Interpretation of Results for decision making of the Market Impact study economic in the MSMEs of the Municipality of Francisco I. Madero, Hidalgo, Mexico

Interpretación de Resultados para la toma de decisiones del estudio de Mercado Impacto económico en las MiPymes del Municipio de Francisco I. Madero, Hidalgo, México

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Abstract

The analysis of the interpretation of results was carried out through the database, for decision making of the market study Economic impact on micro, small and medium-sized enterprises (MSMEs) case of Francisco I. Madero, Hidalgo, Mexico, with a descriptive quantitative approach, with a sample of 269 owners whose main characteristic is having founded it before 2019, in the Municipality of Francisco I. Madero, Hidalgo, Mexico. A survey was applied to them to know the financial fluctuation in the sale of products and services between 2019 and 2022 derived from the growth of three Higher Education Institutions. The Simple random method was used to determine the sample size of the study population, with a sampling error of 0.05 and a confidence value of 95% and its coefficient of 1.96, the results indicate an increase of 1.8% without significant differences. per turn; which allows for an improvement plan that integrates strategies to maximize financial resources

Administration, Interpretation, Relational database

Resumen

Se llevo a cabo el análisis de la interpretación de resultados a través de la base de datos, para la toma de decisiones del estudio de mercado Impacto económico en las micro, pequeñas y medianas empresas (Mipymes) caso Francisco I. Madero, Hidalgo, México, con un enfoque cuantitativo de tipo descriptivo, con una muestra de 269 dueños cuya característica principal es haberla fundado antes del año 2019, en el Municipio de Francisco I. Madero, Hidalgo, México. Se les aplicó una encuesta para conocer la fluctuación financiera en la venta de productos y servicios entre el año 2019 y 2022 derivado del crecimiento de tres Instituciones de Educación Superior. Se utilizó el método aleatorio Simple, para determinar el tamaño de la muestra de la población en estudio, con un error muestral del 0.05 y un valor de confianza del 95% y su coeficiente del 1.96 los resultados indican un incremento del 1.8% sin diferencias significativas por giro; lo que permite realizar un plan de mejora que integre estrategias en la maximización de recursos financieros.

Administración, Interpretación, Base de datos relacional

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Introduction

The municipality of Francisco I. Madero is one of the eighty-four municipalities that make up the state of Hidalgo, Mexico. The municipal seat and most populated locality is Tepatepec; it is bordered to the north by the municipalities of Mixquiahuala de Juárez and San Salvador; to the east by the municipality of San Salvador; to the south by the municipalities of San Salvador and Ajacuba; to the west by the municipalities of Ajacuba and Mixquiahuala de Juárez.

According to (Data Mexico, 2022) In 2020, the population in Francisco I. Madero was 36,248 inhabitants (47.7% male and 52.3% female). Compared to 2010, the population in Francisco I. Madero grew by 6.92% as well as the economic sectors that concentrated more economic units in Francisco I. Madero were Retail Trade (885 units), Other Services Except Government Activities (241 units) and Manufacturing Industries (225 units).

During the month of October 2022, a market study was conducted to measure the economic impact of MSMEs in the Municipality of Francisco I. Madero, Hidalgo, Mexico. As a result, the relational database was obtained, which is the object of study of this research to classify results that allow decisions to be made on the weaknesses identified in the market study.

According to (Gómez, 2023) a database is a set of data belonging to the same context, stored systematically for later use, it is a collection of data structured according to a model that reflects the relationships and restrictions existing in the real world.

To define "databases" it is important to be clear about what is data and information because these elements are fundamental for the development of databases, according to (Juárez, 2023)

– Data: is a set of characters with some meaning, they can be numeric, alphabetic, or alphanumeric, this is the minimum unit of information. A data within a database responds to the function (object, attribute, value).

– Information: is an ordered set of data which is managed according to the user's need, so that a set of data can be processed efficiently and can result in information, it must first be stored logically in files.

The challenges that companies face today with big data are problems that Google first encountered almost 20 years ago. According to (Edward and Sabharwal, 2013) Carlo Strozzi coined the term NoSQL in 1998, using this term to identify his database because his database did not have a SQL interface so NoSQL is a general term for data warehouses that do not follow the principles of relational DBMS. Non-relational databases started to become very important for handling large amounts of information because of the problems faced by Google.

Nowadays, companies are increasingly interested in achieving and developing a solid operational performance against their competitors through the use of tools that are available to them, among them, process control and management. This is why some organisations have concentrated their efforts around management models that contribute to the achievement of total quality, in order to generate the highest possible productivity and profitability for the company, which must clearly understand how to satisfy both internal and external customers.

In turn, (Competitiva & De la Cruz, 2023) conducted a study whose objective was to corroborate the theoretical model of organisational capabilities and competitive advantage in the commercial sector of multifunctional equipment distribution in Mexico, through the application of the questionnaire "Managerial and functional capabilities and competitive advantage from the perspective of the resource-based vision" designed from the literature review. The preliminary version of the questionnaire was peer-reviewed and triangulated with an interview applied to the entrepreneurs in advance. Growth and efficiency have always been some of the constant goals in the strategy of organisations, but a new variable has been added to these, which is related to the speed through which the underlying objectives are required to be achieved and how changing they are (Gallego, 2023).

This global dynamic means that nowadays companies value every effort made to implement agile tools that allow them to respond in a timely manner to the continuous changes they are faced with.

The analysis of the economic situation of a place (demographic) requires a statistical tool that quantifies different aspects of economic activity, which are called economic indicators that serve as an instrument for decision-making by economic units, in order to understand the fluctuation of the economy and economic development. According to (Ernesto Spinak, 2023) they are measures that allow to capture the evolution and economic situation, based on a set of data obtained in a given time.

Inflation, according to (Samuelson & Nordhaus, 2010) the sustained and generalised increase in the prices of goods and services, is currently calculated by means of a weighted average price index of thousands of individual products. Inflation implies a loss in the purchasing power of money.

Development

The interpretation of the results was carried out through the relational database, in order to elaborate a segmentation of the potential clients who have the need to receive training in finance, knowledge of regulations, administration of their income or expenses, of the market study Economic impact on micro, small and medium-sized enterprises (MSMEs) in the case of Francisco I. Madero, Hidalgo, Mexico, with a descriptive quantitative approach, with a sample of 269 owners whose main characteristic is to have been founded before 2019, in the municipality of Francisco I. Madero, Hidalgo, Mexico. A survey was applied to find out the financial fluctuation in the sale of products and services between 2019 and 2022 derived from the growth of three Higher Education Institutions. The simple random method was used to determine the sample size of the population under study, with a sampling error of 0.05 and a confidence value of 95% and its coefficient of 1.96.

The general objective of the study is to interpret the results of the market study of the economic impact on MSMEs in the municipality of Fco. I. Madero, Hidalgo, Mexico, through quantitative analysis in order to create a route for improvement in MSMEs.

Specific objectives

1. To establish the target market through segmentation.

2. To identify the economic sectors of MSMEs.

3. To elaborate a relational database of MSME owners for personalised attention in training.

The results of the relational database containing 269 interviews were interpreted as 100% of the survey results.

In addition to the interpretation of the results of the market study, it is considered necessary to make an improvement route that contemplates specific strategies on issues of financial resource management, as well as sources of financing for business growth. This study analysed the response to the item that asks about the interest in training to be able to manage the financial resources of the owners of MSMEs.

In the item Would you be interested in receiving training on how to manage your finances? According to the survey data, 68.5% of the respondents said that they would be interested in receiving training and 31.5% said that they were not interested in receiving training on managing their finances. See graph 1.

By economic sector, 68.5% corresponds to the commerce sector and 26.6% to the service sector, with the highest representation. See graph 2.

In graph 3, the female gender has a representation of 62% and the male gender is 38%; the results are related to the statistical data at national level, which is 51.2% women and 48.8% men.

By age range of the owners of the MSMEs in the municipality of Francisco I. Madero, the range of 36 to 45 years represents 31%, followed by 26 to 35 years with 23% and 25% and 15% in the range of 18 to 25 years, with 46 to 55 years representing a lower percentage. See graph 4

In the item "Did you prepare a document called a business plan? It can be seen that people who started their business without having carried out a study beforehand, such as a business plan, represent 80.3% of those surveyed and only 19.7% refer to having carried out a business plan themselves or by an expert to help with the creation of the business. Graph 5.

In the item In which places have you registered to formalise your business? Based on the results obtained in this questionnaire, it can be inferred that 39.1% of the population has gone to the presidency, 38.4% has not registered in any place and 15.6% of the surveyed population is registered in the SAT. Graph 6

In the item "How do you manage your income?", according to the data obtained in the surveys, 52.2% of the respondents keep their records in their passbook, 28.7% do not manage their income, 16.6% have a register in a software to keep records of income and expenses. Graph 7.
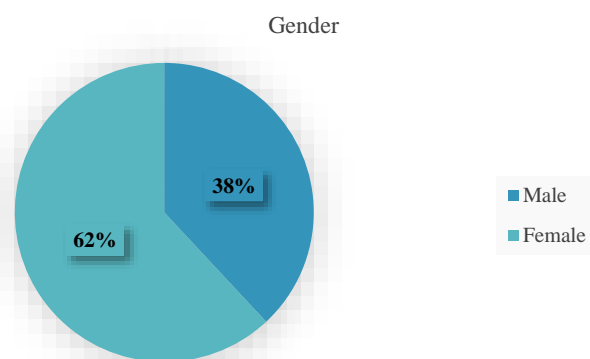
Results

This section contains the graphs showing the results of the interpretation of the questions asked in the instrument used in the market research.
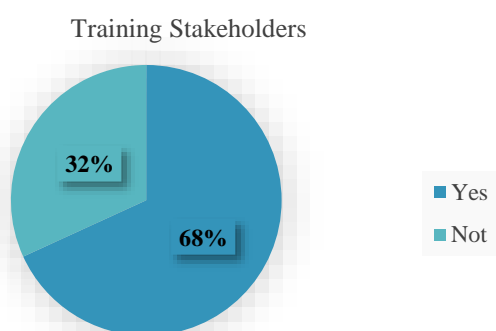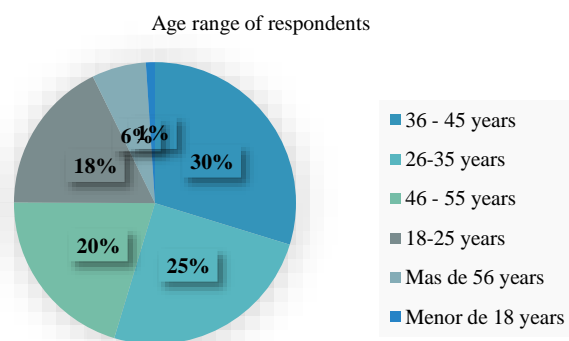

Graph 1 Training Stakeholders
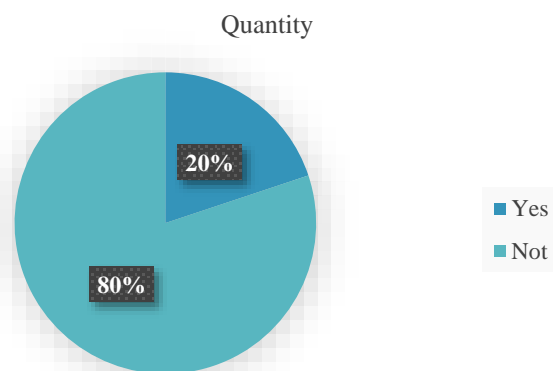*Source: Own Elaboration with survey data*
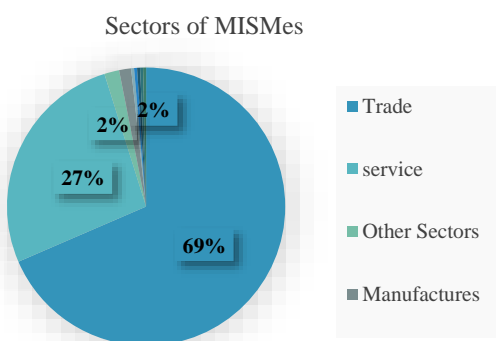
Graph 2 Sectors of MSMEs
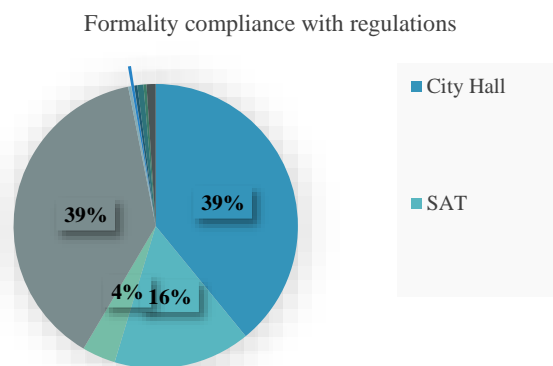*Source: Own Elaboration with survey data*

Graph 3 Sectors of MSMEs
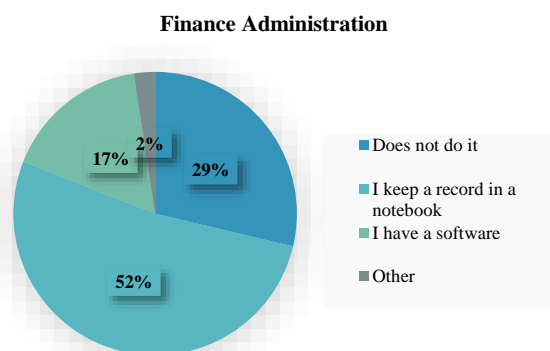*Source: Own Elaboration with survey data*

Graph 4 Age range of respondents
Source: Own Elaboration with survey data

Graph 5 Business plan
Source: Own Elaboration with survey data

Graph 6 Formality of compliance with regulations
Source: Own Elaboration with survey data

Finance Administration

Graph 7 Financial management
Source: Own elaboration with survey data.

Conclusions

In conclusion, there is 68. 5% interest in training in financial management on the part of the owners of MSMEs in the sectors most in demand, such as commerce in the category of food sales, and which require this added value to control their income and expenditure efficiently in order to comply with the obligations requested by the authorities and to be able to become a formal MSME with access to a bank account to obtain a financial history in order to be eligible for a financial loan; It is true that 30% of the MSMEs stated that there are government programmes with financial support, however, as they do not have the required documentation, they are not benefited.

52.2% of the MSMEs keep administrative records of income and expenditure, which is done manually, so there is a need for an improvement plan that integrates courses on finance, since only 16.6% use software to keep records of their accounting movements, another course that includes the development of a business plan, since 80.3% of respondents stated that they had not made a business plan, and 39.1% of the population surveyed stated that on regulations and permits established by law, they have only complied with them locally. Paying for permits at the presidency.

68.5% of the surveyed population is willing to receive training for the management of their businesses and to obtain more benefits.

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