



## The Relationship between Human Capital and the Competitiveness of SMEs in Mexico City, Mexico

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### Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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### ABSTRACT

The main purpose of this paper was to determine if a relationship between human capital and competitiveness in the SMES in Mexico City exists. To be able to determine the above the data collected in the first phase of this research and the correlation statistics tests were conducted with the Chi-square method. This area of human capital is characterized by predominant levels of medium to very low competitiveness, with the exception of the organizational culture factor. In the same sense, with the exception of safety and health all other existing factors were associated to the competitiveness of the company and it was concluded that no significant relationship exists between competitiveness and the factors of the human resources area in the medium-size companies. An employer should be aware that the human capital is a strategic resource and all of the factors are important to achieve competitiveness, therefore, it is necessary to establish a link between the universities and the business sector to provide training in this area. There are few studies in the Mexican and Latin American context that have linked the human capital competitiveness of SMEs. The contribution of this work is critical to knowledge in such area.

*Keywords:* Human capital; human resources; competitiveness; SMEs.

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**JEL:** M100, M510, M590.

**Management area:** Strategic management.

## 1. INTRODUCTION

Companies micro, small and medium level to represent the global segment of the economy that has the greatest number of economic units and staff occupied; hence the importance of this type of business and the need to strengthen their performance, it also affects in a fundamental way in the global behavior of national economies; in fact, in the international context it can be said that the 90%, or a higher percentage of the total economic units, is formed by the micro, small and medium-sized enterprises, which generate more than half of the employment and a smaller fraction of the gross national product. In many countries represent the most dynamic sector of the economy and brings a greater level of competition, ideas, products and new jobs. In the countries of Latin America the figures vary between 95 and 99%, including the micro business, being the most important stratum [1]. In the case of Mexico, this business sector represents 99.80% of the total of the economic units, contributing 52% of gross domestic product and generate 70% of employment, of there the importance of studying them.

Facing the power of globalization, the increasing integration and interdependence of economies and societies around the world that-phenomenon that originates multitude of issues for all types of business- creates opportunities to increase revenue, reduce costs and raise profits in order to achieve permanence and growth of the company within the market in which it participates. In parallel there is a revolution of the organizational knowledge, or companies in constant learning, if SMEs take this type of learning may benefit from the opportunities previously raised.

Since knowledge is a resource that sustains is ampler post-capitalist society and fundamentally changes its structure, it creates a new social dynamics, a new economic dynamics and a new policy; allows the small businesses that used to topple those which continue with traditional management systems [2,3]. Authors such as Peter Drucker [2], Sullivan [4], Edvinson & Malone [5] posed by the conversion of the organizations knowledge to companies to strengthen their relationships with clients and suppliers, using the information productively. In this sense Camarena [6] points out that staff integrates an organization which

needs to be directly linked with all the structural elements of economy, material, technological, psychological, organizational, social or cultural types , and to become involved in the business strategy, to mobilize their capacities and talents toward corporate and social development.

It should be noted that among these new forms, created to successfully deal with the global challenge is the development of organizational knowledge. So that the knowledge and human talent have become a competitive advantage to changing conditions in the environment. The business efficiency no longer lies in the value of buildings or machinery, but in valuable assets that give strength to the human capital as: the intangible, the knowledge, skill, ingenuity, creativity, the experience of the employees and managers, including the values of its forms of organization, its culture and philosophy [5,7].

From the foregoing, a need arises to perform this research, which has as its objective to determine the level of competitiveness of the factors that make up the area of human capital and establish the relationship of these factors with the global competitiveness of SMEs in<sup>1</sup> Mexico city, reason why it is stated the following research question What is the level of competitiveness of human capital and what is their relation to the global competitiveness of SMEs¿s in Mexico city?

This work is divided into three parts: the first part covers the theoretical framework, develops the theme of the human capital, the competitiveness, the map of the Inter-american Development Bank (IDB), the human capital in a competitive business and the strategic direction for SMEs; the second part presents the background to this study, given that in the first part had already been given the competitiveness of SMEs in Mexico city; finally, the third part presents the competitiveness of human capital of SMEs, which describes the competitiveness by factors

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<sup>1</sup> Micro, Small and Medium-sized enterprises. In accordance with the latest classification of the Secretariat of Economy, 2009: are small which are between 11 and 30 workers for the retail sector, and between 11 and 50 employees in the industry sector and services and have annual sales revenues of between 4.01 up to 100 million pesos. Are the medium that have between 51 to 250 employees for the industry sector, between 51 to 100 workers for the service sector and between 31 to 100 workers for the retail sector and have annual sales revenues of between 100.01 up to 250 million pesos.

and presents the relationship between these and the global competitiveness of companies.

## 2. THEORETICAL FRAMEWORK

### 2.1 Human Capital

The human capital greatly involves a return to a comprehensive vision of economic and social development advocated by Adam Smith (in *the wealth of nations* and the theory of *moral sentiments*). In his analysis of the determinants of the production possibilities, Smith emphasized the role of education and the division of labor; the learning by experience and the technical training; the development of human capacity to lead a decent life and to be more productive is essential for the analysis of *the wealth of nations*.

Under this perspective it can be considered that the economic and social development are interrelated by several factors that determine both concepts, as are the skills, knowledge and effort, and the ability to bring a type of life considered valuable and increase their chances of decision-making.

The values of the human capital arising from the competition, on the attitude and the intellectual agility [8]. Human capital is the combination of knowledge, skills, inventiveness and ability of people to perform a task, includes the values with its forms of organization, its culture and philosophy [5]. Thus, in accordance with Nevado & Lopez [9], the human capital picks up all the individual capabilities, knowledge, skills and experience of the employees and managers of organizations, including the innovation, creativity and inventiveness.

### 2.2 Competitiveness

It defines the competitiveness of the company such as the ability that it has to produce goods and services to an open and increasingly demanding market, and at the same time, create value [10,11,12].

According to Parlad & Hamel [13], the competitive company is that one which is able to create technologies, skills and essential skills that allow you to generate absolutely innovative products or services, at lower cost and faster than competitors.

Several studies have determined that the central element of the business competitiveness is the distinctive competencies that the company owns and operates effectively through management decisions [14,15,16]. The competitive advantage

of the company lies in its internal components: resources and capabilities. A distinction is made between tangible resources- physical, financial and human- and intangible resources- reputation, brand image, organizational culture, experience, skills, and abilities of the employees, etc. [14].

To comply with a purpose, any organization must meet the demands of the *stakeholders* - different interest groups- which it interacts with: government, shareholders, suppliers, competitors, customers, employees, trade unions and financial institutions.

Consequently, the results of the organization are directed toward the community of its action, and there is insufficient attempt to capitalize on its factors of labor and capital, the desired results can only be achieved when it is known and acknowledged that its basic function is to return the productive knowledge acquired, i.e. when the used knowledge explains how to make things better.

In the continuing battle to learn benefits that distinguish them from their competitors, the companies agreed to, over the decades that external variables determined business competitiveness. However, the practice of competitive presents a variety of situations where companies, located in the same industry or economic sector, get different levels of productivity even when external variables and the expectations of profitability would be identical for all.

Today, turning their knowledge productive and achieving the harmony of the contributions of the individual knowledge to all organizational functions are priority of any company. Therefore, it is essential to incorporate, retain and develop people that allow optimal fulfilment of this business function [17].

At present, the competition is turning tangible the value of the intangible, becoming visible the hidden values that add value to the organizational operation. The safe sources for companies to achieve a competitive advantage in the market are in the knowledge and information processing, in the management of human talent, in their creative ability and innovation.

### 2.3 Map of competitiveness of the IDB

The map of competitiveness<sup>2</sup> was developed by the Inter-american Development Bank (IDB) and

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<sup>2</sup> It is called map because it achieves a score of each of the areas of the company, which performs a diagram that shows the strengths and weaknesses of the same.

adapted by the Chamber of Commerce of Medellin, Antioquia, to be used in organizational diagnosis of SMEs, displayed to the organization as a system that is composed of nine areas that interconnection improves the performance of the organization [18]. The same is presented below in Table 1.

For purposes of this research there were only used the data of competitiveness of human capital, this factor is explained below:

**Human capital:** The management of human capital can be conceived of as a business strategy that expresses the importance of the relationship to the individual versus collective relations between managers, directors or workers, encouraging the active participation of all workers in the company.

Businesses get to be competitive by the knowledge, the level of preparation and skills that workers and their job performance. To do this, policies that promote the proper selection of personnel should be established, ongoing training at all levels, an appropriate working environment and motivation – to grow and develop within the company.

In the framework of the knowledge-based economy, human capital has become the main pillar of the competitiveness in the business. Human capital is composed by the knowledge, skills, values, attitudes and competencies that are individually and collectively the organizations to generate and apply the knowledge; determines their ability to create new products and services, to access new markets, to implement and realize the full potential of technological change, to stay and grow in the market [19,20].

The Map of competitiveness for this area considers factors such as:

**General aspects related to the company's** organizational structure, policies and procedures manuals, as well as the existence of a board of directors to lead the company and compliance with the legal requirements in force.

**Training and promotion of staff includes** the training program and the rewards and promotions in accordance with the skills and productivity of staff.

**Organizational culture involves** the communication, the sense of belonging,

team work, programs and incentives for improving the working environment, and social and cultural activities to integrate staff.

**Health and safety:** Occupational health program, safe working environment and industrial safety.

## 2.4 Human Capital in a Competitive Company

The success of a company, in many cases is related to an effective management of human capital, given that it is the factor that makes a company to be different, as the structure or technology can easily be copied [21].

The literature has emphasized the importance of intangible resources such as determinants of business competitiveness [22,23]. According to Martin [24] the company must invest in human capital and technological capital, reputation (brand image) and organization.

The competitive advantage that provides human capital is possible if the company ensures that its staff adds value to their production processes, converting them into a single resource, difficult to replicate and replace [25]. Thus, Cantillo & Daza [26] indicate that the human capital is increasingly important over other resources of an organization, because it is in the hands of people where is the success or failure of the company, it depends on them all the carried out processes and they are responsible for causing the customer satisfaction. A well-trained human capital, with values, ethical principles and a mentality focused to achieve the objectives of the company, represent a competitive advantage for the same.

In this regard, Werner & Linde [20] underwent a study in South Africa to evaluate human resource management in SME's as a tool to guarantee its efficiency in achieving competitiveness. The results of this study point out that managers of SME's perceive that human resource problems are an important obstacle to the success of the Company; however, in addition to the fact that they do not seek external assistance there is an existing deficit in the use of human resource management practices.

On the other hand, Puwardi [27] evaluates Human Resource practices to increase competitiveness and in doing so concludes that

development and promotion practices may increase a Company's level of competitiveness.

### 2.5 Strategic Direction in the SMEs

The relationship between strategies and key features of management has been examined in previous works [28,29,30,31,32] which, in general, have found that the strategic orientation differs in the factors of management and core competencies [33]. However, all of them have joined the field of the great company, with the exception of Camisón [12]; this type of analysis has hardly been done in the field of SMEs.

It is worth considering certain management features of the SMEs, which can be key to its competitiveness [12], as the technological resources and innovation, flexibility and organizational design, cooperation and human capital [34,4,35], which demonstrated the performance of the essential role in achieving and maintaining the competitiveness of SMEs.

As well, the emphasis on proper management of human capital is one of the main concerns of today's businesses, as various studies have found a positive relationship between the human capital management and business results [25].

**Table 1. Map of the competitiveness**

Areas	Subareas
Strategic planning	- Strategic Planning Process and Implementation of the strategy
Production and operations	- Planning and production process - Production Capacity - Maintenance - Research and development - Provisioning - Inventory Management - Location and infrastructure
Quality assurance.	- General Aspects of the quality - Quality System
Marketing	- National Marketing: marketing and sales - National Marketing services: - National Marketing: distribution - Export Marketing: Plan exporter - Export Marketing: Product - Export Marketing: Competition and marketing - Export Marketing: international physical distribution - Export Marketing: negotiating Aspects - Export Marketing: participation in missions and trade fairs
Accounting and finance	- Monitoring cost and accounting - Financial Management - Legal and tax rules
Human capital	- General Aspects - Training and promotion of staff - Organizational Culture - Industrial Safety and Health
Environmental management	- The company environmental policy - Strategy to protect the environment - Raising and training of staff in environmental issues - Management of the waste
Information systems	- Planning of the system - Entries - Processes - Outputs

Source: Based on Martinez & Alvarez (2006)

However, Zahra & Pearce [36] note that managers will focus on different philosophies of human capital management depending on the type of strategy of the organization. In this sense, Miles & Snow [37] define the human capital practices most appropriate for each of the strategic types. These relationships are usually supported by the empirical literature [38,8]. Generally, defensive companies have less developed systems of management of human capital, since they use the recruitment and internal selection, design traditional restorative systems based on a fixed salary and hardly evaluate the performance of the employees; however, they give great importance to the long-term oriented training [37].

On the contrary, the exploring companies use more developed companies management systems: resort to external recruitment and selection, design evaluation systems oriented by the performance and reward based on the variable remuneration; on the other hand, they provide limited and informal training [37]. Camisón [12] found that the most innovative companies –exploring- coose in favor of a more developed systems in the human capital management, although they give less importance to the training; smaller companies and proactivity –analytical and defenive– are choosing in favor of less developed practices of human capital, although, the training takes on a prominent role.

### **3. THE COMPETITIVENESS OF SMEs IN MEXICO CITY**

This work is the second part of a research project in which the competitiveness of SMEs in the micro-level or internal factors, so that the descriptive data were taken from the findings of Saavedra, Milla & Tapia [39]. For the determination of the competitiveness both overall and by sectors, sizes and factors used the map of competitiveness of the IDB adapted by Saavedra & Milla [40]. The map of competitiveness of the IDB is a tool that consists of a questionnaire whose answers are found in a Likert scale from one to 5, where 1 means "does not meet"; 5, "fully meets".

#### **3.1 Formation of the Shows**

The sample is made up of 400 companies for the 16 townships in Mexico City. It was calculated on the basis of 382.056 economic units which INEGI posted in the last economic census of companies in 2009, with a confidence level of 95% and a maximum error of 5%.

The total sample of 400 companies was shaped by 10.3% companies from the industry sector, trade 48.0% and services 41.8%. With regard to the size of company, the sample was characterized by 91.0 per cent of micro-enterprises, 7.3% of small and only 1.8% of medium.

#### **3.2 Global Competitiveness of Companies**

The total competitiveness of all the companies of the entire sample reached 41.85 %, while the ranges of competitiveness achieved indicate that the 73.3% of the companies are low competitiveness and only 17% of high or very high competitiveness (see Table 2). That is due to the fact that in Mexico City, more modern productive and technological processes coexist, communication and global trade, along with an informal economy, without access to the systems of social welfare and a rural subsistence vulnerable sector [41].<sup>3</sup>

The Government created support programs oriented to the productive chain and to the services of leading companies for small and medium companies, resulting a positive policy, therefore we find in these sectors dynamic and competitive businesses. However, there is a challenge to the competitiveness of the microenterprise, since the strategies of the Government have not been able to develop it.

#### **3.3 Global Competitiveness by Factors**

In terms of global competitiveness by factors, the areas of opportunity for SMEs are presented in each of the above-mentioned factors, predominating: strategic planning, information systems, human capital, environmental management and quality assurance (Graph 1).

#### **3.4 Competitiveness by Sector**

Mexico city's government considers that the competitiveness of SMEs is based on the performance related to the creation of the necessary conditions to potentiate their capabilities, both in the innovation of processes, such as in the momentum of research and development of new products for the increase in productivity, the strengthening of the profitability,

<sup>3</sup> It is calculated as average for all firms in the sample.



training, innovation and participation in the markets, based on the advantages associated with products or services, as well as in the conditions that offer [42].

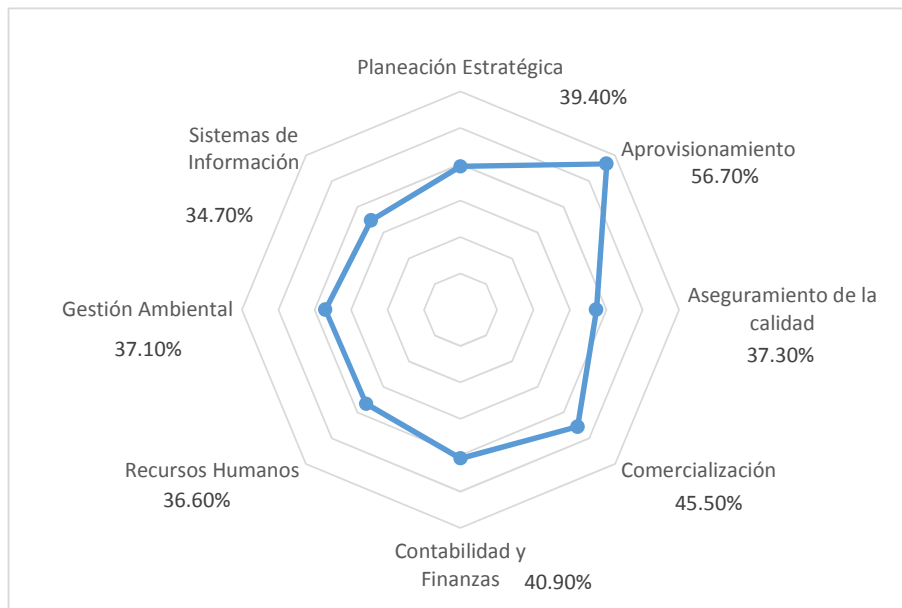
With respect to the industry, only 36.6% is highly competitive and about 60% of low competitiveness, as a result of the lack of an industrial policy defined for several decades (see Table 3).

In both the trade and services sectors, three-quarters of business are not competitive. For the retail trade sector, the government has established programs of support as “my shop”, “my shoe-store” and “my pharmacy” with the objective of finance their growth and development, offering specialized consulting and training to the employer in the administrative areas, commercial and technological, in order to make their business profitable and not survival.

**Table 2. Global competitiveness of companies**

Range of competitiveness	Total number of surveyed companies	Percentage
Very high 81 - 100	14	3.5%
High 61 - 80	54	13.5%
Median 41 - 60	39	9.8%
Low 21 - 40	292	73.0%
Very low 0 - 20	1	0.3%
Total	400	100.0%

Source: Saavedra, et al. , 2013



**Graph 1. Global competitiveness by Factors**

Source: Saavedra, et al., (2013).

**Table 3. Global competitiveness of enterprises by sector (Percentage)**

Range of competitiveness	Sectors		
	Industry	Trade	Services
Very high 81 - 100	19.5%	2.1%	1.2%
High 61 - 80	17.1%	11.5%	15.0%
Median 41 - 60	4.9%	10.9%	9.6%
Low 21 - 40	58.5%	75.0%	74.3%
Very low 0 - 20	0%	0.5%	0%
Total	100.0%	100.0%	100.0%

Source: Saavedra, et al. 2013.

The specialized services sector makes up only 16.2% of turnover of high competitiveness and has supporting programs such as Prosoft<sup>4</sup>, which encourages innovation and the high value added services in information and communications technologies (ICT).

#### **4. COMPETITIVENESS OF THE HUMAN CAPITAL OF SMEs IN MEXICO CITY**

##### **4.1 Competitiveness of the Human Capital by Factors**

Below presented, the level of competitiveness attained by each of the factors in the area of human capital of the companies analyzed.

As you can see in Table 4, on the general aspects of the Human Capital compounded by the organizational structure, policies, manuals, and legal requirements that represent 65% of the total number of firms, we are only referring to the range of medium, low and very low competitiveness, this shows that this business sector does not practice administrative methods to improve the organization of the work done by their staff. In regard to the training and promotion of staff, more than 50% of the companies are in the range of medium, low and very low competitiveness, this implies that the companies have not been made aware of the importance of having a trained and motivated staff as the main element for increasing productivity. In what refers to the factor of organizational culture on 67% of the companies are in the range of high and very high competitiveness, which indicates that good communication channels, sense of belonging, teamwork and integration activities of the staff, are held. With regard to health and safety, more than 50% are in the range of medium, low and very low competitiveness, worrying aspect because this would indicate that most of the companies lack an occupational health program and a safe working environment, which can cause an increase of accidents at work.

##### **4.2 Relationship between the Factors of the Area of Human Capital and the Competitiveness of SMEs**

In order to perform this test the following null hypothesis was made:

Ho1: there is no relationship between the factors of the area of human capital and competitiveness.

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<sup>4</sup> Program for the Development of the Software Industry

We used the method of Chi-square to determine which is the relationship that exists between the factors of the area of human capital and global competitiveness of enterprises, with a confidence level of 95% and an error of 5%, the Chi-square method is employed because the variables that are related are qualitative or categorical in nature thus, an independent proof is executed to contrast the hypothesis that indicates that variables are independent; thus, no relation exists amongst them.

The following results were obtained (Table 5).

As it can be seen in Table 5, significant results were found in the relationship between competitiveness and the factors of the area of human capital, which can be interpreted as follows:

- The general aspects of the area of human capital affect the competitiveness of their business, given the importance of having a professional management [12].
- Training and promotion of staff has relation to the competitiveness of SMEs, due to the fact that a trained manpower and motivated can increase the productivity of the company [34,35].
- The organizational culture affects the competitiveness, given the importance of fostering communication, team work, and a working environment of cordiality and respect [26].
- For its part, the Health and Safety factor does not have any relation with the competitiveness, which might be because the companies will not give much importance to this heading, both by its dimension, such as the use of craft processes.

In general terms, the competitiveness of the area of human capital clearly has an impact on the global competitiveness of the company, whereas [26], as the owners of human capital, pose that the employees have become an important factor in the effective implementation of the business strategy [43,44].

##### **4.3 Relationship between Competitiveness by Company Size and the Factors of the Area of Human Capital**

In order to perform this test the following null hypotheses are made:



Ho2: There is no relationship between the competitiveness of the micro-enterprise and the factors of the area of human capital.

Ho3: There is no relationship between the competitiveness of the small business and the factors of the area of human capital.

Ho4: There is no relationship between the competitiveness of the medium-sized enterprises and the factors of the area of human capital.

We used the method of Chi-square, to determine which is the relationship that exists between the size of the company, the competitiveness and the factors of the area of human capital, with a confidence level of 95% and an error of 5%, with what was achieved the following results (Table 6).

As it can be seen in the table 6, only in the medium-sized businesses the factors of human capital have no effect on the competitiveness; while the micro and small business significantly impact the competitiveness of the company. In some way could be interpreted as follows:

- The factors of the area of human capital of the micro enterprise affect competitiveness, except for the factors of Health and Safety and organizational culture, this should be a very small size of the company would be limiting investment in security aspects, as well as on integration of the staff.

- The factors of the area of human capital of the small business have an impact on the competitiveness, with the exception of the factor of training and promotion of staff, which is due to the fact that these companies use mainly unskilled labor and high turnover.
- The factors of the area of human capital of medium-sized businesses, on the contrary, does not have an impact on competitiveness, it must be noted that in accordance with an increased size of the companies, they become more capital- and technology-intensive than in labor, so the incidence of human capital is not significant.

#### 4.4 Relationship between the Competitiveness of Business Sector and the Factors of the Area of Human Capital

In order to perform this test the following null hypotheses are made:

Ho5: there is no relationship between the competitiveness of the industrial enterprise and the factors of the area of human capital.

Ho6: there is no relationship between the competitiveness of commercial enterprise and the factors of the area of human capital.

Ho7: there is no relationship between the company's competitiveness in services and factors of the area of human capital.

**Table 4. Competitiveness of the factors in the Area of Human Capital**

Range of competitiveness	General aspects	Training and promotion of staff	Organizational culture	Health and safety	Total human capital
Very high 81-100	20.00%	31.25%	34.00%	22.75%	19.50%
High 61-80	14.75%	15.25%	33.25%	23.00%	33.75%
Median 41 - 60	20.75%	22.50%	23.75%	27.25%	30.25%
Low 21-40	26.75%	12.75%	6.25%	17.75%	14.75%
Very low 0-20	17.75%	18.25%	2.75%	9.25%	1.75%
Total	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Own preparation.

**Table 5. Relationship between competitiveness and the factors of the area of Human Capital**

Factor	Regarding the competitiveness
General Aspects of the area of Human Resources	0.000
Training and promotion of staff	0.019
Organizational Culture	0.000
Health and Safety	0.162
Area of Human Capital	0.000

Source: Own preparation.

Note: we do not reject the hypothesis when p is greater than 0.05.

**Table 6. Relationship between the competitiveness by company size and the factors of the area of Human Capital**

<b>By size and competitiveness factors of the area of human capital</b>	<b>Micro</b>	<b>Small</b>	<b>Median</b>
General aspects of the area of Human Resources	0.000	0.013	0.213
Training and promotion of staff	0.013	0.106	0.402
Organizational culture	0.072	0.000	0.055
Health and safety	0.080	0.009	0.301
Area of human capital	0.001	0.000	0.087

Source: Own preparation.

Note: we do not reject the hypothesis when  $p$  is greater than 0.05.

**Table 7. Relationship between the competitiveness by sector and the factors of the area of Human Capital**

<b>Competitiveness by sector and factors of the area of Human Capital</b>	<b>Industry</b>	<b>Trade</b>	<b>Services</b>	<b>Total</b>
General Aspects of the area of Human Resources	0.805	0.000	0.105	0.000
Training and promotion of staff	0.581	0.043	0.170	0.019
Organizational Culture	0.528	0.642	0.001	0.000
Health and Safety	0.591	0.088	0.081	0.162
Area of Human Capital	0.498	0.012	0.000	0.000

Source: own preparation.

Note: we do not reject the hypothesis when  $p$  is greater than 0.05

We used the method of Chi-square, to determine which is the relationship that exists between the sector to which the company belongs and the factors of the area of human capital, with a confidence level of 95% and an error of 5%, with what was achieved the following results (above Table 7).

As it can be seen in Table 7, the industrial company did not provide significant results in comparison with the commercial and services enterprise. The above could be interpreted as follows:

- The factors of the area of human capital of the industrial enterprise clearly do not have any impact on the global competitiveness of the company, this is likely due to the fact that this sector uses craft processes, therefore its workforce is not qualified and, furthermore, is high-rotation.
- The factors of the area of human capital of the company commercial impact on the competitiveness, except the aspects of organizational culture and health and safety, as in this sector is very important the treatment to the client and the human capital plays a key role in this aspect, so that should be promoting actions to improve the communication and the integration of the staff; while in the case of a process of buying and selling the

entrepreneurs do not consider important to address the health and safety aspects.

- The factors of the area of human capital of the company of services does not affect the competitiveness of the company except in the factors of organizational culture, it is clear that in the services sector human capital is essential for achieving competitiveness. However, the low incidence of SMEs in this area should be, in this sector, there are other factors that are considered to be of greatest relevance as the investment in technology and information systems.

## 5. CONCLUSIONS

SMEs face problems related to the quantity and the quality of human capital and of the competences, by which it generates a significant barrier to increasing their productivity, this is a key challenge for Latin America. Therefore the expansion of the potential growth in the region, the greater capacity to compete and innovate in the global economy and the creation of employment and opportunities for the Latin American society require to strengthen and energize the sector of small and medium-sized enterprises. That is why a reflection on the role the public policies can play to take up the challenge, is necessary.

Despite the importance that, today, has the human capital on the competitiveness of the organizations, the practice of the management of intellectual capital in Mexico is not frequent within the companies, therefore the findings of this work show levels of medium to low competitiveness in the competitiveness of the factors of human capital within the analyzed SMEs. Although studies have shown that this resource is valuable to achieve business success, the lack of a well organized human capital management, the lack of training and promotion of staff, lack of security elements that give the worker in their working area would weaken competitiveness to the companies in this sector. In contrast, the factor that was with a high and very high competitiveness was the organizational culture, indicating that the SME entrepreneurs worry about having a good communication with their employees and seek to integrate the company, therefore achieve success in the working teams.

With regard to the relationship between competitiveness and the factors of the area of human capital, it was found that all factors are related except for the Health and Safety, demonstrating that SMEs entrepreneurs do not give importance to this factor because they see it as an unnecessary expense, consequently exposing their staff to work risks.

In regard to the relationship between competitiveness by size and the factors of the area of human capital, only in the medium company is not a significant relationship this is likely due to the fact that when the company has greater dimension, looking for a greater technological development by giving greater importance to investments in this area.

The practical implications of this work is vital for researchers in the field of competitiveness and for employers, who must realize that they need more and better tools to better manage their human capital to raise its competitiveness. The social implications are related to the importance of having small competitive companies that maintain current sources and generate new jobs, to break down the large gaps that exist same as shown in the lack of jobs.

The implications of this study show that the employer should be aware and know that the human capital is a strategic resource and all of the factors are important to achieve competitiveness, therefore, it is necessary to establish a link between the universities and the business sector to provide training in this area,

enabling the employer to perceive the great need to better manage their human capital.

Finally it should be noted that there are few studies in the Mexican and Latin American context that have linked the human capital competitiveness of SMEs. So the contribution of this work is critical to advance knowledge in this area.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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