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EVALUATION OF THE INVESTMENT OF MSMES IN THE COMMERCE SECTOR, TO DETERMINE THEIR DEGREE OF COMPETITIVENESS

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Abstract: The financial item is one of the most important lines in any financial statement, either personally or business, For this reason, it is necessary to apply strategies so that finances are optimal and healthy and allow economic development in the company, the general objective of the present investigation was to design financial strategies to promote the competitiveness of SMEs in the commerce sector of the San Martín Texmelucan Puebla region.

In this qualitative applied research, the target population was the directors, managers and owners of micro and small companies in the commercial sector, according to the Mexican Business Information System (SIEM) for the second semester of 2022 there are 965 companies registered in the region of San Martín Texmelucan Puebla Mexico, of which 65% are commercial, which were taken as the basis for obtaining the information; applying a questionnaire of 20 items with a Likert scale to a sample of 324 companies.

The most important findings obtained show that only 18% of the companies studied have control of their finances and that 32% have requested extra-bank financing, in addition 78% of SMEs require a financial analysis that allows them to diagnose their financial position, finally financial investment strategies were designed so that companies can be more efficient in managing their resources so that savings are presented to incorporate them into investments that allow them to obtain returns that can promote their competitiveness.

Keywords: finance, competitiveness, SMEs

INTRODUCTION

Small and medium-sized enterprises (SMEs) currently constitute a fundamental sector for the world economy and its functioning. According to studies from various sources, such as the International Labor Organization (ILO) and the German Agency for International Cooperation (GIZ, for its acronym in German), SMEs generate about 63% of total employment in the economy (Rojas, 2017), making the sector a fundamental element of the global economic gear today.

According to the Inter-American Development Bank (IDB, 2017), in Latin America this business sector has been characterized by its high level of informality, high mortality rate, and low internationalization, aspects that, together with their poor financial culture and difficulties in accessing bank credit, make them vulnerable organizations due to lack of adequate conditions that allow them to innovate, operate, and grow.

In terms of analysis of the financial conditions of this type of company, one of the closest references is the one carried out annually by the Organization for Economic Cooperation and Development (OECD), which since 2012 has been able to establish the conditions of this problem throughout the world and identifies the existing financing gap between the credit granted to SMEs and the level of financing resources that are oriented to large companies worldwide (Rojas, 2017, p. 14).

In addition to having within the entity a financial administrator who can maximize resources according to the correct analysis of financial information and correct decision-making, it is important to make appropriate financial decisions that allow you to guarantee the achievement of these objectives. The objective of maximizing finances in a company, currently companies must make use of financial decisions; These decisions can be grouped into three closely related categories:

Investment decisions refer to the acquisition of short- or long-term assets. At the beginning these decisions were evaluated individually and currently it has evolved to

a global analysis, in this type of analysis the repercussions of the investment in question on the rest of the company's investments are taken into account. Financing decisions seek to answer the question: what is the optimal combination of financing sources? These sources have two major origins: debts and equity. And finally the dividend decisions; These strategies are closely linked to the financing policy. It involves seeing if shareholders are rewarded thereby depriving the company of funds to make investments. (Nunez, 2020)

The financial item is one of the most important lines in any financial statement, either personally or business, For this reason, it is necessary to apply strategies so that finances are optimal and healthy and allow economic development in the company, the general objective of the present investigation was to design financial strategies to promote the competitiveness of SMEs in the commerce sector of the San Martín Texmelucan Puebla region.

METHODOLOGY

In this qualitative applied research, the target population was the directors, managers and owners of micro and small companies in the commercial sector, according to the Mexican Business Information System (SIEM) for the second semester of 2022 there are 965 companies registered in the region of San Martín Texmelucan Puebla Mexico, of which 65% are commercial, which were taken as the basis for obtaining the information; applying a questionnaire of 20 items with a Likert scale to a sample of 324 companies.

The type of sampling used was random and stratified based on the number of companies in the trade sector in the region. The database was taken from the Mexican Business Information System (SIEM), which is a business registry that is carried out by the country's business chambers and administered by the Ministry of Economy, which contains industrial, commercial and service companies from Mexico. Table 1 shows the distribution by state of the 55,502 companies, the % of companies by State and the number of surveys applied in each state.

State	Commercial section 45%	% of Companies by State
Puebla	10245	18%
Total	55502	100%

Table 1. Matrix of composition of companies and representativeness of the South Central Region of Mexico.

Source: SIEM, 2022

As an instrument for collecting information, a self-administered questionnaire was used that was applied to directors, managers, partners and owners of companies in the commerce sector of the south-central region of Mexico.

The questionnaire items will be designed considering questions or statements that were measured with a 5-point Likert-type attitude scale, so that the participants could select their degree of agreement/disagreement, or satisfaction/dissatisfaction with them. The instrument has 3 sections, with a total of 20 items.

To identify the association that exists between the 20 indicators that make up the 3 variables under study in this work, which are:

Failure 1: Financial knowledge

Failure 2: Self-exclusion

Failure 3: Risk aversion

Failure 4: Mismanagement of resources

Failure 5: Extra-bank financing

The correlations were determined with a significance level of 5%, using the Stata software (Statistics/Data Analysis) version 12.0, with the results obtained the correlation

map of the variables was elaborated.

The variables that showed a significance level of 5% are those that are shaded in light gray and have an asterisk. For the preparation of the Correlation Map, the variables with the highest value were taken into account, associating them with the other variables vertically and horizontally.

As can be seen in Figure 2, there is a vertical association between the variable financial education (edu_fin) and the variables financial monitoring (mon_fin) and financial analysis (ana_fin) of 0.9553 and 0.8523, which means that financial education in companies allows a correct financial analysis for the interpretation of financial statements and appropriate decision making.

In the same way, the self-efficacy variable (aut_efi) in the vertical position shows an association with the variables financial education (edu_fin) and financial monitoring of 0.8971 in both variables, which means that the company must be careful when managing to invest in the training of collaborators, not leaving only financial education but considering its proper management. And it is this financial education variable (edu_fin) in addition, it is detected that there is a horizontal association between the self-efficacy variables (aut_efi) 0.9220, which means that the timely detection of training needs would avoid a problem in the information management process.

In addition, it is detected that there is a vertical association between financial education in financial development with the self-efficacy variable of 0.9204 and with the financial monitoring variable of 0.8523, this can be explained because commercial companies are considering the part of financial management in most of their actions, such is the case of the incorporation of new training courses in financial education. Likewise, these actions are increasingly being considered in a

formal way through integration into policies and procedures, as observed in the horizontal association that exists between the financial analysis variables of 0.8523 and the self-efficacy variable of 0.8762.

It can also be identified that horizontally there is an association between the knowledge variables of 0.9917 and the training process of 0.8703 with the financial policy variable, this implies that companies in the commerce sector are taking into account the economic part in the development of their activity and their relationships with suppliers.

The first association that is presented vertically is in the financial inclusion variable with the loan variables with an association of 0.8460 and with the financial awareness variable with 0.8065 and this analytical awareness variable (conc_ana) is identified horizontally with an association with the vision and mission variable of 0.9783, the above implies that financial management influences the certification of the quality of the processes of commercial companies. Another association that is found in this category of self-exclusion is the one that is presented horizontally between the responsibility variables (resp) with the quality variables in the actions (cal_acci) of 0.9869 and the financial and liquidity company variable of 0.9869, this is important to highlight since if there is no order in the assignment of personnel functions it will be very difficult for companies to ensure the quality of their finances.

And also in the area of risk aversion, the existing associations between the variables shown in figure 4 below were analyzed using the correlation map.

Figure 4 shows that there is a vertical association between the risk perception variable and the financial analysis variable of 0.9204 and -0.3196 respectively, which allows us to conclude that despite the fact

1									
-0.0749	1								
-0.0119	0.9553*	1							
-0.0679	0.9527*	0.6257*	1						
0.0776	0.0335	0.1002	0.0242	1					
0.0754	-0.066	-0.0035	-0.0592	0.8971*	1				
0.0387	-0.1006	-0.0368	-0.1013	0.8455*	0.6257*	1			
0.0316	0.0776	0.8530*	0.8523*	0.0114	0.1002	0.0288	1		
0.6242*	0.0754	-0.2037*	0.0776	0.7326*	0.6257*	0.6393*	-0.0119	1	
0.0836	0.0387	0.8473*	0.0754	-0.0004	0.0904	0.0304	-0.0679	-0.3191	1
0.6242*	0.0316	-0.066	0.0387	0.7326*	0.6257*	0.6393*	0.0776	0.0387	-0.3191*
0.9917*	-0.066	-0.0035	0.0316	0.8971*	1.0000*	0.9220*	0.0754	0.0316	0.0904
0.1312	0.6638*	0.0996	0.0335	0.0466	0.138	0.0776	0.0387	0.0387	0.7656*
0.1342	0.6693*	0.0964	0.1002	0.0336	0.1423	0.0754	0.0316	0.0316	0.0387
0.0927	0.0335	0.1002	0.0068	0.0068	0.0996	0.0387	0.6242*	0.0288	0.0316
0.0902	0.1002	0.0996	-0.0109	-0.0109	0.0964	0.0316	0.0836	-0.3339*	0.0387
0.0936	0.0068	0.0964	0.0114	0.0114	0.1002	0.0288	0.6242*	-0.3198*	0.0316
0.6242*	-0.0109	-0.2037*	0.0068	0.7326*	0.6257*	0.6393*	0.0316	0.0387	0.0288
-0.0749	0.0114	0.0776	-0.0109	0.0335	-0.066	-0.1006	0.9917*	0.0316	0.8703*
-0.0119	0.0068	0.0754	0.9204*	0.1002	-0.0035	-0.0368	0.1342	0.0387	0.8473*
0.0927	-0.0109	0.0387	0.8612*	0.0068	0.0996	0.0387	0.8523*	0.0316	0.8465*
0.0902	0.0754	0.0316	0.0754	-0.0109	0.0964	0.0316	0.0114	0.0288	-0.0004
0.0936	0.0387	0.0387	0.0387	0.0114	0.1002	0.0288	0.1002	0.6257*	0.0904
0.0927	0.0316	0.0316	0.0316	0.0068	0.0996	0.0387	0.0288	0.6393*	0.0304
0.0387	0.8523*	0.0288	0.8523*	-0.0109	0.0964	0.0316	0.0936	0.8762*	0.8530*

Figure 2. Map of correlations of the variables of the Financial Knowledge category

Source: Own elaboration with data obtained by the software, (2022).

1							
0.6257*	1						
-0.2636*	0.138	1					
0.9220*	0.1423	0.8460*	1				
0.0387	0.0996	0.7815*		1			
0.0316	0.0964	0.0387	0.7725*	0.9548*	1		
0.0387	0.0387	0.0316	0.0387	0.9869*	0.0387	1	
0.0316	0.0316	0.0387	0.0316	0.0387	0.0316	0.0387	1
0.0288	0.0387	0.0316	0.0387	0.0316	0.0387	0.0316	-0.2750*
-0.2037*	0.0316	0.8065*	0.0316	0.0387	0.9783*	0.0387	0.0387
0.0316	0.0288	0.6422*	0.0288	0.0316	0.0288	0.0316	0.0316
0.0288	0.8971*	0.0466	0.0336	0.0288	-0.0109	0.0288	0.0387
0.0387	0.0387	0.6422*	0.1423	0.0096	0.0964	0.9220*	0.0316
0.6393*	0.0387	0.0776	0.0754	0.0387	0.0316	0.0288	0.0288
0.0387	0.0114	0.1002	0.0288	0.9869*	0.0387	0.0288	0.0387

Figure 3. Map of correlations of the variables of the category Self-exclusion

Source: Own elaboration with data obtained by the software, (2022).

that companies are already considering the investment part as a way to improve and increase their returns, the acceptance of the minimum requirements to obtain some financing is still not being shown.

Horizontally, an association was detected in the risk area, which was financial control and investment management of 0.9220 and 0.8971 respectively, which indicates that for the company to comply with financial assurance, it must take into consideration different actions that allow it to manage its investments adequately, reducing their financial impact.

DEVELOPMENT

To affirm that financial strategies improve the competitiveness of companies in the commerce sector of the San Martin Texmelucan Region. The linear relationship between competitiveness and its dimensions was determined:

As for the companies that the participants run, on average they have been in operation for 11.8 years: 63.4% work in the commercial line, 23.3% in the industrial sector and 23.3% correspond to the service sector.

Table 1 summarizes the conceptual and operational definitions supported by the theory, both of the demand failures in the regional financial system and of extrabank financing.

The model analyzed from a parametric perspective has a residual standard error of 0.888 with 389 degrees of freedom, an adjusted R^2 of 0.317 (F=46.7 with 4 and 389 df, p-value=0).

Taking the response variable as ordinal, the dispersion parameter that was taken for the Gaussian family was 0.789; the null deviation was 454.1 (393 g.l.) and the residual deviation was 306.9 (389 g.l), from which it can be deduced that the model is adequate. It can be seen in table 50.4 that only Failure 2: Self-exclusion, and Failure 3: Risk aversion, have a significant effect on extrabank financing among MyPe directors in San Martín Texmelucan.

To better assess the relationships between the variables, their partial correlations are presented graphically, placing the nodes of the network according to the algorithm of Fruchterman and Reingold (1991). The distances between the nodes denote the intensity of the correlation, so that the closest nodes are the most related, so that the clusters can be seen more clearly.

As observed in the results of the present investigation, the financing of the companies of the municipality of San Martín Texmelucan, according to what was revealed in the applied surveys, indicates that the owners, proprietors, managers of the companies resort to extra-bank financing, the above since, in the mind of the entrepreneur, it presents an easier and faster procedure than the bank, the above causes some problems such as: the high cost of financing, the loss of assets that were pledged by said financial operation, to mention a few.

This translates into an area of opportunity for the development of these entrepreneurs, would be training in financial issues specifically in formal bank financing, which allows Texmeluquense businessmen to change their perspective to enter the financing formality, perceiving their own economic and financial benefit, which allows their businesses and companies a better position in the market and present a satisfactory economic recovery in favor of competitiveness.

CONCLUSION

It is concluded that currently it is not enough for small and medium-sized companies in Mexico to have an excellent service or offer a quality product if they do not have a vision for the future, that they care about growing, innovating and developing to be competitive and not get stuck in the constant market

1						
0.9553*	1					
0.9527*	0.9204*	1				
0.0335	0.1002	0.0242	1			
0.066	0.0035	0.0592	0.8971*	1		
-0.1006	-0.0368	-0.1013	0.8455*	0.0387	1	
0.8762*	-0.3198*	0.0387	0.0114	0.1002	0.0288	1

Figure 4. Map of correlations of the variables of the heading Risk Aversion

Source: Own elaboration with data obtained by the software, (2022).

Variable	Concept definition	Operational definition
Failure 1: Financial knowledge	Knowledge that an entrepreneur must have, in such a way that it allows him to understand the information relating it to personal finances and business (Romero & Ramírez, 2018).	The self-efficacy and subjective financial knowledge subvariable of the simplified CF1 instrument, consisting of 5 items, was used as "I have the knowledge and skills to manage my personal finances." The Cronbach's alpha of the scale was 0.84..
Failure 2: Self-exclusion	By self-exclusion is understood the decision of the microentrepreneur not to access credit of his own free will (Castro, Londoño, Parga & Peña, 2020).	The financial inclusion sub-variable of the simplified CF1 instrument was used, which consists of 6 items such as: I have used my account to save or make payments on credit. The Cronbach's alpha of the scale was 0.824.
Failure 3: Risk aversion	Someone who always rejects fair bets will be considered risk averse. If the marginal utility of individuals' wealth is decreasing, they will feel risk aversion, therefore, they will be willing to pay something to avoid having to take fair bets (Rojas, 2017).	The risk perception subvariable of the simplified CF1 instrument was used, which consists of 4 items, as "I have loaned a large portion of my income to a friend or relative." The Cronbach's alpha of the scale was 0.92.
Failure 4: Mismanagement of resources	The mismanagement of financial resources is understood in this study as the absence of good practices that help to have healthy finances, be it planning, control and optimization of the financial resources of the business.	This is an inverted variable, since the two subvariables of the simplified CF1 instrument that were used measured good practices for resource management. The Financial Attitude subvariable consists of five items such as "A written financial plan is absolutely essential for successful financial management," and the Financial Management Behaviors variable consists of 9 items, such as "I pay my bills or credits on time to avoid additional charges." Cronbach's alpha of the scale was 0.84. This variable was measured with three items created expressly for this book, with items such as "I have had unfortunate experiences due to borrowing from credits outside the banking system." Cronbach's alpha of the scale was 0.88.
Off-bank financing	Loans made by networks of friends, pawnshops or drop by drop, according to the definition of Castro et al. (2020) of informal credits.	

Table 2. Definitions of demand failures in the financial system and extrabank financing.

that changes and renews daily. It is therefore necessary for the financial manager to worry about having objectives in the entity and take appropriate financial strategies that allow him to comply with what has been agreed and with the development and success of the entity.

The role of the financial administrator or person in charge of decisions in the entity is of vital importance, the poor execution of their decisions, the badly invested capital can bring many complications to the entity and in some occasions even the bankruptcy of the business. That is why the person in charge of this responsibility within the entity must be someone with academic knowledge and experience that allows them to have intelligence and decision-making skills; And currently we realize that these companies are managed by the same owners, and it often happens that they are not people with the academic knowledge or experience to meet the financial needs of the entity.

The success of an SME lies in the good management of resources, innovation and being competitive with other local companies, the execution by the financial manager of adequate financial strategies according to the objectives of the organization and coupled with the quality products or services that they offer, which are attractive to customers and which meet consumer expectations, will achieve the success of the entity.

Regarding the original contributions of this study, it must be noted that Mexico is the third investment destination worldwide, because competitiveness at the country level is very significant; However, the existing strategic planning analyzes have been designed to promote the competitiveness of large companies, leaving out micro, small and medium-sized companies (My SMEs), which as a segment have grown the most in recent years, in addition to the fact that they tend to only use tools and methodologies that have been tested by large companies. For this reason, the analysis developed in this work provides a tool that has mainly been designed for micro, small and medium-sized companies in the commerce sector that promotes their competitiveness and permanence in the market, as demonstrated in this study, and this is because for this type of companies in the commerce sector, the areas of environmental management, production and quality are essential for their operation, which is why they were analyzed and considered. The analysis presented here can serve as a basis for the development of innovation planning analysis in large companies in the commerce sector, since its bases are laid out in this research work.

Regarding the social impact of the design of the analysis, having developed this research has generated an important social impact, since the companies that served as the basis for the study benefited from the information presented here. And this benefit can be generalized to the rest of the 55,502 companies that make up the South Central Region of Mexico according to data provided by the Mexican Business Information System (SIEM), which will provide greater economic stability in companies in the sector, since it can be applied as a measure to prevent the mortality of these companies. In a globalized world, companies are required to be constantly evolving to be competitive. Strategic planning in the company is a diagnostic, methodical, introspective and collective decision-making process, in relation to current activities and the direction it must take in the future to adjust to changes and demands of the environment and its structure, which will help its continuity over time, with successful business results.

From an academic point of view, the information included here serves to develop subjects that support educational institutions in the teaching and dissemination of finance concepts, strategic planning in the areas of financial knowledge, investment risk, since

they are topics that are booming in companies but are still new and even unknown to many commercial companies and of course they are not considering them as factors that influence their competitiveness.

REFERENCES

Banco Interamericano de Desarrollo. (2017). Micro, pequeñas y medianas empresas. Recuperado de https://idbinvest.org/es/soluciones/servicios-de-asesoria/micro-pequenas-y-medianas-empresas

Enciclopedia de los municipios y poblaciones de México. (2022). http://inafed.gob.mx/work/enciclopedia/EMM21puebla/municipios/21132a.html

Instituto Nacional de Estadística y Geografía (INEGI). (2022). Directorio estadístico de unidades económicas (DENUE). Aguascalientes, México. Recuperado de http://www3.inegi.org.mx/sistemas/mapa/denue/default.aspx

Núñez, G.J.A. (2020, noviembre 5). *Estrategia financiera para la pequeña y mediana empresa Pyme*. Recuperado de https://www.gestiopolis.com/estrategia-financiera-para-la-pequena-y-mediana-empresa-pyme/

Rojas, L. (2017). Situación del financiamiento a PyMes y empresas nuevas en América Latina. Santiago de Chile: Cieplan.

Sistema de Información Empresarial Mexicano. (2022). https://siem.economia.gob.mx/ui/pubconsultaestablecimientos

Sistema Nacional de Información Municipal. (2022). http://www.snim.rami.gob.mx/