Importance of financial planning for the administrator of microenterprise in Guasave, Sinaloa

Jesús Alberto Peinado Guevara 1, Víctor Manuel Peinado Guevara2, Aldo Alán Cuadras Berrelleza3, Jaime Herrera Barrientos4, Héctor José Peinado Guevara5, Mayra Patricia Osuna6, Miguel Ángel Montoya Leyva7

1Preparatoria Guasave Nocturna, Universidad Autónoma de Sinaloa, Guasave, Sinaloa, México, 2, 3, 5, 6, 7Escuela de Ciencias Económicas y Administrativas, Universidad Autónoma de Sinaloa, Guasave, Sinaloa, México, 4Centro de Investigación Científica y de Educación Superior de Ensenada, Baja California (CICESE), Ensenada, Baja California, México

jesuspeinado@uas.edu.mx1, v_peinado@hotmail.com2, aalan@uas.edu.mx3, jherrera@cicese.mx4, hpeinado75@hotmail.com5, mayraosuna59@gmail.com6, miguel.montoya166@gmail.com7

Abstract. Microenterprises are of great importance to the economies of the world because of their capacity to generate jobs and contribute to the gross domestic product, favoring the national production system. However, they are also highly vulnerable to the different socioeconomic scenarios that affect their different environments, as well as to the financial planning training of their operators (managers, administrators, or owners) who are a central part of the life expectancy of these enterprises, as well as of their growth. The relevance of the operator is analyzed using the chi-square statistical test by relating varieties of financial planning such as credit, liquidity, indebtedness, costs of goods and services, decision making about the age, education, and professional training in the financial planning of the microenterprise operator. Using Likert scaling, 124 surveys were formulated, each with 22 items related to the profile of the operators and the financial planning resources mentioned above, thus generating quantifiable numerical records containing the responses of the microenterprise operators interviewed. From the statistical analysis with the chi-square test, the degrees of dependence between variables were determined, finding that the professional training in the field of financial planning of the microenterprise operator is a determinant in survival, existence, or life expectancy, which is 5.7, lower than the national average.

Keywords. financial planning; microenterprises; financial resources

1. Introduction

The changes that are currently taking place in global, national, and local markets are placing greater demands on organizations, with an emphasis on international economic factors, which are increasingly affecting the lives of small commercial enterprises.

According to the Ministry of Economy (SE), micro-enterprises are establishments or businesses that have less than ten workers and can obtain sales of up to 4 million pesos per year.
These represent 95% of the total Mexican business fabric, generate up to 40% of employment nationwide, and contribute 15% of the Gross Domestic Product [1].

In 2018 there was an approximate registration of 4.1 million micro, small and medium-sized enterprises (MSMEs), classified mainly in the manufacturing, commerce, and non-financial private services sectors. Microenterprises represent 97.3% of the total number of companies, totaling 4,057,719 [1].

The Mexican commercial opening generated the bankruptcy of many companies [2] many others presented difficulties to compete in the face of technological and financial limitations in the acquisition of tangible assets, especially fixed assets, as a consequence of a credit market with terms difficult to comply with as credit subjects, a situation that has led them to low levels of competitiveness [3]. This situation led to necessary changes in the local businessman's activities, which may lead to an emergency of investment in different factors or areas of commercial activity.

Given this contingent situation, a couple of questions arise: What role does the economic liquidity of the business play in facing contingencies, and how does financial planning impact the success of microenterprises in the municipality of Guasave, Sinaloa, with the understanding that the resources available cover the greatest number of needs. These must be taken care of since interest rates are high in the case of a loan, affecting the organizations' income. On the other hand, increases in the prices of raw materials or inputs are increasingly higher, so conditions make evident the need for increasingly adequate planning of finances.

According to [4] a company cannot obtain competitive advantages if it is observed as a whole, but it can achieve them if it identifies activities in design, production, marketing, delivery, and supplier support, thus improving its competitors [5].

In an environment such as the one described above, modern microentrepreneurs must have financial knowledge, to know and apply, without problem, the techniques and strategies of the administrative process, such as strategic planning, which allows them to be efficient with the financial resources available [6].

Strategic planning is a fundamental element of companies' growth and future sustainability [7]. The planning and regularization process is required by all companies, including those belonging to the micro-level, which otherwise will find it difficult to evaluate and prevent changes caused by economic, technological, social, and cultural factors. Tax credits and charges represent the use of resources that require planning, especially when the profit margin is limited due to competition and low demand.

Munch and García (2006) consider that finances are relevant since every company works based on constant money movements, so obtaining funds and supplying capital is necessary for the company's departments to function properly.

Based on the above, this research aims to analyze the perception that microentrepreneurs in Guasave, Sinaloa have of strategic planning and finance.

2. Results and discussion

Regarding data collection, a structured questionnaire was used through the application of a survey using random probability sampling. From Table 1 it can be observed that, from the Chi-square test, a level significantly lower than 0.05 (0.009<0.05) was found, so it can be concluded that the maximum level of study of the owner or manager of the microenterprise is significantly related to the time that the enterprise has been operating, and that, with a level of significance higher than 0.05 (0.958>0. 05) are not related to the following items: financial planning, the estimation of expenses to keep the business operating month after month.
(0.598>0.05), the methodology for calculating and analyzing costs (0.113>0.05), the analysis of a loan, the money needed to meet economic needs in the short term (0.391>0.05), the level of liquidity of the business (0.241>0.05) and the level of indebtedness of the business (0.241>0.05).

Table 1. Chi-square test to determine the relationship between the maximum level of education of the owner or manager of the microenterprise with various aspects of the enterprise.

<table>
<thead>
<tr>
<th>Relationship of the owner's or manager's highest level of education to:</th>
<th>Chi-square tests</th>
<th>Value</th>
<th>gl</th>
<th>Asymptotic sig. (2 sides)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of time the company has been in operation</td>
<td>Pearson's Chi-square</td>
<td>32.520*</td>
<td>16</td>
<td>0.009</td>
</tr>
<tr>
<td></td>
<td>Likelihood ratio</td>
<td>30.557</td>
<td>16</td>
<td>0.015</td>
</tr>
<tr>
<td></td>
<td>Linear by linear association</td>
<td>6.47</td>
<td>1</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>N of Valid cases</td>
<td>124</td>
<td>7.672a</td>
<td>16</td>
</tr>
<tr>
<td>Financial planning</td>
<td>Pearson's Chi-square</td>
<td>10.682</td>
<td>16</td>
<td>0.829</td>
</tr>
<tr>
<td></td>
<td>Likelihood ratio</td>
<td>10.682</td>
<td>16</td>
<td>0.829</td>
</tr>
<tr>
<td></td>
<td>Linear by linear association</td>
<td>1.018</td>
<td>1</td>
<td>0.313</td>
</tr>
<tr>
<td></td>
<td>N of Valid cases</td>
<td>124</td>
<td>14.010*</td>
<td>16</td>
</tr>
<tr>
<td>Estimate expenses to keep your company operating month after month.</td>
<td>Pearson's Chi-square</td>
<td>14.010*</td>
<td>16</td>
<td>0.598</td>
</tr>
<tr>
<td></td>
<td>Likelihood ratio</td>
<td>17.824</td>
<td>16</td>
<td>0.334</td>
</tr>
<tr>
<td></td>
<td>Linear by linear association</td>
<td>0.009</td>
<td>1</td>
<td>0.923</td>
</tr>
<tr>
<td></td>
<td>N of Valid cases</td>
<td>124</td>
<td>23.014*</td>
<td>16</td>
</tr>
<tr>
<td>Methodology for the calculation and analysis of my costs</td>
<td>Pearson's Chi-square</td>
<td>23.014*</td>
<td>16</td>
<td>0.113</td>
</tr>
<tr>
<td></td>
<td>Likelihood ratio</td>
<td>22.747</td>
<td>16</td>
<td>0.121</td>
</tr>
<tr>
<td></td>
<td>Linear by linear association</td>
<td>0.387</td>
<td>1</td>
<td>0.534</td>
</tr>
<tr>
<td></td>
<td>N of Valid cases</td>
<td>124</td>
<td>16.917a</td>
<td>16</td>
</tr>
<tr>
<td>The analysis of loan analysis and the money needed to meet short-term economic needs</td>
<td>Pearson's Chi-square</td>
<td>19.563a</td>
<td>16</td>
<td>0.241</td>
</tr>
<tr>
<td></td>
<td>Likelihood ratio</td>
<td>19.563a</td>
<td>16</td>
<td>0.241</td>
</tr>
<tr>
<td>Analysis of my company's level of liquidity</td>
<td>Likelihood ratio</td>
<td>22.784</td>
<td>16</td>
<td>0.12</td>
</tr>
</tbody>
</table>
and level of indebtedness. Linear by linear association 0.371 1 0.542

N of Valid cases 124

Source: Own elaboration

In the same way, a chi-square test was used (see Table 2) to test the association between the variables' level of studies and skills and knowledge, obtaining a significance level lower than 0.05 (0.016<0.05), so it can be concluded that the level of studies is significantly related to the skills and knowledge necessary to carry out financial planning in the company.

Table 2
Chi-square test

<table>
<thead>
<tr>
<th>Chi-square tests</th>
<th>Value</th>
<th>gl</th>
<th>Asymptotic sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2 sides)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson's Chi-square</td>
<td>30.370a</td>
<td>16</td>
<td>.016</td>
</tr>
<tr>
<td>Likelihood ratio</td>
<td>31.852</td>
<td>16</td>
<td>.010</td>
</tr>
<tr>
<td>Linear by linear association</td>
<td>7.877</td>
<td>1</td>
<td>.005</td>
</tr>
</tbody>
</table>

N of Valid cases 124

a. 18 boxes (72.0%) have expected a count of less than 5. The minimum expected count is .05.

The skills and knowledge necessary to carry out financial planning are related to the resources for financial planning, the estimation of expenses to keep the company operating month after month, and the methodology for the calculation and analysis of my costs; these relationships are given with the significances (0.007<0.05), (0.039<0.05) and (0.000<0.05), respectively. On the other hand, it is not related to the analysis of a loan, the money needed to solve the economic needs in the short term, analysis of the level of liquidity of my company and level of indebtedness of the company, since the significances were (0.139>0.05), for the first two, 0.207>0.05 and 0.087>0.05, respectively.

2.1 Age of the microenterprise operator

Regarding the age of the surveyed entrepreneurs or managers, 52% were found to be between 36 and 65 years of age. The predominant ages range from 26 to 35 years of age and represent 29.3% of the surveyed population. Of the total surveyed, 16.3% correspond to younger entrepreneurs, with an age range of 18 to 25 years.

A relevant aspect of this research was to identify the age and time that a manager has been working as an administrator or manager of a company since a person’s labor and business maturity are relevant for correct decision making; however, several studies differ in these variables [9] refer to a study conducted in Vietnam, where he argues that the manager of a company assumes financial risks due to non-personal factors as the main influencing factors, where age, marital status, level of education, among other variables, have nothing to do with decision making.
In the same sense, a new study on financial decision making based on aspects such as analysis and logical reasoning conducted in London, [10] describes that the financial decision making of traders is not based on such variables, in fact, neither do they study nor investigate economic aspects of market behavior variables, that their analysis can catapult them to better consider the decisions.

On the contrary, studies such as [11] in Machala Ecuador, and [12] in Coahuila, Mexico, relate the age of managers with various managerial skills and attitudes, it was found that the age and labor seniority of these managers is a determinant for improving the leadership practice exercised in an organization, modern organizations are in constant search of knowledge that helps them to improve the attitudes, values, and skills of their workers, aspects or factors that are always influenced by the age of the staff.

2.2. Time of operation of the company

Regarding the time of operation in the market, of the 124 companies considered for the study, 60.48% have been in business for 0 to 5 years, 20.16% have been in business for 6 to 10 years, while 19.36% have been in business for 10 years or more (see Figure 1).

According to studies conducted by the National Institute of Geography and Statistics (INEGI), regarding the life expectancy of MSMEs by the state in Mexico, show that in the entity of the study area, they average from 6.6 to 7.3 years of life; in this research, it was found that during the last 5 years, there were more new business registrations than closures, with 49.7% (47,224 new businesses) versus 36.6% (34,727 business closures), a period in which only 13% subsist [13]. In the same sense, but at the national level, the life expectancy of Mexican companies is around 7.8 years, with micro-businesses being the majority with 94.9% of the total number of establishments in the country [14].
The life expectancy of businesses in the state of Sinaloa is 5.7 years for commercial, while nationally it is 6.9 years. In this regard, businesses in the manufacturing sector have the longest life expectancy. Businesses in the commerce sector have greater volatility than the rest, at any age [13]. In terms of data by the municipality, life expectancy is 7.4 years for Guasave.

It can be inferred that the life expectancy of a business correlates with decision-making and financial planning since the start and end of the activity is long and allows the development of the aforementioned activities. Regarding the life expectancy of a company, in a study done in China on the factors that determine the survival of companies in this Asian country, it was found that among the factors that have an impact on this aspect are the financial and economic capacity, the lack of dynamism and innovation, lack of competitiveness and above all government support, are variables that lead to business failure [15].

2.3. Training and professional education

Regarding the professional training of those who serve as managers, the survey showed that 41.13% have a bachelor's degree and 32.26% have a high school degree. These results do not favor the administrative and financial context of the company (see Figure 2).

Figure 2

Respondents' level of education

Source: Own elaboration with survey data

The data are very clear: 58.87% of those surveyed do not have professional studies that support the correct decision-making at the head of a company, including financial aspects, a factor directly related to the premature closure of companies in Mexico.

The operation of a company depends to a great extent on the decision making that takes place within it, for this, a fundamental element that helps the organization to remain in the line of success is, without any doubt, the level of studies and knowledge of those who are in charge, especially when it comes to numbers or financial aspects. In this sense, [8, 9] agree that to
achieve better results in a company, it is necessary to use the resources available in an adequate manner, thus achieving the planned objective with lower costs and better timing.

For [18] in a study conducted in Bogota, Colombia, knowledge management is something that businessmen still do not choose to carry out in their companies and managers, thus lacking determining elements for proper decision making. [19] argue that being well prepared has an impact on the proper management of organizations, as well as on greater organizational capabilities in decision making, and [20] emphasize that financial education has a significant positive relationship in the decisions made in the company.

The ENAPROCE 2018 indicates that, in 2017, at the national level, 15.3% of MSMEs provided training to their workers, 61% of those trained were men and 39% women, while seven out of ten establishments that did not train their staff, pointed out that the knowledge and skills of their staff are adequate; 13.2% stated that they hire staff that is already trained and 4.7% consider the cost to be high [21].

According to [22] there is little information on the actual functioning and internal challenges that hinder the adoption of management skills of managers (managerial skills, decision making, unwillingness to actively participate, irresponsibility, among others) of small and medium-sized enterprises, which undoubtedly hinders their managerial development.

To strengthen the above, the manager's educational profile was questioned, since the ability to make decisions and the vision for the development of adequate financial planning in the company he/she represents depend on this, the data obtained are presented below (see figure 3):

**Figure 3.** Professional profile of those in charge of the management of the microenterprises located in the study area.
Source: Own elaboration with survey data

The results of this question are directly related to the above analysis, due to the importance, for financial decision making, of the training and knowledge that the manager or owner of a company may have to contribute to the success of the company. In this case, 19.35% have professional training in economic-administrative areas, an ideal profile to develop the real capacity to be in charge of the administration of a company. [23] emphasize that, in today’s behavioral economics and business finance, it is understood that decision-makers in a company will make decisions according to different characteristics and contexts of each one of them, highlighting within these characteristics or factors, the level, and profile of education, in addition to others. In this same sense, [24] highlights the importance of financial education, which means that the managers or owners of these companies have reliable information and data for proper decision making in financial life, both personal, and as well as organizational.

[25] points out that the entrepreneur or producer requires a higher degree of financial education, since the lack of it has repercussions in making incorrect decisions, mainly in terms of credit, and, therefore, the ability to manage is limited and has a negative financial impact on the company. Similarly, [26] points out in his report on the financial inclusion of small rural producers in Latin America, that financial education for company personnel is fundamental for them to include corporate finance as a determining pillar for the proper functioning of the company.

Of those surveyed, 66.94% work as administrators, while 29.84% work as business owners. [27] point out that one of the points that make Mexican companies less competitive is the low level of education of their personnel, including managers.

2.4. Financial Planning

Proper strategic planning is essential at all times in the life of a company. Of the universe of surveys applied for this study, where multiple-choice answers were given to the question about the financial planning tools they use, the following were indicated: sales budget, cost budget, and inventory control with 66.94%, 56.45%, and 52.42%, respectively. To a lesser extent, they used: inventory control, preparation of financial statements, and break-even analysis with 20.97%, 23.39%, and 29.84%, respectively (see Figure 4).
Figure 4.
Financial planning tools used by microentrepreneurs in the commercial sector in Guasave, Sinaloa. (Multiple choice answers)

![Bar chart showing financial planning tools used by microentrepreneurs](chart.png)

Source: own elaboration with survey data

The results show that those who are in charge of administration lack financial knowledge or skills, leaving aside important financial resources applicable to proper planning, such as the analysis of financing needs, to mention just one example.

In this regard, [28] argue that the lack of basic education in administrative positions, and especially in topics such as accounting and finance, coupled with little training in them, are limiting factors for the implementation of strategic and financial planning strategies in organizations.

This can also be reflected in Figure 5, where only 20.97% of those surveyed said that they were in complete agreement with the statement "I currently have the necessary skills and knowledge to carry out financial planning in my company", a figure close to the 19.35% of respondents who indicated that they had studies in economic and administrative areas, as described in Figure 3.
This aspect of the applied instrument is of relevance since, through it, the ethics and knowledge of the respondent can be assessed in a certain way.

Financial planning is a process of utmost importance for companies since it constitutes the action guide for the proper use of financial resources. Every company should recognize the importance of the process of defining where it wants to go through time, that is, the importance of carrying out Strategic Planning, since strategies represent the actions that will be carried out to achieve long-term objectives; the analysis and selection of the strategy above all, making subjective decisions based on objective information; unless the company is facing a desperate situation, the strategy alternatives represent steps that advance the company to its desired position in the future [3].

The results showed that the vast majority feel that they have the skills and conditions for the financial planning of their business, 52.42% agree with their knowledge, 26.62% were undecided or disagreed in their response, which means that there is no full security of knowledge about the financial area and can have repercussions in poor results by presenting very marked limitations [29].

In a study on financial planning in micro, small and medium-sized enterprises in India, it was found that, within this type of organization, service organizations have a significantly higher level of financial education than their manufacturing counterparts, and it was also found...
that, in terms of the level of education of entrepreneurs, those with a higher level of education have a significantly higher level of financial education [30].

One of the resources for financial planning is to make estimates of how much, in value of units and money, will be sold in the future; in this case, 18.55% of the universe indicates that they do it very frequently and 47.58% that they do it frequently. In this same sense, when evaluating the importance of making sales forecasts as a mechanism for making projections in inventory management as part of financial planning, only 38.71% of the surveyed population considers that it is very important to carry them out and 5.65% consider that it is of little or no importance.

2.5. Costs of goods and services

Regarding the calculation of the costs of goods and services as a resource for financial planning, 26.61% of the microenterprises state that they use it very frequently and 57.26% use it frequently (see Figure 6). Among the main benefits reported by the surveyed entrepreneurs are profits, decision making at the time of investment (25.81%), better inventories (16.13%), improvements in profitability (14.52%), and determination of sales prices (14.52%).

Figure 6. The frequency with which cost estimates are made in microenterprises in Guasave, Sinaloa.

In this same sense, to make estimates regarding costs, the use of appropriate methodologies to make cost calculations and analysis is required. [31] comment that "cost information plays a fundamental role in companies since financial results largely depend on its proper management" (p. 190). This allows executives to obtain adequate and more accurate reference values to be considered in financial planning and thus make appropriate decisions.
The results shown in Figure 7 show that 61.29% of managers and owners mentioned that they perform cost calculations very frequently and frequently, which is related to the previously described short-term financial planning activities. However, the values occasionally, rarely, and never represent 38.71%, which suggests that they are unaware of the existence of adequate methodologies to make cost estimates.

Figure 7.
Use of methodologies for cost calculation and analysis in commercial microenterprises.

Source: Own elaboration with survey data

More than half of the managers and owners mentioned that they perform cost calculations, which are related to short-term financial planning.

Regarding the break-even point of production costs, the relationship between production and sales was studied. Figure 8 shows the interest of businessmen in this concept. Most of the managers of the companies analyze or measure the cost-benefit, considering the production of the products placed on the market, only 16.94% of the respondents mentioned doing this occasionally. Very frequently and frequently are 38.71% and 41.13%, respectively.
The ratio of production to sales needed to find the break-even point in production costs

Source: own elaboration with survey data

2.6. Credit, liquidity, and indebtedness

Regarding the analysis of financing needs, as a financial planning strategy, the frequency with which loan needs and the amount required to meet short-term economic needs are analyzed was questioned (see Figure 9). A study on financing decisions in SMEs carried out in the city of Bahía Blanca, Argentina [32] point out that "larger companies borrow more, while companies that adopt legal forms with limited liability differ in a greater use of collateralized loans" (p. 71).

According to [33] in a study on how access to finance affects employment in small and medium-sized enterprises (SMEs) in sub-Saharan Africa becomes a constraint to business creation and, therefore, employment. This means that those SMEs that do have access to formal finance create more jobs than those that do not, and, noting also, that the impact of access to finance is stronger for manufacturing firms than for service firms. The results of the study show that 12.1% use this indicator very frequently, and with those that use it frequently, it adds up to 50%. This means that businessmen resort to this resource to increase the possibilities of obtaining credits that give greater financial fluidity to their company.
Seven out of ten businessmen and entrepreneurs point out that the lack of access to credit is the main limitation to their growth and that the main attributes that an entrepreneur looks for when choosing, are speed of credit, few requirements, and affordable interest rates. Credit for SMEs is considerably more expensive than credit for large companies and corporations, while causes such as poor credit history, double tax accounting, and poor knowledge of financial analysis make it even more complicated to obtain financing for this segment (p. 1).

Proper cash management in SMEs represents a determining pillar for their success, [35] argue that:

Among the most important difficulties of SMEs in Latin America is the lack of access to sources of financing, a problem that goes hand in hand with the lack of liquidity faced by entrepreneurs of these companies, since, having scarce resources, they show low bargaining power against creditors and banks when requesting credit, either in kind or in cash; consequently, they are left with little room for maneuver to have the liquidity that allows them to settle their daily operations. (p. 287)
Now, the positive aspect of this is that the entrepreneur analyzes the needs and makes economic projections to incur credit as a strategy to achieve greater liquidity. For this reason, the frequency with which the company's liquidity is analyzed was questioned, as a strategy to foresee situations that could hurt the company's development (see Figure 10).

Figure 10.
Analysis of the level of liquidity in commercial microenterprises.

As in the previous section, liquidity analysis is of vital importance, since it has short-, medium- and long-term repercussions on the very existence of the company. Entrepreneurs in Guasave do it very frequently (29.03%) and frequently (45.16%).

For [36] answering questions about how much to invest in the growth of the company and how to obtain liquidity for it will depend on productivity and the cost of financing. When financing is very costly, decision-making on how to allocate limited resources is relevant.

The analysis of the company's liquidity and access to loans to meet the company's needs in the short term generates the need to consider its borrowing capacity. When studying the frequency with which businessmen review the level of indebtedness, it was found that 20.16% of respondents do it "very frequently", 36.29% do it "frequently", but, on the contrary, 14.52% responded that they never do it and 6.45% of these rarely do it; this information highlights the levels of risk that are assumed when making erroneous decisions to carry debt levels higher than the payment capacity (see figure 11).
Graph 11.
*Frequency analysis in which the level of indebtedness is analyzed within the company*

Source: Own elaboration with survey data

Forbes notes, about the aforementioned study, that in terms of credit "only 50.48% of respondents use it to achieve their strategic objectives. Only 45.89% of micro, small and medium-sized companies use credit to boost the growth of their businesses" [34].

According to data from ENAPROCE 2018, of Mexican MSMEs, within these commercial microenterprises, 28.2% review three to five key indicators that show their performance, 8.8% ten or more indicators, and 66.5% of microenterprises do not monitor indicators; regarding the financing indicator, of the companies that reported by this means, in 2017, eight out of ten used it to purchase inputs, 27.5% to acquire machinery and 25.6% of these used it to pay other credits. In the same way, 60% of the companies that were part of this study indicated that bank credit is expensive, and 70% indicated that they would not accept it [21].

3. Materials and Methods

To achieve the objective set out in this study, a descriptive-analytical type of research was used, with a cross-sectional field design, given that information was collected at a single point in time (2019) from local commercial microentrepreneurs in the city of Guasave, Sinaloa, Mexico [37].

For data collection in the present study, a questionnaire with 22 items was designed to describe the profile of the operators and the financial planning resources used by the companies under study (see Table 3).
Table 3. Variables of the study contained in the research instrument

Section I. Characterization of the company manager

1. Years the company has been operating
2. The maximum level of education of the administrator
3. Professional career studied by the administrator
4. Description of the role within the company as a director

Section II. Tools for financial planning (Infante, 2019).

<table>
<thead>
<tr>
<th>Sales budget</th>
<th>Cost budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory control</td>
<td>Break-even Analysis</td>
</tr>
<tr>
<td>Costing of goods/services</td>
<td>Analysis of financial ratios</td>
</tr>
<tr>
<td>Analysis of financing needs</td>
<td>Preparation of financial statements</td>
</tr>
</tbody>
</table>

To determine the sample size, we resorted to the procedure indicated by [38] taking as reference a total population N of 2107 establishments with characteristics of micro-businesses located in the city of Guasave [21] for which we established reliability of 95% (Z=1.96), a probability of success p=50%, probability of failure q=50% and a maximum permissible error d of 8.55% resulting in a sample of 124 managers by the following formula:

\[
n = \frac{NZ^2pq}{d^2(N-1) + Z^2pq} = \frac{2107(1.96)^2(0.5)(0.5)}{(0.0855)^2(2107-1) + 1.96^2(0.5)(0.5)} = 123.7 \approx 124
\]

3.1 Statistical analysis

The present study analyzed the information with the Statistical Package Social Science Software (SPSS) to determine the dependence between the variables involved in the survey. Among the statistical software widely used in data analysis are SPSS and Minitab, with SPSS being one of the most widely used mainly in medicine, social sciences, and engineering [39]. The Chi-Square Test of Independence allows determining whether there is a relationship between two categorical variables, hence its wide use to analyze the relationship of dependence and/or independence between two qualitative variables [40].

For the statistical analysis, the resources that influence financial planning were considered and were: cost estimates for the maintenance of the company; methodologies for the calculation and analysis of costs; analysis of loans and capital necessary to meet short-term economic needs; the liquidity of the company and the company's indebtedness, for which the opinion of the respondents was averaged using the Likert scaling method [37] (where 0 means that financial planning is never carried out and 5 that it is done very frequently. Of the five questions related to financial planning, the average was obtained to compare their relationship with the respondent's sex, level of study, and the skills and knowledge necessary to carry out financial planning in the company using the chi-square method or Pearson's \( \chi^2 \) [41] which shows the distance between the observed and expected frequencies.
4. Conclusions

The commercial micro-entrepreneur in Mexico represents a valuable part of the productive economic links, in the case of Guasave, it can be seen that this figure is failing to do some positive things, among these, those related to administrative aspects, training, and management of financial instruments to achieve greater success for your company, but on the contrary, this situation demerits his work and that of his business.

Undoubtedly, the profile of the figure in charge of decision making in a micro-enterprise will be a determining factor in the adequate decision making, not only in the financial area, but in all the topics of interest, in this sense, the correct training, together with the profile of the manager or owner, will allow even more efficiency and certainty in this regard.

Executing financial planning tools promptly will prevent the company from accessing credit and, therefore, prevent debt levels from growing, which will also prevent commercial micro-businesses in the Petatlan region from failing and, therefore, prevent the region's economy from declining, thus promoting improvements in job creation and favorable regional economic growth and development.

The average lifespan of microenterprises in Guasave is largely determined by the absence of financial culture and strategic planning. This situation is not very different from the national situation, where the life expectancy of microenterprises is 6.9 years. In both cases, these periods are very short considering the life expectancy of Mexicans and the length of the productive life span.

References


