199 (38.56%)		More than 5 184 (35.66%)		Total 516
Education	No schoolin g 4	Primar y 70 (13.78)	Secondar y 200 (39.37)	High school 166 (32.68)	Bachelor' s degree 67 (13.19)	Graduat e degree 1 (0.19)	Total 508

The average age of the respondents was 31.78 years, with a median age of 30 with a positive bias. This sector generally employs younger people. The employees had an average seniority of 5.37 years, with a median of 3 years and a standard deviation of 6.518 years, which indicates that there is a large dispersion in years of seniority.

The median educational level was secondary studies. 71% of the respondents completed secondary school, high school or technical training. Surveys were administered to businesses of the following types and sizes: Microenterprise: 193, Small business: 190, Medium-sized business 133. Trade: 182, Service: 176, Industry: 158.

Figure 2 is a network graph that shows the perceived level to which the components of quality culture have been developed in SMEs in the city of Matehuala, S.L.P. In this chart, the scale has been adjusted proportionately; the 1-to-5 scale has been adjusted to 0-to-10 for visual clarity. The results of the survey were mapped on the radar diagram, in which each axis corresponds to one of the 10 components of quality culture. Figure 2 gives us an idea of how much attention each company pays to each of the ten components.

**FIGURE 2**  
**Profile of Quality Culture in the 56 Sample Companies**



The graph shows that these 10 components are present, indicating that these SMEs have quality culture. The weakest areas of quality culture in the SMEs studied are Component 3, Trust in Employees (6.35); Component 6, Effective Communication (6.89); and Component 10, Service Improvement (7.27).

However, Component 2, Employee Commitment and Responsibility (8.77) and Component 7, Planning and Organization (8.39) were noteworthy because of their stronger presence.

As you can see, there are many opportunities for improvement; however, it is first necessary to correctly identify which of the components should be addressed to improve business culture. To do this, one option is to focus on the components with lower ratings (3, 6 and 10); however, one can also analyze dependencies and correlations between the components to understand the effect that improving one dimension will have on the others. That is the purpose of this study.

**TABLE 3**  
**Pearson Correlations**

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	
Management commitment and responsibility	Correlation	1	.616**	.508**	.599**	.594**	.570**	.594**	.578**	.538**	.542**
	Sig. (two-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	516	516	516	516	516	516	516	516	516	516
Employee commitment and responsibility	Correlation	.616**	1	.327**	.506**	.584**	.467**	.594**	.438**	.508**	.505**
	Sig. (two-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	516	516	516	516	516	516	516	516	516	516
Trust in management	Correlation	.508**	.327**	1	.317**	.280**	.497**	.357**	.474**	.300**	.560**
	Sig. (two-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000
	N	516	516	516	516	516	516	516	516	516	516
Trust in employees	Correlation	.599**	.506**	.317**	1	.485**	.478**	.526**	.421**	.493**	.385**
	Sig. (two-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	516	516	516	516	516	516	516	516	516	516
Job satisfaction	Correlation	.594**	.584**	.280**	.485**	1	.413**	.481**	.421**	.516**	.396**
	Sig. (two-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	516	516	516	516	516	516	516	516	516	516
Effective communication	Correlation	.570**	.467**	.497**	.478**	.413**	1	.381**	.397**	.555**	.493**
	Sig. (two-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	516	516	516	516	516	516	516	516	516	516
Work planning and organization	Correlation	.594**	.594**	.357**	.526**	.481**	.381**	1	.461**	.433**	.430**
	Sig. (two-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	516	516	516	516	516	516	516	516	516	516
Unified vision	Correlation	.578**	.438**	.474**	.421**	.421**	.397**	.461**	1	.361**	.464**
	Sig. (two-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000
	N	516	516	516	516	516	516	516	516	516	516

Teamwork	N	516	516	516	516	516	516	516	516	516	516
	Correlation	.538**	.508**	.300**	.493**	.516**	.555**	.433**	.361**	1	.356**
	Sig. (two-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000
Continuous improvement	N	516	516	516	516	516	516	516	516	516	516
	Correlation	.542**	.505**	.560**	.385**	.396**	.493**	.430**	.464**	.356**	1
	Sig. (two-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	516	516	516	516	516	516	516	516	516	516

\*\* . The correlation is significant at the 0.01 level (two-tailed test)

Table 3 shows that all correlations are significant and positive. The following components have correlation values greater than 0.5, from highest to lowest:

Management Commitment and Responsibility has 9 correlations greater than 0.5.

Employee Commitment and Responsibility has 6 correlations greater than 0.5.

Trust in Employees has 2 correlations greater than 0.5.

Trust in the Company has 3 correlations greater than 0.5.

Employee Satisfaction has 3 correlations greater than 0.5.

Effective Communication has 2 correlations greater than 0.5.

Planning and Organization has 3 correlations greater than 0.5.

Unified Vision has 1 correlation greater than 0.5.

Teamwork has 4 correlations greater than 0.5.

Service Improvement has 3 correlations greater than 0.5.

The components Management Commitment and Responsibility and Employee Commitment and Responsibility have the highest correlation value, at 0.616.

Eighteen correlation coefficients are greater than 0.5, indicating a certain degree of dependence between these variables. Nine of these values belong to the first component—Managerial Commitment and Responsibility—which indicates that it is important to focus on this area to improve business culture.

## CONCLUSIONS

Are there strong and significant correlations between the ten components that comprise quality culture in the SMEs of Matehuala, San Luis Potosi?

Empirical evidence (see Table 3) shows that significant correlations exist, and 18 items have values higher than 0.5, indicating a certain degree of dependence between the variables. However, companies should focus on improving the three components that have the highest degrees of

correlation with the others, which are Management Commitment and Responsibility, Employee Commitment and Responsibility and Teamwork.

#### Component 1: Management Commitment and Responsibility

As figure 2 shows, the component Management Commitment and Responsibility has a strong value of 8.01, which, while not the highest, is ranked number three. This is important because this component has positive correlations with the other nine components. Improvements to this component seem to have a positive effect on all others.

#### Component 2: Employee Commitment and Responsibility

As figure 2 shows, Employee Commitment and Responsibility has the highest value (8.77) and is correlated with Trust in the Company, Employee Satisfaction, Planning and Organization, Teamwork and Service Improvement.

#### Component 9: Teamwork

As figure 2 shows, Teamwork is among the group of components with a lower value (7.71) and is correlated with Management Commitment and Responsibility, Employee Commitment and Responsibility, Employee Satisfaction and Effective Communication.

The company's formal leaders (executive management) play the most important role in developing quality culture. Business culture is a company's main asset. The cultivation and development of business culture should be a priority for business managers. Its creation must be intentional and not by chance. "In fact, possibly the only truly important thing that company leaders should do is create and develop business culture" (Schein, 1996 cited by Pérez, 2003).

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**OPERATION AND INVESTMENT STRATEGY AND FINANCIAL PERFORMANCE  
IN THE SERVICE SECTOR IN MEXICO**

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**ABSTRACT**

The objective of this paper was to identify the impact, as well as the positive or negative mathematical relationship, exerted on growth (sales) and financial performance (operating profit). We looked at strategies of investment in tangible and intangible resources destined for the operation (current assets) and the installed capacity (Fixed Assets) of companies in the service sector in Mexico. In the analysis, financial information published in the Mexican Stock Exchange financial yearbook, from 2000-2012, was used. The positive or negative mathematical relationship exerted by independent factors on dependent factors was determined applying the technique known as Panel Data. The variables considered in the construct of this study were identified and chosen when analyzing the theory of resources and capacities, as well as empirical studies from previous investigations. The main findings concerning companies in the service sector show that current assets have a positive correlation with financial performance. On the other hand, fixed assets are shown not to have any significant mathematical correlation with financial performance.

**Keywords:** Financial performance, Operating and investment resources, Services sector



## INTRODUCTION

Determining and analyzing the financial performance of organizations requires focusing on inputs (input) and outputs (output), in order to guide efforts towards improving investments and operational activities to achieve strategic objectives in the market and profitability. In this regard, productivity and financial performance will be a function of the factors related to investments and operations performed versus financial performance, the latter represented by operating income and growth in sales. An emphasis will be placed on the study of strategies used for organizations to generate value by allowing this as a means of supervision of their performance and growth (Wang & Feng, 2015; Molano & Campo, 2014).

This research article shows the results of the financial performance caused by investment strategies in the operation and fixed assets of the organizations in the service sector in Mexico. In organizations, studies related to financial performance have adopted a different approach, as well as various forms of measurement, since it is unlikely to reconcile a multidisciplinary perspective taking into account the fundamental differences in terminology, assumptions and varied approaches that exist between the various disciplines (Venkatraman & Ramanujam, 1986).

Determining the mathematical relationship that current assets and fixed assets have over financial performance as a result of strategic management is an essential issue for the directors of public and private organizations, and for researchers.

For the most part, research in financial performance, which has been a dominant paradigm since the 1980s, emphasizes the idea that organizations should be seen as a group of resources and capacities to generate value and, consequently, obtain competitive advantages (Lockett, Thompson, & Morgenstern, 2009).

Recent empirical studies related to financial strategies of current assets and fixed assets mostly highlight the identification of competitive advantages, which seek survival and the achievement of financial performance consistent with the requirements of profitability required by shareholders. Consequently, they engage and pursue the interest, the need and the importance to review the theoretical concepts and the empirical postulates that allow us to approach the subject to identify the mathematical relationship between the variables of the resources invested in the current assets and the fixed assets, and the variables of financial performance in the service sector in Mexico.

## THEORETICAL FRAMEWORK

Research on investment strategies in current assets and fixed assets and their impact on financial and organizational performance, based on the resources and capabilities of the company, has not been examined with a comprehensive vision, which allows the identification of their configuration and the covariance between resources, capabilities and financial performance (Yarbrough, Morgan, & Vorhies, 2011; Parnell, 2011).

## **Theory of Resources and Capabilities**

The theory of considering organizations as a broad set of resources and capacities began in the research developed and published by Penrose (1959). The approach, the idea and the postulates of the theory have been enriched through time with the incorporation of multiple theoretical approaches and diverse mathematical models used by researchers from various disciplines.

The theory of resources and capacities (Theory Resource Based-View) (TRBV) analyzes the position of resources and capacities of the company. Those resources generate the support of the competitive advantages that sustain the options and strategic investments adopted by the organizations.

Through time, the particular way of managing and positioning investments in resources and capabilities has generated a good relationship between financial performance, which is represented by profitability, the operating resources and installed capacities of organizations (Wernerfelt, 1984; Lockett, Thompson, & Morgenstern, 2009).

In organizations, empirical studies on financial performance, using support from (TRBV), have found strong differences in the kind and combination of resources used not only between organizations in the same industry, but also within the narrower limits of the groups of the same industry. This suggests that the effects of individual, organization-specific resources on performance can be very significant (Mahoney & Pandian, 1992; Hansen & Wernerfelt, 1989; Cool & Schendel, 1988).

Companies inside the same sectors individually have a unique combination of tangible and intangible resources, skills and knowledge that cannot be transferred easily or without cost and that constitute their resources and capabilities. Companies, in general, are heterogeneous and have different resources, resulting from their history, luck and past decisions on which a competitive advantage can be sustained (Fernández & Suárez, 1996; Teece, Rumelt, Dosi, & Winter, 1994).

The vision, based on resources, postulates that the performance of companies is driven primarily by differences in their resources and capabilities. The resource-based vision focuses on the aspects of value (V), rarity (R), imitability (I) and organization (O), leading to a structure known as (VRIO).

### **Resources**

The analysis and interpretation of resources is summarized by Guizzardi (2005) in the following definition: A resource is "an abstraction of structure elements" that also includes a relation of "realization" that can be used to "connect the elements of structure to the resources." In markets where the resource in question is dominant, companies can do more than obtain a strategic advantage, they can also obtain high returns.

Resources are defined as any tangible or intangible entity available to the company that allows it to produce and offer a product or service in a manner which is efficient or effective and that has value for some market segments (Hunt & Morgan, 1995).

The resources of a company can be defined as those assets (tangible and intangible) that are linked semi-permanently to the company. Examples of resources are brand names, internal knowledge of technology, employment of qualified personnel, commercial contacts, machinery, efficient procedures, capital, etc. (Caves, 1980).

### **The Capabilities**

With more than two decades of research on resources and dynamic capabilities and their impact on strategic management, there are still unresolved issues that research has to address to explain the distinction between resources and dynamic and operational capabilities.

Organizations have specific "capacities" to achieve the organization or the parts that constitute it to carry out a particular activity in a reliable and satisfactory way (Helfat & Winter, 2007). Capabilities describe the routines of the company which consist of integrating and reconfiguring resources and high-level organizational skills (Wang & Ahmed, 2007).

### **Resources and Capabilities: Radical and Gradual Dynamic Changes**

Researchers and professionals interested in the TRBV have used a variety of different terms to discuss the resources and capabilities of a company, including competencies, skills, strategic assets and stocks. The definition of what a resource means is a key challenge for theorists of resources and capabilities (Prahalad & Hamel, 1990; Grant, 1991; Amit & Schoemaker, 1993, 1996; Capron & Hullan, 1999).

Defining precisely and radically when a resource is dynamic or ordinary prevents the use of the concept or similar concepts such as disruptive or discontinuous change. The difficulty in classifying resources generates the probability that the classification of the scope of the radical change is a matter of perspective, experience and degree on the part of the researcher (Helfat & Winter, 2011).

Capacities that promote an important but gradual economic change are also considered dynamic (Helfat & Winter 2011). This criterion is opposed to the desire to draw a line between dynamic and operational capabilities. Change often takes time and a slow but transcendental change requires time to build something easily discernible.

In the research conducted by Birnholz, Cohen and Hoch (2007), it is mentioned that this is "the paradox of the world in constant change." If everything is changing all the time, what is the basis of the impression that some things do not change at all? Part of the answer to this enigma lies in

the perspective of the researcher. If small details are examined closely, much more change is seen than if large phenomena or high-level descriptions are observed or the phenomenon is perceived from afar.

Generalists and specialists observe the permanence of capital investments and the installed capacity of the assets in a different way. Over time, they conceal important changes in the resources or capabilities in the strategy of the organization. Examining the investments or the installed capacity to manufacture a particular good or service for an insufficient period of time does not allow any change caused to be observed by the capital investment or installed capacity and wrongly leads to the conclusion that the company lacks dynamic capabilities.

The resources and capacities are a basic determinant of success, growth and performance of the company and, therefore, constitute the basis of the organizational strategy and sustainable competitive advantage (Schoemaker, 1990).

The resources and capacities that support ongoing businesses, moderately dynamic environments or apparently non-radical changes can have important dynamic attributes that play a fundamental role in the development and competitiveness of companies, generating competitive advantages, high financial performance and reducing risks.

### **CIRCULATING ASSETS**

The resources destined to support the operation of the company, better known as current assets, are part of the financial strategy. They deal with the goals, patterns or alternatives drawn up in different areas to perfect and optimize the financial management of an organization with the predetermined goal of improving existing results and reaching or approaching the best ones by generating value for organizations.

Operating or short-term resources are investments made temporarily to generate surplus income on invested resources for a period not exceeding one year or, in other circumstances, the normal business cycle of the company. Generally, these resources must be invested in high quality, safe and easy to perform values at any time.

### **FIXED ASSETS**

In the long-term assets reside the productive capacities whose fundamental characteristics are permanence in the company for several years, the capacity to produce, to generate income, and therefore benefits, allowing a continuity to business activity (Marshall, Mcmanus, & Viele, 2010). The ability to generate liquidity, solvency and profitability of a company on time, in quantity and to generate margin that enables benefits in companies is in the long-term asset (Riedl, 2004).

The resources of long-term investments, better known as fixed assets, are those investments that are made for the purpose of being used and not for the purpose of being sold. These investments pursue different objectives, such as using surplus resources to produce some additional income in a momentary way. This type of investment is generally used for the acquisition of fixed assets that will generate income for some years or innovation projects that promote the company's growth gradually. To be considered a long-term investment, it is necessary that factors occur that indicate that the company intends to remain the owner of such investment for a period exceeding one year or its normal operating cycle.

The long-term investment in tangible and intangible assets, when planning and designing financial strategies, requires special attention in order to achieve adequate levels of liquidity, solvency and profitability in organizations.

### **GROWTH (SALES)**

Organizations grow because they have investment resources or idle installed capacity or an underutilized distribution channel to which they try to find an application where they take advantage of it to start the production or distribution of new products, diversify their offer to enter different markets, expand their business portfolio and mark the path of growth and expansion of sales in the organization.

Sales are one of the most sought-after activities by companies in their target market, because their success depends directly on the number of times they are made and the financial strategies that have been previously created. The sale of new products causes the company's performance to increase and an innovative idea is a key to success for them (Björk, Boccardelli, & Magnusson, 2010).

The concept of growth in organizations refers to the changes and increases in size reflected in their sales and financial performance causing it to be different from its previous state. That is to say, there have been increases in quantity and dimension as well as a change in their internal characteristics, such as their economic and organizational structure. These increases can be reflected in all or several of the following variables: investment in assets, growth in its product and production lines, new markets, growth in sales and greater profits in operating income.

### **FINANCIAL PERFORMANCE**

The guidance given to the financial management of an organization greatly influences its functioning and the objectives that are key to achieving its financial performance. The objectives set generate the strategies and action plans that govern and allow the achievement of the goals in the financial area as well, as those from the company and the shareholders that contributed the capital for all the tangible and intangible assets used in the operation and investment.

Measuring financial performance in organizations requires using the figures in financial statements. The results show us if the company is doing well or badly economically. The basic financial statements are income statement, balance sheet, retained earnings statement and cash flow statements, based on which a series of financial ratios are derived that are used to measure financial performance.

The figures in the financial statements are used to determine a series of financial ratios. "The financial reasons are designed to reveal the relatively strong and weak points of a company" (Besley & Brigham, 2000). These may be the reasons for liquidity, reasons for asset management, reasons for debt management, reasons for market value and reasons for profitability or financial performance (Moreno, 2003).

The performance or financial profitability indicates the company's capacity to generate profits from the investment made by the shareholders, including the undistributed profits of which they have been deprived. The evaluation of profitability provides a basis for the various investors to determine the feasibility of depositing their resources in the organization when they receive the returns on their contributions.

The profitability is affected by the price and the level of sales, in the same way the profitability or the financial performance is determined by the recovery of the portfolio because it is useless to sell if it cannot be charged. Due to the costs and expenses associated with the activity, the corresponding interest payment, as well as the tax levels activities of the organization decrease their profitability.

The level of profitability or financial performance is improved by increasing the rotation of total assets, decreasing the level of assets or increasing sales with the same available assets, increasing the turnover of stockholders' equity, increasing the net profit margin and increasing financial leverage, thus achieving high operating profitability or financial performance.

### **QUESTIONING, OBJECTIVES AND HYPOTHESIS**

The Financial Theory considers that the investment of economic resources in the operation of the organization and the investment in its installed capacity constitute an important part of the problem of the financial objective of the company. This is identified with the normative principle of maximization of the shareholder wealth considered as a rational guide to plan and manage the financial strategy for the efficient placement of cash surpluses in the capital market or in the investment of tangible and intangible assets. These replace the investment prescriptive models in the companies. It is for this reason that the present investigation will be guided by the following questioning and general objective:

## RESEARCH QUESTIONS, OBJECTIVES AND HYPOTHESIS

### Research Questions

How are the resources that support the operation and the resources that support the investment in fixed assets or installed capacity related to the financial performance and the growth in sales of the companies of the service sector in Mexico?

### Objective

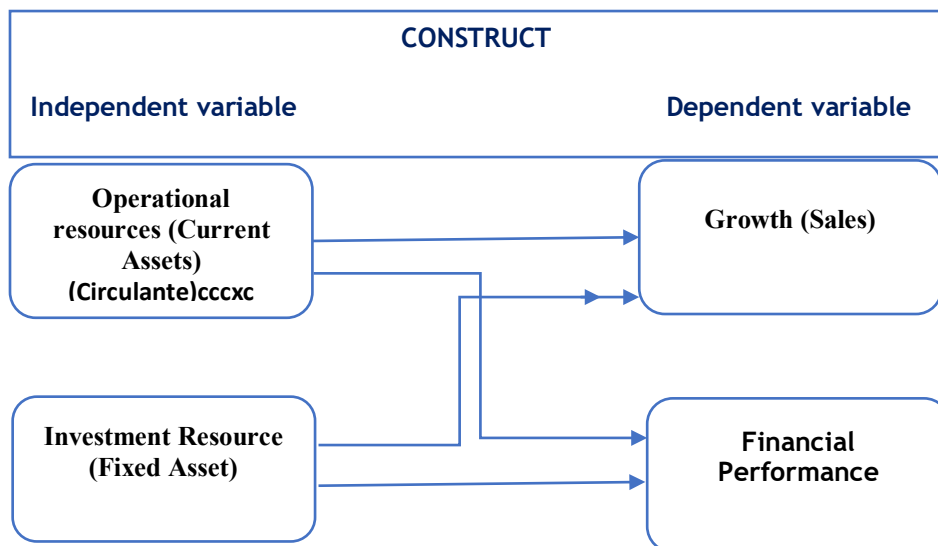
To determine how the resources that support the operation and investment in fixed assets or installed capacity are related to the financial performance and sales growth of companies in the service sector in Mexico.

### Formulation of Hypothesis

The definition of our objectives, the approach of the problem, the analysis of the theoretical framework and the questions formulated in this investigation gave rise to the formulation of the following general hypothesis:

H1: The investment in resources that support the operation and investment in fixed assets or installed capacity is positively related to the financial performance and sales growth of companies in the service sector in Mexico.

**FIGURE 1**  
**Construct with Dependent and Independent Variables**



## SOURCE AND DATA COLLECTION

The data of the specific variables from the companies was obtained from the financial statements published in the financial yearbooks of the Mexican Stock Exchange. The source is very reliable since companies listed on the Stock Exchange have the legal obligation to generate reports at the end of each quarter (Schneider, 2001).

The study sample was non-probabilistic because all companies in the service sector that were constantly quoted in the period 2000-2012 were considered. All companies are classified as large according to the stratification of the Official Gazette of June 2009.

In this research study, two independent variables were considered: 1) Operating resources represented by current assets; 2) Investment resources represented by fixed assets or installed capacity. Moreover, two dependent variables were considered: Sales representing the growth of the organizations and the Operating Profit representing the Financial Performance.

The sample consisted of 6 corporate groups representing 49 subgroups with 368 companies to offer the service. See Table 2.

**TABLE 2**  
**Companies in the Service Sector that were Constantly Quoted on the Stock Exchange**

No.	GROUP	SUBGROUPS	COMPANIES
1	Grupo Posadas S.A.B. de C.V.	Fiesta Americana Vacation Club	105
		Fiesta Americana Hotels & Resorts	
		Fiesta Americana Grand Hotels & Resorts	
		Fiesta Inn	
		Hoteles One	
		Live Aqua Hotels & Resort	
		Otros	
2	Grupo Aeroportuario del Sureste S.A.B. de C.V.	Aeropuerto Internacional de Cancún	9
		Aeropuerto Internacional de Cozumel	
		Aeropuerto Internacional de Huatulco	
		Aeropuerto Internacional de Mérida	
		Aeropuerto Internacional de Minatitlán	
		Aeropuerto Internacional de Tapachula, Oaxaca.	



		Aeropuerto internacional Heriberto Jara, Veracruz. Aeropuerto Internacional Villahermosa	
3	Grupo S.A.B. de C.V.	El Cid Mega Resorts Mazatlán (4) El Cid la Ceiba (Cozumel) El Cid Cancún (Riviera Maya)	6
4	Corporación Mexicana de Restaurantes, S.A.B. de C.V.	Wings Fonda Mexicana Chilli's Olive Garden La Destilería El Lago Red Lobster The Capital Grille Meridiem La Calle	204
5	Grupo Medica Sur S.A.B. de C.V.	Hospital Medica Sur Tlalpan Hospital Medica Sur Lomas Sucursales de Diagnostico Básico	31
6	Grupo Aeroportuario del Centro Norte S.A.B. de C.V.	Aeropuerto Internacional de Acapulco Aeropuerto Internacional de Ciudad Juárez Aeropuerto Internacional de Culiacán Aeropuerto Internacional de Chihuahua Aeropuerto Internacional de Durango Aeropuerto Internacional de Mazatlán Aeropuerto Internacional de Monterrey Aeropuerto Internacional de Reynosa Aeropuerto Internacional de San Luis Potosí Aeropuerto Internacional de Tampico	13

		Aeropuerto Internacional de Torreón	
		Aeropuerto Internacional de Zacatecas	
		Aeropuerto Internacional de Zihuatanejo	
TOTAL	6	49	368

Source: Based on the annual lists of issuers published by the Bolsa Mexican Securities

Independent variables. – For this investigation two specific variables were considered as independent, showed in Table 3.

**TABLE 3**  
**Independent Variables**

<b>Independent Variable</b>	<b>The expected relationship between financial performance (Operating Profit) and growth (Sales), according to the theory of Resources and Capacities</b>
Operating Resources (Current Assets)	Positive
Investment Resources (Fixed Assets, Installed Capacity)	Positive

Source: Based on the annual lists of issuers published by the Mexican Stock Exchange

### ANALYSIS AND INTERPRETATION OF RESULTS

The application of the multivariate technique of the panel data took into account the two dependent variables and the two independent variables and ran the program separately for each one of them. The null hypothesis for each hypothesis was defined as follows:  $H_0: B_i = 0$  where  $i$  corresponds to the independent variable at the level of significance of 5%.

Cronbach's alpha is the average of all the possible coefficients of division by halves that result from the different ways of dividing the reagents of the scale. This coefficient varies between 0 and 1, and a value equal to or less than 0.6 usually indicates unsatisfactory reliability of internal consistency. An important property of the alpha coefficient is that its value tends to increase with the increase in the number of reagents on the scale. Therefore, the alpha coefficient can be inflated artificially and inadequately by the inclusion of several redundant reagents on the scale (Malhotra, 2008).

The reliability of the database elaborated with the results of the elaborated survey was tested through the software SPSS-Version 20.0 using the Cronbach's alpha test to measure its reliability, taking into account the averages of the coefficients. The results are presented below:

**TABLE 4**  
**Cronbach's Alpha**

Cronbach's Alpha	N of elements
.774	4

Source: Based on output data analysis using Spss-Version 20.0 program

Cronbach's alpha is considered a correlation coefficient indicating if the different items of the scale are measuring a common reality; that is, if the answers to these items do not have a high correlation with each other, it would mean that some of the scale statements are not reliable measurements of the construct (Molina, 2008).

It is concluded that in the scale with 5 items they have an excellent correlation when obtaining a value of Cronbach's alpha of .774. The reliability of the scale is high, so it is possible to continue with the analysis.

**TABLE 5**  
**The Variance Inflation Factor (VIF) Test**

<b>VIF Growth (Sales)</b>		
Variable	VIF	1/VIF
Current asset	1.02	0.976954
Fixed asset	1.02	0.976954
<b>Mean VIF</b>	<b>1.02</b>	

Source: Based on the Mexican Stock Exchange for the period of 2000-2012

**TABLE 6**  
**Final Results, After Applying the Panel Data Technique Using the Stata-11 Program**

<b>xtreg net sales, current asset, fixed asset, fe</b>		
<b>Fixed-effects (within) regression</b>		
Group variable: e	Number of groups	= > 6
R-sq: within = 0.53	Obs per group: min	= > 13
between = 0.6250	avg	= > 13
overall = 0.6093	max	= > 13
	F(2,70) = > 40.47	
corr(u <sub>i</sub> , Xb) = 0.1057	Prob > F	= > .0000

<b>vent_n</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>t</b>	<b>P&gt;t</b>	<b>[95% Conf. Interval]</b>		
Current Asset	0.1865217	0.0209555	8.9	<b>0.000</b>	0.14473	0.22	83162
Fixed Asset	0.2563433	0.0746098	3.44	<b>0.001</b>	0.10754	0.4	51479
cons	583752.7	281617	2.07	0.042	22085.2	11	45420

Source: Based on the Mexican Stock Exchange for the period of 2000-2012

The multivariate regression of fixed effects panel data shows that the Current Assets and the Fixed Assets have a positive correlation with the Growth represented by Sales, showing an explanatory capacity of the 0.6250 model.

Financial Performance represented by the Operating Profit: multivariate panel data technique took into account the two dependent variables and the two independent variables.

Test (VIF). The factor of inflation of the variances of returnees (VIF) was calculated with the two independent variables. The result showed an average of the variance inflation factor of 1.02 (Table 7).

**TABLE 7**  
**The Variance Inflation Factor (VIF)**

<b>VIF Financial Performance (Util.)</b>		
Variable	VIF	1/VIF
Current Asset	1.02	0.976954
Fixed Asset	1.02	0.976954
<b>Mean VIF</b>	<b>1.02</b>	

Source: Based on the Mexican Stock Exchange for the period of 2000-2012

Multivariate Panel Data Technique. The final results after adjusting and applying the econometric method through panel data technique are shown in Table 8:

**TABLE 8**  
**Final Results, After Applying the Panel Data Technique Using the Stata-11 Program**

<b>xtreg operating profit, current asset, fixed asset, fe</b>	
Fixed-effects (within) regression	Number of obs = 78
Group variable: e	Number of groups = 6
R-sq: within = 0.5831	Obs per group: min =13
between = 0.9537	avg = 13.0
overall = 0.8230	max = 13
	F(2,70) =48.96
corr(u <sub>i</sub> , X <sub>b</sub> ) = 0.3493	Prob > F =.0000

Operating profit	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]		
Current asset	0.0684152	0.00748	9.14	<b>0.0000</b>	0.05348	0.08	33453
Fixed asset	0.0378841	0.02665	1.42	<b>0.1600</b>	-0.01527	0.09	10409
cons	44739.5	100600	0.44	0.6580	-155902	245	381.4

Source: Based on the with financial data from the Mexican Stock Exchange for the period of 2000-2012

The multivariate regression of fixed-effect panel data shows that the Current Assets have a positive correlation with the Financial Performance, which is represented by the Operating Profit and show an explanatory capacity of the 0.9537 model.

The multivariate regression of fixed-effect panel data shows that the Fixed Asset has no correlation with the Financial Performance represented by the Operating Profit.

**TABLE 9**  
**Variables that Have a Mathematical Relationship in Companies in the Service Sector**

CONCEPT	Current Asset (+)	Fixed Asset (+)
FINANCIAL PERFORMANCE (OPERATING PROFIT)	<b>0.0000 ***</b>	<b>0.1600</b>
GROWTH (SALES)	<b>0.000 ***</b>	<b>0.001***</b>

Source: Based on the output results of the STATA-11 program (See Tables 6 and 8)

The Financial Performance is represented by the Operating Profit for companies in the service sector in Mexico. The obtained result shows a positive relationship with the Current Asset. On the other hand, the Fixed Asset showed no mathematical relationship with the financial performance.

For Growth, represented by Sales, a positive mathematical relationship was identified with the Current Assets and also with the Fixed Assets.

## CONCLUSIONS

The investigation fulfilled its objective of study that consisted of determining the positive or negative mathematical relationship of the independent variables represented by the current assets and the fixed assets with the dependent variables, the financial performance (operating income) and the growth (sales). The mathematical relationship was determined through the statistical technique known as "panel data," using data from companies in the service sector that were continuously quoted on the Mexican stock exchange in the period from 2000 to 2012.

In the model, dependent variables were considered as the growth represented by the Sales, and the financial performance represented by the Operating Profit. Independent variables were considered as the Current Assets and the Fixed Assets.

The results obtained are useful for generating regulations and guidelines which facilitate decision making when planning and managing Current Assets and Fixed Assets of companies in the service sector in Mexico. The results will minimize uncertainty and will sustain investment decisions in tangible and intangible assets in future research projects carried out by companies in the service sector in Mexico.

## LIMITATIONS OF THE RESEARCH

This research study focused on a particular way of identifying the mathematical relationship between Current Assets and Fixed Assets with Financial Performance and Growth of service companies in Mexico. This represents the reason why the factors that emanate out of qualitative characteristics, such as culture, power, country risk and personal values, are aspects that can influence and modify the results obtained, which is why we suggest they be included in future research.

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**DEVELOPMENT OF THE HOSPITALITY INDUSTRY IN TLAXCALA:  
THE IMPACT OF WORKFORCE SKILLS ACCORDING TO THE BALANCED  
SCORECARD**

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**ABSTRACT**

Today, a skilled workforce is what sets an organization apart and determines its competitiveness (Lozano, 2007). Workforce skill is the basis of all organizations. Gardner (1994) considers this concept to be not one-dimensional, but multidimensional. The objective of this study is to analyze the impact of workforce skill on the development of the hospitality industry of Tlaxcala, according to the Balanced Scorecard. A non-experimental, descriptive, cross-sectional mixed-approach was used. The proposed instrument was validated by expert methods and Cronbach's alpha reliability estimate. Forty-one surveys were administered to companies in the hospitality industry in the State of Tlaxcala. The results indicate that, according to the Balanced Scorecard, *Learning and Growth* and *Client Relationship* are the areas [known as "perspectives" in the Balanced Scorecard] in which workforce skills have the biggest impact on industry development.

**KEYWORDS:** Development, Workforce skills, Balanced Scorecard, Hospitality

## INTRODUCTION

According to the World Tourism Organization (UNTWO) (Turismo, 2015), the tourism industry has experienced continued growth and has diversified greatly, becoming one of the fastest-growing industries in the world. This trend has deeply affected the economic and social growth of countries that have made this industry a pillar of their development, where the amount of foreign money brought into the economy by tourism has equaled that of the oil, food products and automobile industries. As new tourist destinations are incorporated, global tourism is closely linked with socioeconomic development; for this reason, this industry has become a key driver of socioeconomic progress.

Since the beginning of Mexico's current federal administration, the head of the Ministry of Tourism has stated that this sector must be a major tool in the country's social and economic development, and it is a powerful instrument to combat poverty. Thus, tourism has already been identified as an important sector for socio-economic development (SECTUR, 2013).

In this regard, it is important to note that the hospitality industry is a major part of the tourist services that all countries must offer their visitors and, according to the National Statistical Directory of Economic Units (Spanish acronym: *DENUE*) of the National Institute of Statistics, Geography and Informatics (Spanish acronym: *INEGI*), Mexico had approximately 23,928 units offering temporary accommodation services in 2015, while the state of Tlaxcala had 310 similar units, grouped according to their distinct classifications.

However, according to the last tourism competitiveness report (BDO Castillo Miranda, 2012), Tlaxcala was ranked last among Mexican states in tourism competitiveness. This critical situation has led to analysis of factors that detract from the development of this sector, which is the topic of this investigation. This topic is addressed while considering the figures that the state provides regarding the growth of tourism. These figures, provided by the Ministry of Tourism and the Economic Development of Tlaxcala (SETYDE, 2015), show that the number of tourists has increased by almost 5% from 2010 to 2012 and an average of 9% between 2012 and 2014. With a little more than 356 thousand tourists, Tlaxcala ranks among the states with the lowest numbers of visitors in the country.

Accordingly, hospitality services are a key component in developing this sector, which depend on one of the most important resources of any organization: workforce skills. It is understood that, since the 5th century BC, the success of any organization has depended on the aptitude and skills of its personnel (Tzu, 2012). Problems are more easily resolved when the personnel have the skills, capabilities and experience to do so (Jericó, 2008).

For these reasons, we highlight the importance of workforce skill as a crucial element in developing the tourism and hotel industry and achieving competitiveness in this industry, which is why this research is socioeconomically relevant. This paper considers a strategic tool with four components (*perspectives*), designed to redirect and guide organizational structure, to enhance

control and business management and to increase competitiveness. These perspectives are Learning and Growth, Internal Processes, Customer Focus and Financial Performance, which Kaplan and Norton (1996) track using their Balanced Scorecard.

## DEVELOPMENT

The word “tourism” is derived from the Latin terms *tornus* (“lathe”) and *tornare* (to go around, to turn, to rotate), and the suffix “-ism” refers to an action in which a group of people take part. According to this etymology, we thus can define tourism as “people traveling with the intention of returning to their home location” (Ramírez, 1992).

Mexico Tourism’s Satellite Account defines tourism as “when people temporarily change their location, as well as the actions they perform while on these trips and outside of their usual environment” (INEGI S., 2003). When people make non-profit trips, they require a large quantity of services, ranging from transportation, lodging and food to attractions, recreation and shopping. Tourism thus encompasses the activities necessary to produce the goods and services that tourists require.

The World Tourism Organization (UNWTO) specifies that this sector includes the activities performed by people during their trips when staying at places other than their usual environment, for a period less than one year, whether for leisure, business or other motives. Thus, when viewed as an activity performed by visitors, tourism is seen not an economically productive activity, but as consumption.

The 2013-2018 National Development Plan, specifically the Sectorial Program for Mexican Tourism, notes that this sector “is one of the main sources of foreign capital coming into the country, as it comprises 8.4 percent of the Gross Domestic Product (GDP) and more than 2.2 million jobs” (Federación, 2017). However, the Plan also notes that the growth of tourism in Mexico has not been as high as in other countries over the last 30 years. For example, during the years 1980-2012, the Annual Average Growth Rate (AAGR) barely reached 2%, whereas in other countries it has been higher. In 2000 to 2012, other countries experienced the following growth rates: Turkey experienced a growth rate of 11.6%; Hong Kong, 8.6%; Japan, 4.8; and Mexico’s growth rate was only 1.1%.

According to the figures of the Labor Observatory, obtained by the Ministry of Labor and Social Security (Spanish acronym: *STPS*), which evaluates labor trends and characteristics in Mexico, 3.1 million were employed in the tourism sector in the year 2013. The results of INEGI’s National Occupation and Employment Survey also highlighted the importance of tourism industry employment for various reasons, including that tourism is a primary source of employment for young people and has become a viable alternative to increase employment rates for this group. It is also gender-egalitarian, as a majority of people working in the field are women.

In rural areas, poverty has been decreased through tourism-related activities, such as the production of handicrafts, ensuring lower poverty rates. Thus, it is important to continue implementing training and skills programs in the tourism sector to develop rural areas, as extreme poverty rates have been reduced by 9.7% in these areas and patrimony poverty rates have been reduced by 12.2%.

These figures show that increasing the professional skills of the people working in this sector will have a multiplicative effect on indicators such as human affairs and social development, which will further increase competitiveness and open these areas to tourism (Gooroochurn & Sugiyarto, 2005), as three million people already work in this field and another 10 million Mexican workers depend on them, which is 10% of the total population.

Tlaxcala's State Development Plan points out that the economy has shown a downward trend over the last decade—a situation accentuated over the last three years by the international financial crisis of 2009, which caused the state's GDP to diminish.

Under these circumstances, this institution faces big challenges, such as overcoming low productivity, low rates of competitiveness, high unemployment rates, a high degree of informality in the industry, low wages and low purchasing power, which prevent demand from growing and prevent the domestic market from becoming stronger.

Currently, Tlaxcala receives 0.29% of the tourists that arrive in the country, which is a little over 278 thousand visitors, according to the Ministry of Tourism's (Sectur) 2013 statistics. And, according to the Mexican States' Tourism Competitiveness Index (Centro de Investigación y Estudios Turísticos del Tecnológico de Monterrey, 2010) prepared by CEITec, the state ranks 30th with 28.5 points, which is 6.3 points below the national average. However, the Mexican Competitiveness Institute (Spanish acronym: *IMCO*) ranks the state 29th, at the 35.69% percentile, which suggests that the competitiveness of the state's tourism industry is the equal to the national figure.

In this context, both competitiveness models analyze what is referred to as the *labor market* or *human resources*, for which the following observations were made: The IMCO report—which analyzed the Economically Active Population (Spanish acronym: PEA) for the section of the labor market that has received training and makes average labor wages—placed Tlaxcala in 20th place. On the other hand, the 2010 Tourism Competitiveness Index of Mexican States (CEITec), which analyzes the subject of human resources according to the ability of people working in an industry to access professional development resources and to increase their competitiveness within their region, considering variables such as the available labor force and the current amount of people employed in tourism, ranked Tlaxcala at 32nd and 30th place, respectively, according to these criteria. The results clearly show that it is necessary to strengthen workforce skill in this sector of the tourism industry. As we have stated above, this research intends to propose strategies to develop and increase the competitiveness of the tourism industry's hospitality sector in the State of Tlaxcala by focusing on workforce skills.

Tourism is one of the most important industries in Mexico, as it accounts for about 7% of the country's GDP. In recent years, this industry has experienced a growth rate of 2%. However, during the economic crisis and the influenza outbreak, there was a 14% decrease between 2008 and 2009. It is worth mentioning that Mexico ranks 9th in the world in terms of the amount of GDP derived from tourism (CONOCER, 2009).

Many companies now realize that their growth and competitive advantages come from the skills, talents and the intangible connections that their employees provide—rather than from investments in physical assets. Thus, to apply these strategies, it is necessary that all employees, businesses and supporting institutions be aligned and linked through these strategies.

Camisón (1996) states that, in service industries such as tourism, the biggest resource is the people offering the service. Consequently, any competitive advantage in this field is directly related to the skills and talents of the workforce, which also contribute to the development of the industry.

Uriel and Monfort (2001), cited by Lillo, Ramón and Sevilla (2007), state that any modern company knows the importance of human resources in fully developing business potential. This fact is thus self-evident in tourism-related industries, where the human factor plays a leading role in tourism services.

In addition, this research is intended to reduce the factors that contribute to low levels of competitiveness, such as failure to integrate technology into tourism services and neglecting accounting duties when managing inventories. Differentiation and innovation in business models and processes will be highlighted (Carrizosa, 2015).

To understand the causes and effects of being a successful company, it is necessary to have a clear understanding of the characteristics of the company's environment and the area in which it operates, which have a substantial influence on the company's business operations as well as how the company achieves its goals (Vadillo, 2011).

A strategic tool designed to redirect and guide organizational structure, to enhance control and business management and to increase competitiveness has four perspectives, which are Learning and Growth, Internal Processes, Customer Focus and Financial Performance, which Kaplan and Norton (1996) track using their Balanced Scorecard. These perspectives are described below:

- Financial performance is the ultimate indicator of a company's success. The strategy describes how an organization intends to implement sustainable growth for shareholders.
- Succeeding in *Customer Focus* is a major component in optimizing financial performance. In addition to providing indicators for a company's success rates with its customers—in terms of customer satisfaction, retention and growth—the customers' perspective can enhance the company's value proposition for specific groups of customers. Choosing a value proposition suitable to the customer is crucial.
- *Internal processes* are used to create and deliver the value proposition to customers. The performance indicators for internal processes also indicate financial results, customer relationship results and other subsequent improvements.

- *Learning and Growth* objectives are composed of intangible assets, which are the definitive source of sustained value. This category describes how people, technology and organizational structure work together to support business strategies. Improvements in *Learning and Growth* also indicate enhanced performance in internal processes, customer relationship and finance.

In the Balanced Scorecard, the objectives of these four categories are linked through cause-and-effect relationships, thus, improving and organizing intangible assets leads to better performance, which, in turn, leads to improved relationships with customers and shareholders.

### **General objective**

Establish strategies to develop the Tlaxcala hotel industry through workforce skills, within the context of the Balanced Scorecard.

### **Research hypothesis**

The development of the Tlaxcala hotel industry is supported by workforce skills, according to the Balanced Scorecard.

## **RESEARCH METHODS**

### **Research design**

This research is based on theory of knowledge and involves logical reasoning, explicit description and the identification and synthesis of patterns in the subject matter.

To validate our research, pathways of dialogue were opened between researchers and the subjects/objects of this study, which were managed, presented and interpreted according to inductive-deductive theories, establishing causal correlations between the applied variables to deduce axioms and theories (Rocha , 2007), maieutics and statistics (research methods) (Ballina, 1997).

In this study, we rely only on observing phenomena in context, studying events within a given period. Therefore, the method is non-experimental, descriptive and transversal. Because the study is based on the observation of industry-related activities, which are subsequently statistically quantified, the research uses a mixed-methods approach.

In this manner, the study complies with all stages of research design: planning, execution, evaluation and feedback (Briones, 2008; Valarino, Yáber, & Cemboraín, 2010).

### Instrument design

To obtain the data, a preliminary investigation was performed of primary and secondary sources. The purpose of this study was to identify the variables that would be used to design and adapt the instrument that would be applied to study hotel industry entrepreneurs in the state of Tlaxcala. The instrument was based on the four perspectives of the Balanced Scorecard.

Once the instrument was developed, it was validated by six experts and Cronbach's alpha. It is worth mentioning that the instrument (an interview-questionnaire) includes the items needed to measure the variables with a Likert scale—in this case, a scale from 1 to 4, where 1: Never, 2: Seldom, 3: Often and 4: Always.

### Sample

The sample was obtained from the directory maintained by the state's Ministry of Tourism and Economic Development (SETYDE, 2015), using the stratified simple random sampling method. The margin of error was estimated at 10% and the confidence level at 90% (Richard, Williams, & OTT, 2007). Table 1 shows the distribution of the stratified sample in relation to the target population.

**TABLE 1**  
**Determining Sample Size by Population**

Municipality	Population (Nt)	Calculated sample size	Established sample size (nt)
Alzayanca	2	0.8	1
Apetatitlan	1	0.4	1
Apizaco	22	8.8	9
Ayometla	1	0.4	1
Calpulalpan	3	1.2	1
Chiautempan	6	2.4	2
Huamantla	14	5.6	5
Mazatecochco	1	0.4	1
Nanacamilpa	7	2.8	2
Nativitas	1	0.4	1
Santa Cruz Tlaxcala	4	1.6	1
Tetla	2	0.8	1
Tlaxcala	20	8	8
Tlaxco	5	2	2
Totolac	10	4	4
Yauhquemecan	2	0.8	1
Zacatelco	4	1.6	1
<b>TOTAL</b>	<b>105</b>	<b>42</b>	<b>42</b>

Source: Based on the 2015 SETYDE

It is important to note that only 41 of the 42 surveys were administered, as Alzayanca’s municipal organization was non-operational.

## RESULTS AND ANALYSIS

### Reliability analysis

Reliability is defined as the degree to which a multi-item instrument consistently measures a population sample. The degree of reliability refers to the degree to which the measurement is expected to be free from error. According to Oviedo and Campo (2005), this index is used to measure the reliability of a scale’s consistency or to evaluate the degree to which an instrument’s items are correlated. Table 1 shows the value obtained for Cronbach’s alpha. These values indicate that the instrument has a high degree of internal consistency and is therefore reliable:

**TABLE 1**  
**Reliability Statistics**

Cronbach's alpha	Cronbach’s alpha based on the established elements	Cronbach’s alpha based on the established elements
<b>.967</b>	<b>.969</b>	<b>.63</b>

### Overview of Balanced Scorecard perspectives

Table 2 shows how the Balanced Scorecard perspectives are related to the instrument that was administered to the companies involved, as well as the average values that were obtained from the employers’ responses. The data shows that the mean of the average values is 2.96, corresponding to “Often”—the employers *often* perform the activities entailed by each question.

The table also shows the average values for the Balanced Scorecard perspectives, which are:

**TABLE 2**  
**Results by Balanced Scorecard Perspective**

Perspective	Average
Learning and growth	3.07
Internal processes	2.91
Customers	3.25
Financial performance	<b>2.92</b>
<b>Mean of averages</b>	2.96



The results show that development of the hotel industry in Tlaxcala depends mainly on the Balanced Scorecard perspectives *Customer Relationship* and *Learning and Growth*. A similar trend was demonstrated in a study on the competitiveness of the hotel industry, based on the theory of resources and skills. The results indicated that the variable “customer service quality” had a 0.682 correlation to competitiveness, according to Tau-b Kendall statistical analysis. The authors also maintain that the variables *resources* and *workforce skills* have acceptable coefficients of determination (greater than 0.7) with respect to the variable *competitiveness*, according to ordinal regression analysis.

**TABLE 3**  
**Determining the Averages of Averages**

Perspective	Primary variable	Associated variable	N	Loss	Mean	Median	Stan. dev.	Variance	Avg. of averages	
			Valid							
Learning and growth	Human capital	Skills	41	0	3.34	3.00	.656	.430	<b>3.28</b> .	
			41	0	3.24	4.00	.916	.839		
			41	0	3.24	3.00	.799	.639		
		Training	41	0	3.15	4.00	1.085	1.178	<b>3</b> .	
			41	0	2.88	3.00	1.122	1.260		
			41	0	2.98	3.00	1.060	1.124		
		Knowledge	41	0	3.10	3.00	.995	.990	<b>3.27</b>	
			41	0	3.34	4.00	.794	.630		
			41	0	3.37	3.00	.698	.488		
	Learning and growth	Business capital	Culture	41	0	2.73	3.00	1.162	1.351	<b>2.41</b>
				41	0	2.10	2.00	1.200	1.440	
			Leadership	41	0	3.29	3.00	.680	.462	<b>3.31</b>
41				0	3.27	3.00	.672	.451		
41				0	3.37	3.00	.581	.338		
Team organization			41	0	3.54	4.00	.552	.305	<b>3.18</b>	
			41	0	2.88	3.00	.980	.960		
			41	0	3.12	3.00	.781	.610		
Teamwork			41	0	3.20	3.00	.926	.861	<b>3.06</b>	
			41	0	2.93	3.00	.985	.970		

Internal Processes	Operations management processes	Provision	41	0	2.20	2.00	1.123	1.261	<b>2.81</b>
			41	0	2.68	3.00	1.059	1.122	
			41	0	3.56	4.00	.550	.302	
		Production and distribution	41	0	3.32	4.00	.850	.722	<b>3.17</b>
			41	0	3.29	4.00	.955	.912	
			41	0	2.90	3.00	.860	.740	
		Risk management	41	0	3.37	4.00	.829	.688	<b>3.30</b>
			41	0	3.24	3.00	.830	.689	
		Customer-related management processes	Selection	41	0	2.85	3.00	1.038	1.078
	41			0	2.41	2.00	1.183	1.399	
	Acquisition		41	0	2.02	2.00	1.060	1.124	<b>2.22</b>
			41	0	3.27	3.00	.867	.751	
	Retention		41	0	3.41	4.00	.741	.549	<b>2.94</b>
			41	0	2.15	2.00	1.174	1.378	
			41	0	3.24	3.00	.943	.889	
	Growth		41	0	3.49	4.00	.870	.756	<b>3.41</b>
			41	0	3.51	4.00	.810	.656	
		41	0	2.88	3.00	1.005	1.010		
	Innovation process	Identifying opportunities	41	0	2.88	3.00	1.005	1.010	<b>2.88</b>
		Investment and development	41	0	2.61	3.00	1.159	1.344	<b>2.61</b>
		Design and development	41	0	3.02	3.00	.935	.874	<b>3.07</b>
			41	0	3.12	3.00	.812	.660	
	Implementing	41	0	2.68	3.00	1.035	1.072	<b>2.68</b>	
	<b>2.62</b>								

Internal processes	Regulatory and social process	Environment	41	0	3.22	3.00	.791	.626	<b>3.27</b>
			41	0	3.32	4.00	.789	.622	
		Health and safety	41	0	3.00	3.00	1.000	1.000	<b>3.07</b>
			41	0	3.24	3.00	.860	.739	
			41	0	2.95	3.00	1.071	1.148	
		Community (employee)	41	0	1.85	2.00	.989	.978	<b>2.45</b>
			41	0	2.54	3.00	1.120	1.255	

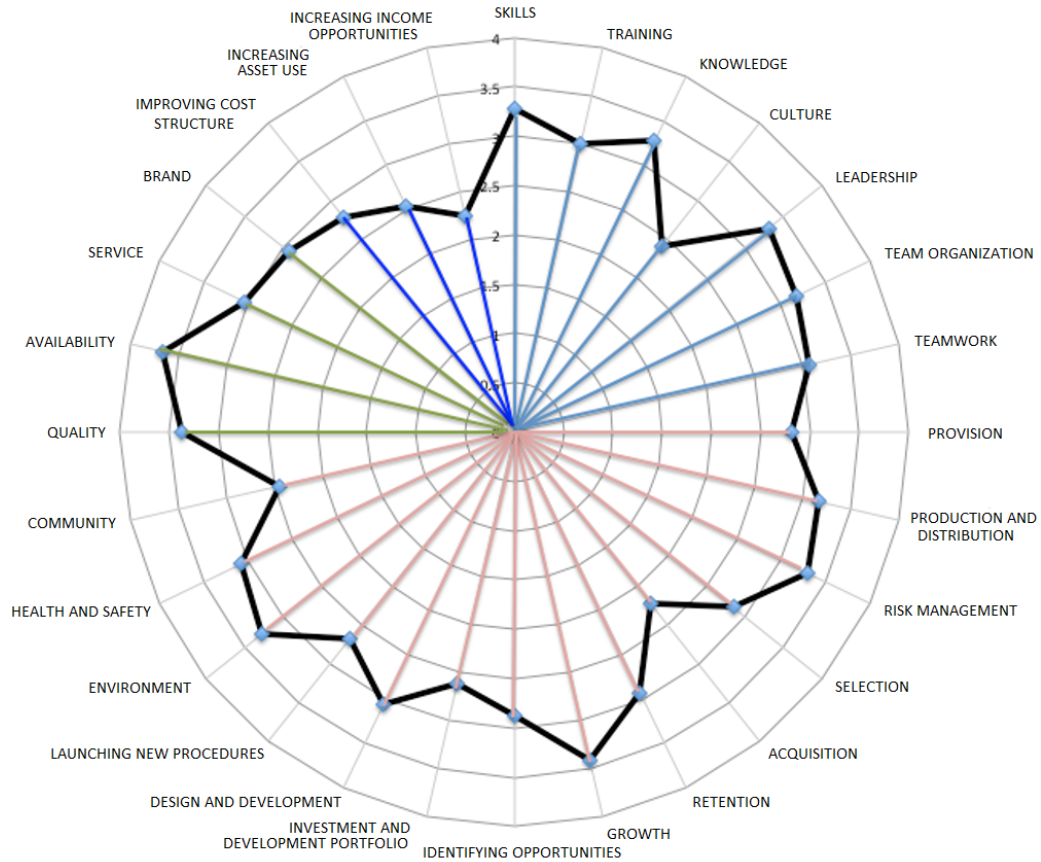
			41	0	2.29	2.00	1.270	1.612	
			41	0	3.12	4.00	1.100	1.210	
Customers	Quality		41	0	3.15	4.00	1.014	1.028	
			41	0	3.32	4.00	.879	.772	
			41	0	3.66	4.00	.656	.430	<b>3.37</b>
	Availability		41	0	3.66	4.00	.575	.330	<b>3.66</b>
	Service		41	0	3.34	4.00	.855	.730	
			41	0	2.73	3.00	1.096	1.201	<b>3.04</b>
	Brand		41	0	2.98	3.00	1.037	1.074	
			41	0	2.83	3.00	.972	.945	
			41	0	3.00	3.00	.922	.850	<b>2.93</b>
Finance	Cost structure		41	0	2.76	3.00	.860	.739	
			41	0	2.80	3.00	.980	.961	<b>2.78</b>
	Increasing asset		41	0	2.54	3.00	1.051	1.105	<b>2.54</b>
	Expanding income		41	0	2.24	2.00	1.044	1.089	<b>2.24</b>
									<b>2.62</b>

Table 3 shows the averages of the responses given by those surveyed. The perspectives *Internal Processes* and *Finances* had lower values, which were between “Seldom” and “Often” on the applied Likert scale. On the other hand, the perspectives *Learning and Growth* and *Customer Relationship* had higher ratings, practically registering as “Often” on the Likert scale.

The results support the research findings on the factors that increase competitiveness in the hotel industry (González, Jiménez, & Martín, 2015). It is evident that intangible assets (organizational resources, human resources and marketing—which in turn encompass competition, culture, strategic planning, organizational structure and employee knowledge and skills) have a direct and positive influence (beta = 0.723) on hotel competitiveness. According to this data, the authors maintain that competitive success depends—directly and indirectly—on a company’s intangible assets.

Figure 1 shows the mean values for each one of the instrument’s associated variables, making it easier to determine what actions entrepreneurs should take to enhance industry competitiveness.

**FIGURE 1**  
**Averages of Associated Variables**



Source: Based on our SPSS data analysis

## CONCLUSIONS

The proposal for developing the hospitality industry, in terms of workforce skills and according to the four perspectives of the Balanced Scorecard, is outlined below.

### Learning and Growth Perspective

We return to the Balanced Scorecard of Kaplan and Norton (2004), in which the objectives of the four perspectives are linked in a chain of cause-and-effect relationships that enhance company value. Accepting that the perspective *Learning and Growth* is the basis of this model—which is composed of intangible assets—two of the three categories are closely linked to workforce personnel:

- 1) Human capital: Employee abilities, knowledge and skills.
- 2) Information capital: Databases, information systems, networks and infrastructure.

3) Business capital: Culture, leadership, team organization, teamwork, among others.

The graph of associated variable averages indicates that this group of entrepreneurs pays more attention to *Organizational Capital* than *Human Capital*. The lowest average values are:

- a. Human capital: Training 3.0 and Team Organization 3.18
- b. Business capital Culture 2.41 and Teamwork 3.06

These results support our proposal. Entrepreneurs may develop competitiveness according to the *Learning and Growth* perspective by focusing on strengthening Workforce Skills and Capital: *Training, Skillsets* and *Team Organization*. However, it is most important to focus on *Organizational Capital: Leadership, Culture* and *Teamwork*.

Therefore, these entrepreneurs must strategically incorporate programs to grow the intellectual capital of their workforce according to their business policies, principals and philosophy, which will result in building important intangible strengths. Through cause-and-effect relationships, improving these factors will add value to an organization, according to the Balanced Scorecard.

This is understandable, as a majority of companies already focus on finding the right personnel during recruitment and selection procedures requiring evidence of developed skillsets from each applicant, which have generally been acquired before entering the organization through formal and informal education and work experience.

However, organizational capital is developed only within the company after personnel has been hired. This comprises of *Culture, Team Organization, Leadership* and *Teamwork* and these must be developed and strengthened within the company. Throughout a work relationship, there should be a daily focus on the human factor. And when a company takes on new personnel, the new personnel should be indoctrinated in the company's values, principles, policies and other internal regulations.

This proposal is intended to inform employers that it is necessary to cultivate and develop employee *Organizational Capital* to gain competitive advantages, according to the *Learning and Growth* perspective.

Finally, the research establishes that the human capital of the tourism industry is comprised of the individuals that interact directly with the customer, and it is through these interactions that tourists develop an opinion about the services performed and whether their expectations have been fulfilled. Therefore, the customer is part of the service process and the customer's impression of the tourism service consumed is influenced by various subjective elements, such as the quality of service and the treatment the customer has received.

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