Chapter 8 Financial management in SMEs of two municipalities in the north zone of the State of Mexico

Capítulo 8 Gestión financiera en PyMes de dos municipios de la zona norte del Estado de México

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Abstract

Financial management is vital to the growth and development of small and medium-sized enterprises (SMEs). Therefore, an adequate implementation supports financial decision-making, allowing opportunities for monetary sustainability. Therefore, the present work aims to analyze some financial management variables in SMEs in two municipalities in the north of the State of Mexico to detect those financing alternatives they use for development and consolidation. The main results show that SMEs in Atlacomulco and Ixtlahuaca opted for external financing, leaving internal financing in the background.

Financial Management, Financing and SMEs

Resumen

La gestión financiera es clave para el crecimiento y desarrollo de las pequeñas y medianas empresas (pymes), por ello, una adecuada implementación apoya la toma de decisiones financieras, permitiendo oportunidades de sostenibilidad monetaria. Por tanto, el presente trabajo tiene como objetivo analizar algunas variables de la gestión financiera en las pymes de dos municipios de la zona norte del Estado de México a fin de detectar aquellas alternativas de financiamiento que utilizan para el desarrollo y consolidación. Los principales resultados muestran que las PyMes tanto en Atlacomulco como en Ixtlahuaca apuestan por el uso del financiamiento externo, dejando en un segundo plano al interno.

Gestión Financiera, Financiamiento y Pymes

8.1 Introduction

Delve into financial management emphasizes the studies done to formulate approaches or theories that seek to explain and enrich it and to understand the importance of developing and consolidating small and medium-sized companies, which are essential in the world economy. However, despite all the contributions that SMEs make in economic terms, they also face different challenges that limit their development and consolidation in the market where they have a presence, which is often due to poor financial management on the part of the owners or administrators, as they are the people in charge of making decisions in them. In this sense, the present work aims to analyze some variables of financial management in SMEs in two municipalities in the north of the State of Mexico to detect those financing alternatives that they use for development and consolidation.

Therefore, the central hypothesis raised is that financial management analysis (financing, use of accounting and financial information and characteristics of the company) in the SMEs of two municipalities in the northern area of the State of Mexico allows the detection of financing alternatives. That they used for development and consolidation.

The research is structured by a brief literature review on the importance of creating companies immediately after the financing characteristics and problems for SMEs are presented, followed by the importance of financial management in SMEs, management theories and models. Financial, as well as the theoretical model selected for this work, and finally, the results and conclusions are shown.

8.1.1 Business creation

Small and Medium-sized Enterprises (SMEs) have growing importance, especially in developing countries, due to their contribution to employment and economic well-being. Also, because these types of companies are part of the productive apparatus, as part of the value chain, which contributes to diversification and revitalization of the economy, which translates into the creation of more employment and promotion of wealth (Cardoso et al., 2012), in this sense, Saavedra and Hernández (2008) refer that small and medium-sized companies are more than necessary; they are indispensable because they are the main generators of employment and income among the population and regions; they are essential in the existence of large companies and represent a factor of social cohesion.

While Oropeza and García (2013) point out that SMEs worldwide are the most significant number of economic units, they also employ the most personnel; therefore, their relevance and need to strengthen their performance through the improvement of internal processes. Díaz et al. (2005), for their part, express that the creation of companies directly affects the solution of three problems: economic growth, employment generation and business innovation.

According to Chagerben et al. (2017), financing is critical for the development and growth of SMEs since, through it, they can continue with daily operations and even increase productive capacity, allowing them to generate more income and increase revenues—financial performances. However, according to León and Saavedra (2018), access to financing is limited due to high-interest rates, the lack of access to long-term credit, and difficulties establishing guarantees. Regarding the above, it is unfortunate that different aspects limit financing even though this is key in the creation, continuity and growth of companies by everything that can be done or achieved by obtaining it.

As mentioned in previous paragraphs, even though SMEs are the engine of development and economic growth in countries, they present multiple problems that prevent them from remaining in the market for a long time due to their high mortality rates. Hence, eighty per cent of these companies fail to exceed two years (Raufflet et al., 2021, as cited in Laitón and López, 2018). The preceding because they start their operations without sufficient capital, for which reason they cannot ensure their evolution; additionally, given their nature, obtaining resources is difficult, mainly when it comes to financing because the characteristics of the company such as age, size, sector, among others directly condition this. Intriago et al. (2021) confirm that there are limitations in the development of small and medium-sized companies, one of which is access to financing since many of these are created, developed and even positioned informally in the market. , which means they do not have accounting and financial information when applying for a loan. Therefore, the lack of financing for their subsistence constitutes one of the main problems faced by these types of companies; in addition, some entrepreneurs do not go to the existing sources of financing, either due to ignorance or lack of interest. , although it can also be because they do not meet the requirements: credit history, economic solvency or sufficient guarantees (Guercio et al., 2015).

Recapitulating what has already been mentioned, obtaining financing can sometimes be a problem that SMEs have to face repeatedly, but also the ignorance of its existence is a problem since, despite being excellent businesses, they cannot grow; it is that is, to go from small to medium and from medium to large companies.

8.1.2 Importance of financial management in SMEs

Cabrera et al. (2017) postulate that one of the significant challenges that companies face is to be able to administer and manage the financial resources they have efficiently; this is because any activity carried out within a company must inevitably be expressed in monetary terms. For their part, Rodríguez (2016) and Terrazas (2009) argue that financial management is essential in SMEs since it helps the administration, planning and control of financial resources that give sustainability to it. Likewise, financial management is vital because it is related to the control of operations, the search for new sources of financing, operational effectiveness and efficiency, the reliability of financial information, and compliance with applicable laws and regulations. However, it is closely related to the size and composition of the assets, financial level and structure and focuses on profit maximization and wealth (Córdoba, 2012). For this reason, financial management plays an essential role in SMEs, since when these types of companies put it into practice, they achieve an efficient administration of the necessary resources for their continuity, the above by maximizing profit and wealth, given their relationship with operations, financing and information.

8.1.3 Classification of financing sources

According to Van Horne and Wachowicz (2002, as cited in Bohórquez, López and González, 2013), financing sources are essential tools that help companies ensure financial sustainability. Hence the proper selection of this type of financing is crucial, since it will influence the company's ability to generate the necessary funds to recover or pay as appropriate since financing can be both internal (own resources) and external (third-party resources).

In this order of ideas, Bohórquez et al. (2018) mention that internal financing is constituted by the company's resources, obtained through contributions from the owners or shareholders, using the daily flows, or from the profits generated during a given period. Regarding external financing Levy (2008), cited in Torres et al. (2017), is one in which third parties are involved because their resources are insufficient for the normal development of the company.

8.1.4 Financial management characteristics

In this context, the financial function is integrated by all those tasks related to the achievement, use and control of resources, they also mention that financial management is related to decision-making related to the size and composition of assets, financial structure and dividend policy, so each company must define its strategic objectives from its particular perspectives. It has needed (Cabrera et al., 2017). Given the above, it is essential that each company analyzes its particular situation, that is, its characteristics, and based on these, determine the necessary activities that allow it to fulfil its strategic objectives through the use and control of its resources.

8.1.5 Theories or models on financial management

According to Gómez, García and Marín (2008), since the 1960s, theories have been developed to explain the factors that influence the financing preferences of companies. However, they are mainly focused on large companies. Therefore, of these is the Hierarchy Theory, Pecking order Theory (POT) Order of preference theory, which says that when companies need financing, they first resort to internal financing through retained earnings. However, when they require external financing, they first acquire bank debt, followed by long-term obligations and finally, the issuance of shares. Along the same lines, the Financial Cycle Theory states that information asymmetry is among the problems companies must face when they request external financing (Berger and Udell, 1998). In this context, several theories or models exist regarding financial management. However, these are focused on financing since they state entrepreneurs' preferences before the options that exist, as well as the problems that revolve around them are around this.

8.1.6 Recent Financial Management Research

Regarding the research related to the study of financial management, some works were detected; in Europe, there was the work of Intriago et al. (2021), while in America, works such as that of Paredes et al. (2019) were found, and in Ecuador found Marcotrigiano (2013), while in Venezuela those of Martínez et al., (2017), while in Colombia there is Lopera et al., (2014). On the other hand, in Mexico, there are the works of Oropeza and Garcia (2013), Saavedra, Tapia and Aguilar (2016), Esparza et al. (2010), Gómez, Garcia and Marín (2008) and Saavedra and Milla (2017) in the states of Tabasco, Mexico City, Quintana Roo, Puebla and Querétaro respectively. Although there are few investigations carried out recently, thanks to these, it has been possible to shed light on knowledge. Therefore, it has been possible to formulate new theories and models which could have modified existing ones.

8.1.7 Generalities of the financial system

The financial system is a subject investigated since it promotes transferring economic resources or money to those who require it. Hence it is essential because it offers different benefits, among which are the growth of the economy through the promotion of economic activities and minimising economic crises. However, the financial system has challenges, which, once overcome, would lead to more significant benefits than those it already offers to individuals and companies since it would make it possible to change the panorama in this context. Regarding the concept, López and Lara (2017) state that the financial system comprises financial intermediaries or entities that promote the transfer of resources through specialized instruments to comment on financial inclusion. In the same way, Morales (2017) mentions that the financial system can also be known as the financial sector and that this is made up of institutions authorized by the State that are in charge of capturing, managing and investing the money of natural or legal persons and National and international. For his part, Méndez (1999) argues that the financial system comprises the stock and capital market, the set of institutions that provide credit to finance different economic activities. Going back to what the authors pointed out, the financial system can be conceptualized as those institutions and entities authorized by the State that act as intermediaries that offer credit to people or companies that need it through stock or capital markets.

Regarding the importance, the financial system is fundamental in the structure of a country because it promotes the economy's growth by promoting certain economic activities that lead to development. Therefore, financial stability is considered a fundamental pillar in the construction of the financial system to avoid and minimize the consequences of economic crises and their spread to other economies (Terceño and Guercio, 2010). In a word, the financial system is essential under all the benefits people and companies can obtain thanks to it, given that it promotes those who need it and improves the economic context, which translates into stability.

Regarding the challenges of the financial system, Quintana (2014) establishes that financial systems have been unable to promote the development and growth of the economy since how it operates only benefits large companies, promoting inequality and weakening the system. Democratic mainly in Latin America. Therefore, there is the challenge of transforming the framework that regulates the financial system at the international level because the effects of the crises would be minimal if this change were to take place. Uribe (2013), in turn, points out that another challenge is to create an adequate regulation for the different activities carried out by institutions in the financial markets, thus limiting the creation of financial instruments or operations outside of the regulation.

8.1.8 Some recent research on the financial system

According to Terceño and Guercio (2010), in the economic literature, concern about the effects of the financial system on economic growth is visible, given that these two variables are interrelated. Likewise, they show the correlation that exists between indicators of the financial system. and the GDP; they also verify that in the Latin American economies, the banking sector presents a more significant link with the growth of the economy, regardless of the financial structure that the country has. For his part, Uribe (2013) analyzes the structure, the conglomerates, the operation and the leading indicators of the Colombian financial system to delimit its behaviour. Meanwhile, De Jesús et al. (2021) consider that the emergence of collective funding was a solution to the shortcomings that financing presents in Mexico, both for investors and for funders, as it is a watershed in the risk relationship. performance of the offer of the Mexican financial system, being a technological finance sector with a formal, reliable and transparent scheme. Although there are few recent investigations on the financial system, they have contributed in one way or another to formulating new theories and models or modifying existing ones, which means a contribution to knowledge.

8.1.9 Research carried out with the variables under study.

Next, the variables included in this work are presented as a group, extracted from a brief review of the literature on financial management. In this sense, SMEs are an economic unit that produces goods and services, at a small size, with a limited number of workers and market coverage, usually directed by the owner or an external person (Cardozo et al., 2012), generating employment and economic well-being that they generate in the areas where they have a presence. To which, for the present investigation, it is divided into three variables, the first is financing, the second is the use of accounting and financial information, and the third is the characteristics of the company.

Regarding financing, according to Bohórquez et al. (2018) explain that financing can come from two sources: the use of own resources and access to external sources. In this sense, Treviño et al. (2012), based on a study carried out with exporting SMEs from Nuevo León (Mexico), distinguish that bank financing generates a significant increase in sales and, in turn, López and Lara (2017) specify After an investigation of the banking institutions that provide credit in Mexico, Banco Santander is the best option for this type of company. However, Esparza et al. (2010) show that companies established in emerging economies do not resort to bank financing due to the costs to access it, the little development of the Mexican banking system, and above all, for fear of default. Therefore, they prefer using their resources as the primary source of financing.

Regarding the use of accounting and financial information, Martínez et al. (2017) mention that lacking this is one of the main obstacles SMEs present when seeking financing. Oropeza and Garcia (2013), in turn, postulate that this depends on the size of the companies since, as their size increases, so does their application level. For their part, Saavedra-García, Tapia-Sánchez, and Aguilar-Anaya (2016) mention that even though SMEs have an accounting information system, they do not dimension what this means since their concern is focused on complying with their tax obligations and not having problems with Despite the Treasury, thanks to this, decisions on investments and credits could be made, the financial resources of the business (origin and characteristics) evaluated, as well as the financial management that is carried out (Sandoval, 2008). However, according to the investigation of Saavedra, Tapia and Aguilar (2015), with a sample of 300 SMEs from the Federal District, found that there is a relationship between business studies and the adoption of accounting and financial information in the same way, that the preparation of financial forecasts and analyzes is scarce. In this sense, Collin and Jarvis (2002), through a study carried out on 385 SMEs in the United Kingdom, identify that this type of company uses formal methods for planning and control.

Regarding the characteristics of the company (age of the company), León and Saavedra (2018) specify that for external financing (bank credit), they usually require SMEs to be between 2 and 3 years old. In addition, Oropeza and Garcia (2013) verify a positive relationship between bank financing and the company's age, since as age increases, the use of financing also increases, although it is almost null.

8.1.10 Choice of theoretical model

The present work has as a solid base the research carried out by Esparza et al. (2010); said research includes two fundamental variables within financial management: financing and the use of accounting and financial information (see Figure 8.1).

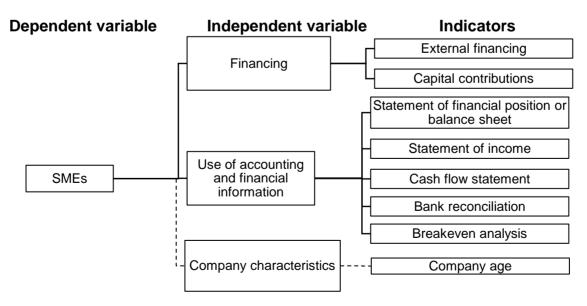


Figure 8.1 Diagram of study variables

Source: Self made.

8.2 Methodology

8.2.1 Study population

In this context and for the present investigation, the small and medium-sized companies of the State of Mexico are considered as population, according to data provided by the Institute of Statistical and Geographic Information (IIEG) of the year 2018, in the State of Mexico there are a total of 3,955 companies, of these companies 3,169 correspond to small and 786 to medium-sized companies.

8.2.2 Sample selection

To calculate the sample size, a probabilistic sample was used under the formula calculating a margin of error of 12.15%, a confidence level of 95%, with a population size of 3,955 and 50% heterogeneity, obtained a sample size of 65 SMEs (see Table 8.1).

| Geographic scope | The municipalities of Atlacomulco and Ixtlahuaca. |
|-------------------------|---------------------------------------------------|
| Universe population | Small and medium businesses |
| Size of the universe | 3,955 |
| Application mode | Survey through structured questionnaire |
| Sampling method | Probability sampling |
| Sample size | 65 |
| Mistake | 12.15% |
| Confidence level | 95% |

| Table 8.1 Research | data | sheet |
|--------------------|------|-------|
|--------------------|------|-------|

Source: Self made.

8.2.3 Measuring instrument design

The measurement instrument to obtain data used in this research is the questionnaire used by Esparza et al. (2010), at the convenience of this work. The instrument is made up of 11 statements in 3 blocks, block one referring to company characteristics, is made up of four multiple-choice questions; block two, referring to financing, is made up of 2 statements with a Likert scale of five positions, where 1 is little use and 5 a lot of use and block three of accounting and financial information for 5 approaches with a Likert scale of five positions, where 1 is no use and 5 much use.

It should be noted that this instrument will be applied electronically through a form in Google Forms and will be addressed directly to company managers, considering the structural characteristics of small and medium-sized companies and the lack of economic databases in Mexico where the data obtained were analyzed using Cronbach's α .

8.2.4 Coding of the variable skills and perceived abilities

To carry out the data processing, an exhaustive review of the information collected from the questionnaires applied during October and November 2021 to the owners or administrators of small and medium-sized companies in the municipalities of Atlacomulco and Ixtlahuaca respectively, was carried out without However, it should be noted that responses were also obtained from business people belonging to other municipalities located in the northern zone of the State of Mexico, obtaining a total of 64 responses.

The review process consisted of the following:

- 1) Check that the answers to the questionnaires belonged to entrepreneurs of small or medium-sized companies.
- 2) Check that the place where the small and medium-sized companies surveyed belong to municipalities located in the northern zone of the State of Mexico (Atlacomulco and Ixtlahuaca).
- 3) Verify that the questions contained in the questionnaire were answered.

Once the review process was completed, the data obtained was recorded in an Excel spreadsheet, which was transferred to the statistical program SPSS version 20.0 for the social sciences, performing the analysis and coding of the data (see Table 8.2).

| CODING | ITEM | DESCRIPTION |
|-----------------|-------------------------|-----------------------------------------------------------------------------------------------------------|
| Company | Company age | Variable of scalar type corresponding to the age of the company. |
| characteristics | | 1) 0 to 2 years |
| | | 2) 3 to 5 years |
| BUED | | 3) 6 to 8 years |
| | | 9 to 11 years |
| Use of | Statement of | Likert scale that identifies the degree of use of the statement of financial position or balance sheet as |
| accounting and | financial | a source of accounting and financial information. |
| financial | position or | (1= Little use, 5= Much use). |
| information | balance sheet | |
| BTBG | | |
| BTER | Income | Likert scale that identifies the degree of use of the income statement (sales, costs, expenses) as a |
| | statement | source of accounting and financial information. |
| | (sales, costs, | (1 = Little use, 5 = Much use). |
| | expenses) | |
| BTFE | Cash flow | Likert scale that identifies the degree of use of the cash flow statement (cash flow or cash flow) as a |
| | statement | source of accounting and financial information. |
| | (cash flow or | (1 = Little use, 5 = Much use). |
| | cash flow) | |
| BTCB | Bank | Likert scale that identifies the degree of use of bank reconciliation as a source of accounting and |
| | reconciliation | financial information. |
| DEDE | | (1= Little use, 5= Much use). |
| BTPE | Analysis of | Likert scale that identifies the degree of use of the break-even analysis (sales-expenses and costs) as |
| | the break- | a source of accounting and financial information. |
| | even point | (1 = Little use, 5 = Much use). |
| | (sales- expenses and | |
| | costs) | |
| Financing | external | Likert scale in which the degree of use of external financing in companies is identified. |
| BDFI | financing | (1= Little use, 5= Much use). |
| BDAC | Capital | Likert scale in which the degree of use of capital contributions in companies is identified. |
| | contributions | (1= Little use, 5= High use) |
| | (shareholders | |
| | or owners) | |

Table 8.2 Coding of perceived skills and abilities

Source: Self made.

8.3 Results

Significant correlation results were obtained between the company group (BUEF) and independent variables (BDFI, BDAC, BTBG, BTER, BTFE, BTCB and BTPE); however, in a second statistic considering all the variables, more significant results were obtained (an additional correlation). In this sense, according to the results obtained, the following significant correlations are recorded (see Table 8.3):

| Table 8.3 Correlat | ion of the | financing | dimension | and accou | nting and | financia | l infor | mation | |
|--------------------|------------|-----------|-----------|-----------|-----------|----------|---------|--------|--|

| | | BUED | BUSE | BUEF | BUUG | BDFI | BDAC | BTBG | BFER | BTFE | BTCB | BTPE |
|------|------------------|--------|--------|---------|--------|--------|--------|--------|--------|--------|-------|------|
| DUED | Pearson | 1 | | | | | | | | | | |
| BUED | correlation | | | | | | | | | | | |
| | Next (bilateral) | | | | | | | | | | | |
| | No. | 65 | | | | | | | | | | |
| BUSE | Pearson | -0.097 | 1 | | | | | | | | | |
| BUSE | correlation | | | | | | | | | | | |
| | Next (bilateral) | 0.44 | | | | | | | | | | |
| | No. | 65 | 65 | | | | | | | | | |
| BUEF | Pearson | 0.122 | 0.028 | 1 | | | | | | | | |
| DULL | correlation | | | | | | | | | | | |
| | Next (bilateral) | 0.334 | 0.824 | | | | | | | | | |
| | No. | 65 | 65 | 65 | | | | | | | | |
| BUUG | Pearson | 0.115 | -0.151 | 0.016 | 1 | | | | | | | |
| DUUG | correlation | | | | | | | | | | | |
| | Next (bilateral) | 0.364 | 0.231 | 0.899 | | | | | | | | |
| | No. | 65 | 65 | 65 | 65 | | | | | | | |
| BDFI | Pearson | -0.111 | -0.002 | -0.08 | -0.003 | 1 | | | | | | |
| DUFI | correlation | | | | | | | | | | | |
| | Next (bilateral) | 0.378 | 0.985 | 0.528 | 0.978 | | | | | | | |
| | No. | 65 | 65 | 65 | 65 | 65 | | | | | | |
| BDAC | Pearson | -0.172 | .312* | 0.035 | 0.093 | 0.116 | 1 | | | | | |
| DDAC | correlation | | | | | | | | | | | |
| | Next (bilateral) | 0.171 | 0.011 | 0.784 | 0.459 | 0.357 | | | | | | |
| | No. | 65 | 65 | 65 | 65 | 65 | 65 | | | | | |
| BTBG | Pearson | -0.088 | -0.077 | 0.213 | -0.003 | 0.103 | -0.004 | 1 | | | | |
| DIDO | correlation | | | | | | | | | | | |
| | Next (bilateral) | 0.488 | 0.544 | 0.089 | 0.98 | 0.416 | 0.976 | | | | | |
| | No. | 65 | 65 | 65 | 65 | 65 | 65 | 65 | | | | |
| BFER | Pearson | -0.028 | -0.111 | 0.026 | 0.032 | 289* | 0.024 | .350** | 1 | | | |
| DILK | correlation | | | | | | | | | | | |
| | Next (bilateral) | 0.828 | 0.377 | 0.837 | 0.803 | 0.02 | 0.851 | 0.004 | | | | |
| | No. | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | | | |
| BTFE | Pearson | 0.078 | -0.111 | 0.027 | -0.026 | 0.032 | 0.119 | .507** | .510** | 1 | | |
| | correlation | 0.72 | 0.00 | 0.05 | 0.005 | | 0.0.1 | | | | | |
| | Next (bilateral) | 0.534 | 0.38 | 0.83 | 0.835 | 0.8 | 0.344 | 0 | 0 | | | |
| | No. | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | | |
| BTCB | Pearson | -0.134 | 0.143 | -0.202 | -0.135 | -0.077 | .279* | .342** | .524** | .422** | 1 | |
| | correlation | | | | | | | | | | | |
| | Next (bilateral) | 0.288 | 0.257 | 0.106 | 0.284 | 0.54 | 0.025 | 0.005 | 0 | 0 | | |
| | No. | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | |
| BTPE | Pearson | -0.104 | -0.072 | -0.179 | 0.118 | -0.115 | .329** | 0.205 | .455** | .395** | .304* | 1 |
| | correlation | | 0.5.55 | 0.1.7.5 | 0.015 | 0.0.11 | 0.005 | 0.100 | - | 0.000 | 0.01 | |
| | Next (bilateral) | 0.41 | 0.569 | 0.155 | 0.349 | 0.361 | 0.007 | 0.101 | 0 | 0.001 | 0.014 | |
| | No. | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 |

Age (BUED); economic sector (BUSE); family business (BUEF); geographic location (BUUG); external financing (BDFI); capital contributions (shareholders or owners) (BDAC); statement of financial position or balance sheet (BTBG); income statement (sales, costs, expenses) (BTER); cash flow (cash flow) (BTFE); bank reconciliation (BTCB) and break-even point (sales-expenses and costs) (BTPE).

**. The correlation is significant at the 0.01 level (bilateral).

Source: Self made.

There is a weak positive correlation between the economic sector of the company (BUSE) and capital contributions (shareholders or owners) (BUAC) (r=0.312), indicating a relationship of 9.73% ($r^2=0.097344$).

The correlation between external financing (BDFI) and the income statement (BTER) is weak negative (r=-0.289), therefore, there is a relationship of 8.35% (r²=0.083521).

On the other hand, capital contributions (shareholders or owners) (BUAC) and bank reconciliation (BTCB) show a weak positive correlation (r=0.279), for which the coefficient of determination indicates a relationship of 7.78% ($r^{2}=0.077841$).

Capital contributions (shareholders or owners) (BUAC) with the break-even point (BTPE) are weakly positively correlated (r=0.329) by 10.825 according to the coefficient of determination (r 2 =0.108241).

While there is a weak positive relationship between the balance sheet (BTBG) and the income statement (BTER) (r=0.350), representing a 12.25% relationship between both ($r^2=0.1225$), that is, for the performance of the balance sheet small and medium-sized companies rely on the income statement.

Similarly, there is an average positive correlation between the balance sheet (BTBG) and the cash flow (BTFE) (r=.507) where they are related by 25.70% according to the coefficient of determination ($r^2=0.257049$).

In the same way, the general balance (BTBG) is positively weakly correlated with the bank reconciliation (BTCB) (r=.342), indicating the coefficient of determination ($r^2=0.116964$) that there is a relationship of 11.69%.

Likewise, there is an average positive relationship between the income statement (BTER) and the cash flow (BTFE) (r=0.510), for which the coefficient of determination ($r^2=0.2601$) indicates that there is a relationship between the items of 26.01%.

Likewise, the items income statement (BTER) and bank reconciliation (BTCB) are positively correlated on average (r=0.524), with a relationship of 27.45% ($r^2=0.274576$).

Between the income statement (BTER) and the break-even point (BTPE) there was a weak positive correlation (r=0.455), for which the coefficient of determination ($r^2=0.20705$) indicated that there is a relationship of 20.70%.

Similarly, there is a weak positive correlation between cash flow (BTFE) with bank reconciliation (BTCB) (r=.422), relating to 17.80% based on the coefficient of determination ($r^2=0.178084$).

The cash flow (BTFE) and the break-even point (BTPE) are related in a weak positive way (r=0.395) indicating a relationship of 15.60% ($r^2=0.156025$).

And between the bank reconciliation (BTCB) with the break-even point (BTPE) there is a weak positive relationship (r=0.304), so there is a relationship of 9.24% ($r^2=0.092416$).

8.4 Gratitude

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8.5 Conclusions

Based on the general objective stated at the beginning of the investigation, which consists of analyzing some variables of financial management in SMEs of two municipalities in the northern zone of the State of Mexico in order to detect those financing alternatives that they use for development and consolidation, carried out from the adaptation of an instrument constituted by Esparza et al. (2010), which measures financial management in companies through financing and the use of accounting and financial information, the following is found:

Concerning financing, small and medium-sized companies in both Atlacomulco and Ixtlahuaca make greater use of external financing, leaving internal financing in the background, which is contrary to what the Hierarchy Theory, Pecking order Theory (POT) or Preference Order Theory, and research such as that of Cemil et al. (2006) with 851 companies in 18 cities in the Black Sea region of Turkey, Esparza, et al. (2010) with 122 tourism MSMEs from the State of Quintana Roo (Mexico) and Eldomiaty et al. (2017) in their empirical evaluation, since these reflect that companies follow an order of preference and are financed in the first instance with their resources. The aforementioned is probably due to the international economic situation due to the Covid-19 pandemic, which has limited small and medium-sized companies' ability to subsist on their own, that is, through their resources.

Meanwhile, the use of accounting and financial information by managers for decision-making is mainly supported by two financial statements: a statement of financial position or balance sheet and an income statement; in this sense, Collin and Jarvis (2002), Through a study carried out with 385 SMEs in the United Kingdom, they identify those small and medium-sized companies use formal methods for planning and control. Additionally, Saavedra, Tapia and Aguilar (2016), in their research with 300 SMEs in the Federal District (Mexico), mention that even though these companies have an accounting information system, their concern is focused on complying with their tax obligations and not having problems with the Treasury, which demonstrates its frequent use in this type of company.

However, the other financial statements: cash flow statement, bank reconciliation and analysis of the break-even point, have a significant presence but less than the previous ones, by which the most significant ones are created; that is, they provide the information that allows its creation and therefore its delivery, although they may be omitted on occasions.

Continuing with this order of ideas, it is concluded that financial management in small and medium-sized companies in the Municipalities of Atlacomulco and Ixtlahuaca, State of Mexico, is based on the use of external financing, which changes the theoretical approach that exists in this regard, and that in terms of accounting and financial information, they only use two financial statements to a large extent: statement of financial position or balance sheet and income statement, which have the particularity that they must be delivered to the Tax Administration System (SAT).

In summary, it is possible to specify that the hypothesis raised at the beginning of this investigation is accepted, since through the analysis of financial management (financing, use of accounting and financial information and characteristics of the company) in SMEs in the area north of the State of Mexico (Atlacomulco and Ixtlahuaca) it was possible to detect the financing alternative that they use for their development and consolidation, this being external financing, which is a contribution in the light of knowledge since it contradicts what the theory affirms to the regard. However, this is likely due to the situation in the State of Mexico and even more specifically in the northern zone, given that a solid economic crisis has broken the possibility of internal financing, which was the most used until recently.

8.6 References

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