

## The impact of the environment on MYPES companies a comparison Mexico-Colombia

### El impacto del medio ambiente en las empresas MYPES un comparativo México-Colombia

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#### Abstract

Micro and small enterprises (MSEs) play a role of great importance in the development of any economy due to their relationship and impact on the generation of employment and economic growth, and generally worldwide, represent on average 80% of the businesses of an economy. The results determined that Colombia and Mexico should reconcile the objectives of trade and environmental policies in order to achieve the most efficient use of natural resources, the reduction of environmental damage and the most efficient use of market instruments. In the end, it was concluded that the entrepreneurs of the MSEs should attach greater importance to the construction of the reputation and prestige of their company in the market, and achieve the support and acceptance by the community, in achieving greater dynamism. Likewise, and given the importance of the knowledge, skills and abilities of employees, these companies must work to improve the low educational level of their employees and increase their professionalization.

#### Resumen

Las micro y pequeñas empresas (MyPes) juegan un papel de gran importancia dentro del desarrollo de toda economía debido a su relación e incidencia en la generación de empleo y crecimiento económico, y de manera general a nivel mundial, representan en promedio el 80% de los negocios de una economía. Los resultados determinaron que Colombia y México deberían de compatibilizar los objetivos de las políticas comerciales y ambientales a fin de alcanzar el uso más eficiente de los recursos naturales, la reducción de los daños ambientales y el uso más eficiente de los instrumentos de mercado. A final se concluyó que los empresarios de las Mypes deben conceder mayor importancia a la construcción de la reputación y del prestigio de su empresa en el mercado, y lograr el apoyo y la aceptación por parte de la comunidad, en lograr un mayor dinamismo. Así mismo, y ante la importancia que revisten el conocimiento, las habilidades y las destrezas de los empleados, estas empresas deben trabajar por mejorar el bajo nivel educativo de sus empleados e incrementar su profesionalización.

#### Environment, Impact, Companies

#### Medio ambiente, Impacto, Empresas

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## Introduction

### *Background*

Micro and small enterprises (MSEs) play a very important role in the development of any economy due to their relationship and impact on employment generation and economic growth, and in general, worldwide, they represent on average 80 per cent of the businesses in an economy. Microenterprises are all those businesses that have less than 10 workers, generate annual sales of up to 4 million pesos and represent 95 percent of the total number of companies and 40 percent of employment in the country; they also produce 15 percent of the Gross Domestic Product, according to an article published by the Ministry of Economy in 2012. A sustainable company is one that seeks success in various aspects such as: well-being of its employees, quality in its products or services, care for the environment from its responsibility to both society and its employees. Sustainability is also known as sustainability, and refers to a type of work that by taking responsible actions with the environment, innovation in its production or the impact of its work in the social and economic spheres of its country will obtain great benefits that will allow it to be maintained for a long time without exhausting its own and external resources. In this sense, the importance of this sector of the economy is transcendental for the generation of jobs, development of production, and sustainable management of the economy, according to the author (Ponce & Mercado, 2020).

In Mexico, measures and presentations have begun to be put together so that companies begin to implement sustainability programmes. Currently, one of the most common practices for companies is to send their waste to cheaper treatment plants, without really looking at whether this is the best disposal option for what they produce. This then becomes a mismanagement of industrial waste that generates a high negative impact on the environment and society. Similarly, not many companies are concerned about their participation in the social life of the country, feeling that their job is to produce or offer products and services directly and almost unilaterally to their clients, but those that take into account the social context in which they develop may have better chances of survival and success in the long term.

It is important to highlight that environmental management is made up of the set of policies and activities that companies develop with the aim of protecting and conserving the elements that make up the environmental system in Mexico, and also has programmes focused more on visual noise, which is why in this research we want to find out how important social responsibility is for businessmen, through integrated management that leads to the prevention and mitigation of problems of an environmental nature.

Van Hoof (2005) highlights that for most MSEs, environmental management is not a relevant and priority element for their management. This low priority is due to a set of factors such as the high level of informality, the low demand of their markets, mainly local, and the low capacity of the environmental authorities to exercise control and compliance with environmental regulations. For their part, Bercovich & López (2005) mention, among the causes of the inadequacies in the environmental management of MSEs, the following: The lack of information and lack of knowledge of the regulations in force and the standards they must comply with, their requirements and deadlines; economic difficulties, as companies are reluctant to face the costs involved in the whole environmental audit process, as well as the identification of technologies that must be incorporated; difficulties in accessing financing, in particular specific lines for environmental management or clean production, added to the fact that banks, in general, have neither specific lines nor staff trained to understand projects in the environmental area; in addition, firms need support to prepare and submit applications for financing environmental projects.

In this sense, Rodríguez & Velez (2018) express that business environmental management in MSMEs can become one of the weapons to face the opening of markets, as long as the different actors of the business and environmental sector manage to orient themselves towards potential niches, for this it is required to adapt a new management that strengthens the coordination between them and leave the traditional approach of an isolated environmental management, integrating it to the competitiveness of companies and region as a whole, since as indicated by Ojeda & Mul (2015) there is a positive linear relationship between environmental management and competitiveness.

Saavedra, Milla & Tapia (2013) citing Solleiro & Castañón (2005), point out that competitiveness is the ability of an organisation to maintain or increase its market share based on new business strategies, in a sustained growth of INNOVA Research Journal 2018, Vol 3, No. 1, 117-129. Monthly Review of UIDE Extension Guayaquil 119 productivity, on the inter-firm capacity to participate in negotiations with different institutions and other companies within its environment, on the existence of a competitive environment determined by the sector and the consumer market, and on policies introduced by national governments and regional economic alliances.

In the global economic context, Micro and Small Enterprises constitute an important part of the productive sector. In the growth of developed countries, as well as those that are in the process of achieving it, these economic units are of great relevance due to their contribution to their economic development. In Mexico, based on information from the National Institute of Statistics, Geography and Informatics (INEGI) in 2009, it is estimated that MSMEs make up 99.8% of all economic units in the country, contribute around 69% of GDP and generate 78.5% of jobs.

For these reasons, in 2011 the Sustainability Index was created in the Mexican Stock Exchange (BMV), which certifies sustainable or sustainable companies mainly according to three criteria:

- Management and use of natural resources.
- Social responsibility.
- Corporate governance.

On the other hand, the Ministry of Environment and Natural Resources (Semarnat) has registered approximately 2,000 companies with the Clean Industry certificate, which refers exclusively to their commitment to the sustainable development of the regions in which they are located. Those companies that have been certified by SEMARNAT have taken actions that in reality could be easily implemented by almost any company.

## **Problem**

The environmental irresponsibility of most corporations is one of the main causes of the environmental deterioration of the planet. This corporate attitude is expressed in global, international damage at all levels, as well as local damage. In Mexico, the environmental impacts caused by Petróleos Mexicanos (Pemex) stand out, especially in southeastern Mexico. Pemex has dramatically damaged vast regions of ecosystems rich in biodiversity and productivity, affecting the quality of life and the economy of thousands of people. This corporate environmental irresponsibility is not only found in Mexico, but also in Colombia, such as visual noise, among others. In Mexico, the Federal Environmental Protection Agency (Profepa) lacks autonomy and resources, which demonstrates the government's insensitivity and lack of interest in natural resources.

In Mexico, as in Colombia, where democracy is incipient, it is common to find that the companies with the greatest impact on the environment are those that invest the most in advertising campaigns claiming to be environmentally responsible. Pollution is one of the most important environmental problems affecting our planet; that is why it has become a subject of inevitable discussion, from the 1960s when environmental awareness began to emerge (on a global scale), to the present day, since we are both victims and perpetrators of this serious problem on a daily basis. During the last 200 years, man has added a large amount of chemicals and physical agents to the environment as a consequence of his dominance over natural resources, especially energy resources". In this way, it is easier to understand what the problem of environmental pollution means, and therefore, the approach to the current reality that covers this issue in terms of the impact of the environment on MYPES companies begins, which is why the following research objectives arise from this problem:

## **Research objective**

To identify the level of commitment of MYPES companies to the environment between Mexico and Colombia.

## **Specific objectives**

- To analyse the current situation of MSEs.

- To identify the environmental factors that influence companies and their regulation with the government.

- To design a social responsibility plan.

This research will be developed in the South of Tamaulipas with the companies affiliated to the National Chamber of Commerce and Tourism Services of Tampico, Altamira, Cd. Madero and part of the Huasteca Veracruzana. In the period 2021-2022, and in the northwest of the country in the centre of the valley in Medellín Colombia.

### **Theoretical approach**

The Micro and Small Enterprise (MSE) is the economic unit constituted by a natural or legal person (enterprise), under any form of organisation, whose purpose is to carry out activities of extraction, transformation, production, commercialisation of goods or provision of services.

The growth of micro and small enterprises in these economies is the result of an amalgam of facts, where it is necessary to highlight: the structural changes generated by the universal productive forces, particularly in the electronics industry, which caused changes in the communications and services industry; the collapse of 500 large companies in the United States (USA), a fact that Iberofórum. *Revista de Ciencias Sociales de la Universidad Iberoamericana* July-December Valdés, J (2016) mentions that in the USA decides to adopt the Neoliberal Monetarist paradigm by Keynesianism.

The implementation of the Monetarist Neoliberal paradigm, due to the size and personnel structure of the American company, which also generated durable and expensive products, combined with the fact that in all its production was in a margin of decline, which resulted in loss of financial resources and competitiveness, caused the American economy to lose spaces in international markets, decreasing levels of competitiveness, showing the exhaustion of the Fordist and Taylorist model of large scale.

In Japan, under the new Juran and Deming philosophy of Total Quality and Kaizen, a new organisational paradigm was generated within the economic space, allowing it to dominate new markets, including the North American market, with high-tech products within the reach of most consumers.

Colombia is a country whose business fabric is mostly made up of small-scale enterprises. Micro and small enterprises (mypes), defined under Colombian law as those with fewer than 200 employees and total assets of up to 30,000 legal monthly minimum wages, represent 99.5% of the national business park (Murillo and Restrepo, 2016). Given their size and the key role they play, these enterprises are fundamental for the development of the country in this sense, MSEs are considered the backbone of modern economies, being vital to sustain economic growth in the long term and with the potential to stimulate economic expansion and act as stabilisers in recessions.

A sustainable company is one that seeks success in various aspects such as: the well-being of its employees, the quality of its products or services, the origin of its inputs, its environmental impact, the social, political and economic impact of its activity and the social and economic development of its country. Sustainability is also known as sustainability, and refers to a working model that by taking environmentally responsible actions, innovation in your production or the impact of your work on the social and economic spheres of your country you will obtain great benefits that will allow you to maintain yourself for a long time without exhausting your own and external resources. The company Innovest Strategic Value Advisors creates an annual list of the 100 Most Sustainable Global Companies. What can be verified thanks to this study is that, nowadays, companies that care about their environment have more opportunities in the market due to the fact that consumers are beginning to prefer products that meet these types of conditions.

In Mexico, measures and programmes have begun to be incorporated for companies to start implementing sustainability programmes. Currently, one of the most common practices for companies is to send their waste to cheaper treatment plants, without really looking at whether this is the best disposal option for what they produce.

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This then becomes a mismanagement of industrial waste that generates a high negative impact on the environment and society. Similarly, not many companies are concerned about their participation in the social life of the country, feeling that their job is to produce or offer products and services directly and almost unilaterally to their customers, but those that take into account the social context in which they develop may have a better chance of survival and long-term success.

The General Law on Ecological Balance and Environmental Protection establishes that for the formulation and conduct of environmental policy and the issuing of official Mexican standards, the following principles, among others, must be observed: everyone has the right to enjoy an adequate environment for their development, health and well-being; the authorities and individuals must assume responsibility for the protection of the ecological balance; those who carry out works or activities that affect or may affect the environment are obliged to prevent, minimise or repair the damage they cause, as well as assume the costs that such affectation implies. Likewise, incentives should be given to those who protect the environment and prevent the causes that generate ecological imbalances, as this is the most effective way to avoid them. As the country's population and productive activities have grown, the generation of municipal, hospital and industrial solid waste has increased to such an extent that the impact and risk caused by its management, treatment and final disposal currently represent a real problem, especially for those wastes considered hazardous. It is therefore necessary to expand and diversify the infrastructure and systems for waste minimisation, reuse, recycling and treatment. One technological disposal alternative is incineration, which reduces the volume and hazardousness of waste. The incineration of waste from any activity, including hazardous waste, produces emissions that cause environmental pollution and thus damage ecosystems and human health, which requires the adoption of preventive actions aimed at promoting appropriate operating conditions and acceptable emission limit values, in particular with regard to dioxins and furans.

Preventive actions, in accordance with ecological policy, require an approach that includes the different receiving environments, which implies considering the control of air emissions and the management of ashes in an integrated manner. Therefore, the publication of this Mexican Official Norm establishes the first of the different commitments that will derive from the Stockholm Convention, since by establishing maximum permissible limits of emissions into the atmosphere for existing and new incineration facilities in the country, care for the health of the population and the environment is being sought.

1. **Objective** This Mexican Official Standard establishes the operating specifications, as well as the maximum permissible limits for the emission of pollutants into the atmosphere for waste incineration facilities.
2. **Scope of application** This Mexican Official Standard is mandatory and applicable throughout Mexican territory, with the exception of territorial seas where the nation exercises jurisdiction, for all waste incineration facilities, except for crematoria, industrial furnaces and boilers that use waste as an alternative fuel. It does not apply to the incineration of radioactive waste, for which the provisions issued by the National Nuclear Safety and Safeguards Commission shall apply.

3. Official Mexican Standard NOM-001-SEMARNAT-1996, which establishes the maximum permissible limits of pollutants in wastewater discharges into national waters and property, published in the Official Gazette of the Federation (D.O.F.), on January 6, 1997, as NOM-001-ECOL-1996, which changed its nomenclature by the Agreement issued in the D.O.F. on April 23, 2003, remaining with the name that appears at the beginning of this quote. 3.2 Official Mexican Standard NOM-002-SEMARNAT-1996, which establishes the maximum permissible limits of pollutants in wastewater discharges to urban or municipal sewage systems, published in the Official Gazette of the Federation (D.O.F.), on June 3, 1998, as NOM-002-ECOL-1996, which changed its nomenclature by the Agreement issued in the D.O.F. on April 23, 2003, remaining with the name that appears at the beginning of this citation. Norma Oficial Mexicana NOM-008-SCFI-1993, Sistema General de Unidades de Medida, published in the Diario Oficial de la Federación on 14 October 1993. Norma Oficial Mexicana NOM-052-SEMARNAT-1993, Que establece las características de los residuos peligrosos, el listado de los mismos y los límites que hacen a un residuo peligroso por su toxicidad al ambiente, published in the Diario Oficial de la Federación (D.O.F.) on October 22, 1993, published in the Diario Oficial de la Federación (D.O.F.) on October 22, 1993, published in the Diario Oficial de la Federación (D.O.F.) on October 22, 1993. ) on 22 October 1993, which has changed its nomenclature on two occasions, the first one, by the Secretary Agreement published in the D.O.F. on 29 November 1994, being modified to NOM-052-ECOL-1993 and, the second one, by the Agreement issued in the same organ of diffusion on 23 April 2003, remaining with the name that appears at the beginning of this quote.

In Colombia, according to the Law for the Promotion of Micro, Small and Medium Enterprises, Law 590, SMEs are classified as follows:

- Microenterprise: Personnel no more than 10 workers. Total assets of less than 501 legal monthly minimum wages in force.
- Small Company: Staff between 11 and 50 workers. Total assets greater than 501 and less than 5,001 legal monthly minimum wages in force.
- Medium: Staff between 51 and 200 workers. Total assets between 5,001 and 15,000 legal monthly minimum wages in force.

The contribution of micro, small and medium-sized industrial enterprises is reflected in these indicators:

- The Annual Manufacturing Survey allows us to assess the incidence of MSMEs in the Colombian business landscape. They represent 96.4% of establishments, approximately 63% of employment, 45% of manufacturing production, 40% of wages and 37% of value added. There are more than 650,000 entrepreneurs contributing to the social security system.

In terms of productivity, there is no data in ACOPI.

The geographical distribution of the units establishes that SMEs in general terms follow the same trend as the manufacturing industry as a whole, with almost 70% in the four (4) main production centres: Cundinamarca-Bogotá, Antioquia, Valle and Atlántico.

## **Development**

Research methods are an essential part of all research and refer to the set of rational procedures that are used to achieve the research objectives. In short, they are responsible for defining the strategies, procedures and techniques that are subsequently used in data collection. The form of data collection and interpretation is usually more dynamic, as it does not follow a standardised process. It allows for a systematic analysis of more subjective information. As it favours the comparison of results and interpretation.

The type of research is descriptive, as this type of research looks for situations and events. That is, to say how a certain phenomenon is and manifests itself. Descriptive studies seek to specify the important properties of people, groups, communities or any other phenomenon that is subjected to analysis, measure or evaluate various aspects, dimensions or components of the phenomenon or phenomena to be investigated. From a scientific point of view, to describe is to measure. That is, in a descriptive study, a series of questions are selected and each of them is measured independently, in order to describe what is being investigated.

The process of description is not exclusively the collection and accumulation of data and their tabulation, but relates to existing conditions and connections, practices that have validity, people's opinions, views, attitudes held and processes at work. Descriptive studies focus on measuring and explanatory studies on finding out.

In this type of research, non-probability sampling is used where sample persons are selected on the basis of convenience, accessibility and proximity to related research subjects. The sample will be taken in Southern Tamaulipas, Mexico City and Medellin, Colombia.

Based on the research objectives, convenience sampling is a non-probability sampling technique where samples of the population are selected only because they are conveniently available to the researcher.

These samples are selected only because they are easy to recruit and because it was considered to select a sample that represents the whole population ideally, in the research, it is good to analyse samples that represent the population of the companies in the Zone, a sample is obtained according to the formula of Infinite Population where the total to sample is 384 companies.

$$m = \frac{Z^2 * p * q}{e^2}$$

m = sample

Z = Critical Z value, calculated from tables of the area under the normal curve. Also called confidence level (95%).

p = approximate proportion of the phenomenon under study in the reference population.

e = absolute precision level. Referred to the width of the desired confidence interval in the determination of the mean value of the variable under study.

Replacing the data we have:

$$Z^2 = 3.84$$

$$p = 0.5$$

$$q = 0.5$$

$$e^2 = 0.0025$$

Obtaining as a result: 384 Therefore, the number we took as a population is 384 entrepreneurs (Mexico-Colombia). Considering 50% for each country.

The data collection will be done with an online questionnaire is a tool designed for the collection of quantitative data, and is widely used in research, as it is a good research instrument to collect standardised data and make generalisations.

Questionnaires can provide quick responses, but due care must be taken when designing them to ensure that you do not influence the response you receive. The design of the questionnaire should reflect the objectives of the research.

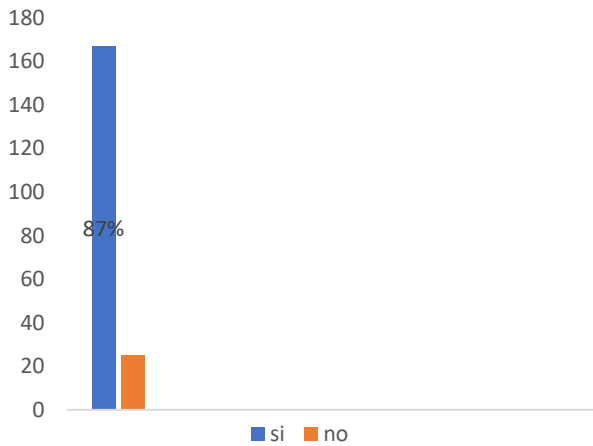
The variable to be measured is the level of companies' commitment to environmental impact. The instrument will be applied virtually in those companies in both Mexico and Colombia that do not allow access through COVID-19.

Mode of administration: online and face-to-face.

### **Analysis of the results**

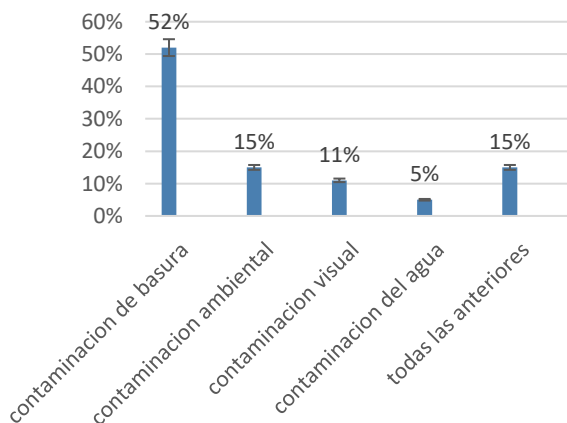
The following graphs will show comments from employees and from the organisations themselves on the social impact of these organisations in Mexico and Colombia.

The graphs are presented in order of importance according to the research objective.



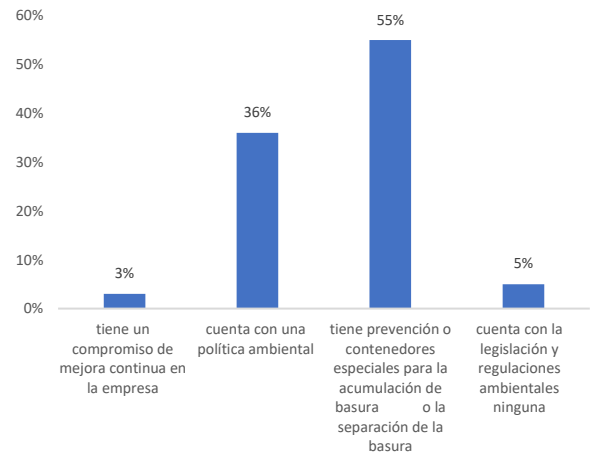
**Graphic 1** The impact of companies on the environment  
Source: Own elaboration

The graph shows that 87% of the companies surveyed in Mexico-Colombia are aware that they have an impact on the environment.



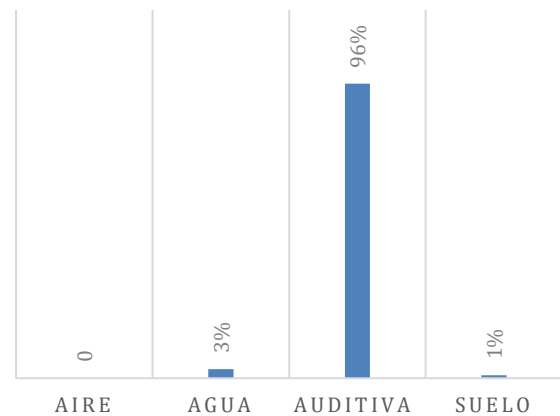
**Graphic 2** Type of impact your company has on the environment  
Source: Own elaboration

This graph shows the companies that have an impact on the environment, 52% in terms of waste contamination. 15% in environmental pollution considering (aromas, visual, noise, etc.)



**Graphic 3** Area most affected by the company in which it works  
Source: Own elaboration.

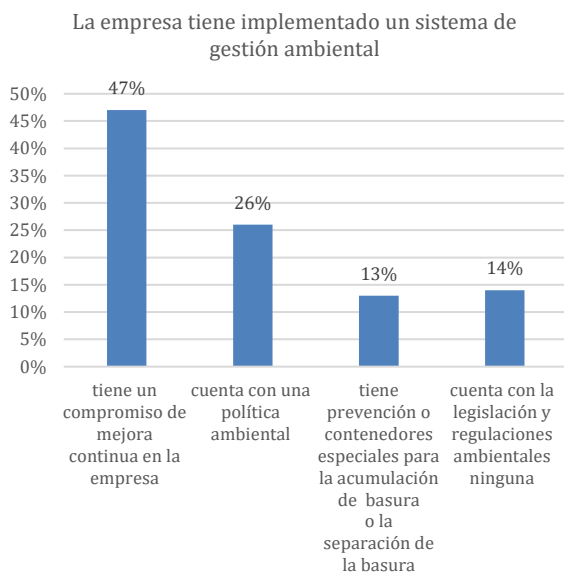
As we can see this graph coincides with 52% of the companies that pollute with rubbish when asked, they tell us that in fact 90% of the soil is the most polluted part in Mexico compared to Colombia, as shown in Graph 3, the pollution is auditory.



**Graphic 4** Implementation of a Quality Management System.  
Source: Own elaboration

Graph 4 shows that in Mexico 47% of the surveyed population does not say that the company has a commitment to continuous improvement, their commitment is to care for the environment, but it is not enough, because if we add 53%, they say that they know about the policies, legislation and damages, but it is not enough to care for the environment. In the 4th graph, Colombia manages prevention or has collectors for the accumulation of waste, as their problem is more focused on the auditory part and here there is still no regulation in the country, as there is no regulation in the country.





**Graphic 5** Are you satisfied with the measures used in the company with respect to the environment?

Source: Own elaboration

Mexico (Rubbish)	90%
Colombia (Auditory-Noise)	96%

**Table 1** Type of Mx-Co Contamination

Source: Own elaboration

In this graph No.5 only one is marked for Mexico-Colombia, as 47% of the respondents are dissatisfied with the measures taken by companies to protect the environment, as well as their social responsibility towards society.

According to the analysis carried out in the area of Medellín, Colombia, we can see that one of the biggest problems for micro and small enterprises is the pollution they generate, and according to the results we can conclude that the main pollutant is auditory pollution. On the other hand, in Mexico, the pollution is the soil, as they consider that they do not have the system, nor the knowledge of the appropriate separation of waste, which is their main problem. This is shown in table 1.

**Conclusions**

The conclusions according to the research analysis in the Southern Zone of Tamaulipas show that Micro and Small Enterprises one of their biggest problems is the pollution they generate and that according to the results the employees as well as the owners or managers conclude that the fact of collecting the rubbish, controlling the pollutants generated by their company is more than enough and that they do not damage the environment that much.

But they do not see the magnitude of this problem and the responsibility that this situation entails at a global level; they believe that because they are small, they do not have an impact.

The research allows the identification of the most relevant characteristics of the MSMEs, the results obtained suggest that the MSME entrepreneurs should attach greater importance to building the reputation and prestige of their company in the market, achieving support and acceptance by the community. Also, given the importance of employees' knowledge, skills and abilities, these enterprises should work with their employees and increase their professionalisation. On the other hand, the governmental institutions that support MSEs, as well as technological development institutions, financial institutions, Chambers of Commerce, trade unions and universities, among others, can design programmes that propose to improve the entrepreneurial preparation of employees to increase their access to sources of financing and alternatives other than bank credit; reduce administrative obstacles for the creation of companies; design special tax contribution schemes; and promote the transfer and use of technology and specialisation in the economic sectors.

Thus, based on the characteristics of the Mexiquense-Colombian Mypes, they can support the development of these enterprises and empower them to respond better to their environment.

Considering that this research is an approximation to the definition of the profile of the Mypes companies in Mexico-Colombia, they have a similarity in the way they manage and act. Some of these are mentioned below:

To make the objectives of commercial and environmental policies compatible in order to achieve the most efficient use of natural resources, the reduction of environmental damage and the most efficient use of work tools.

The environmental issue has undergone a tremendous evolution in recent decades, with changes in society's demands on industry affecting its performance and competitiveness, with consequences for international trade.

On the demand side, consumer pressure has led to the emergence of a "green market", making environmental concerns a strategic competitiveness factor for companies.

International trade must consider new voluntary environmental standards, which constitute factors of comparative advantage in the market and apply to processes, products and environmental management.

Implementation of corrective measures.

Monitoring and control of impact factors and their effects on the environment.  
impact factors and their effects on the environment.

The demand for stricter environmental quality standards environmental quality standards set unilaterally can be turned into advantages and act socially responsible.

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### References

Becerra, M. R., & Vélez, M. A. (2018). *Gobernanza y gerencia del desarrollo sostenible*. Ediciones Uniandes-Universidad de los Andes.

Bercovich, N., & López, A. (2005). *Políticas para mejorar la gestión ambiental en las pymes argentinas y promover su oferta de bienes y servicios ambientales*. CEPAL.

Castro-Numpaque, A. M. (2021). *ACOPI: Las MiPymes en tiempos de COVID-19*.

Murillo, M., & Restrepo, L. (2016). *Nacimiento y supervivencia de las empresas en Colombia*. Bogotá: Confecámaras.

Ojeda López, R. N. y Mul Encalada, J. (2015). *La gestión ambiental y su relación con la competitividad: un estudio de las micro, pequeñas y medianas empresas en el estado de Yucatán, México*.

Página de Internet Consultada:  
<https://www.inegi.org.mx/temas/pib/>

Ponce, J. D. O., & Mercado, L. G. C. (2020). *La gestión ambiental para el desarrollo sostenible de las pequeñas y medianas empresas, Cantón Esmeraldas*. Polo del Conocimiento: Revista científico-profesional, 5(2), 789-804.

Saavedra, M., Milla, S. y Tapia, B. (2013). *Determinación de la competitividad de la PYME en el nivel micro: El caso de del Distrito Federal, México*. (FAEDPYME, Ed.). *Faedpyme International Review*, II, 4.

Solleiro, J. L., & Castañón, R. (2005). *Competitividad y sistemas de innovación: los retos para la inserción de México en el contexto global*. *Revista Iberoamericana*, 5(15), 165-197.

Valdés Díaz de Villegas, J. A. (2016). *Crecimiento económico y desarrollo. Un dilema de la realidad actual*.

Van Hoof, B. (2005). *Políticas e instrumentos para mejorar la gestión ambiental de las pymes en Colombia y promover su oferta en materia de bienes y servicios ambientales*. Cepal.