Inventory management in micro and small enterprises in Izúcar de Matamoros to determine general aspects of inventory management

Manejo de los inventarios en las Micro y Pequeñas Empresas de Izúcar de Matamoros para determinar aspectos generals

FLORES, Fernando*†, RAMÍREZ-CORTÉS, Elva Patricia and BELTRÁN-ROMERO, María de Lourdes

ID 1ˢᵗ Author: *Fernando, Flores*

ID 1ˢᵗ Coauthor: *Elva Patricia, Ramírez-Cortés*

ID 2ⁿᵈ Coauthor: *María De Lourdes, Beltrán-Romero*

Abstract

Inventories are the main reason to exist of commercial enterprises, because they are the items that will give income to entities. This paper shows a comparison of inventory management in the Micro and Small Enterprises among Izúcar de Matamoros City. This will allow to observe the different records and dealings that are made of these assets and their impact on certain financial ratios such as liquidity or acid test.

Inventories, Companies, Financial and control

Resumen

Los inventarios son las razón de ser de las empresas comerciales, debido a que son los artículos que darán los ingresos a las entidades, el presente trabajo muestra un comparativo del manejo de los inventarios en las Micro y Pequeñas Empresas entre Izúcar de Matamoros, lo anterior para observar los diferentes registros y manejos que se hagan de dichos activos así como su impacto en algunas razones financieras como la de liquidez o prueba del ácido.

Inventarios, Empresas, Financiero, control

---

* Correspondence to Author (e-mail: fer_re_6@hotmail.com)
† Researcher contributing first author.

Introduction

Micro and small enterprises are very important in the economic growth of a country, but nevertheless they face internal and external problems, which often prevent them from carrying out processes that strengthen them and in turn increase their income, and although they often fail to impress due to their low production capacity, their success is uncertain and their impact is unexpected, they are a great opportunity for employment and the creation of new services and products that help the economy of the countries.

Sanchez, Osorio and Baena (2007) state that: "It cannot be ignored that small and medium-sized enterprises are a fundamental factor in the generation of employment and growth. It is undeniable that SMEs are the business segment that faces the most obstacles to their development and one of these obstacles is financing, especially long-term financing, since it is with this that investment and business growth can be supported".

The world's economies are focusing their attention on the development and protection of micro and small enterprises, as they have been identified as a sector that in recent years has been increasingly contributing more and more points to the GDP of countries, regardless of their level of development. (Velásquez, 2004)

Within micro and small companies, inventory management represents one of the solutions to the many problems that the administration of any company has; these are a way of avoiding shortages and in an SME it must provide materials or services at any time.

Chiavenato (1993) states: "Stock is the composition of materials that are not used momentarily in the company, but which need to exist in terms of future needs".

Classification of MSMEs in Mexico

Table 1 Classification of MSMEs in Mexico

Inventory

Policies for managing inventories must be formulated jointly by the sales, production and sales areas. These policies consist mainly of setting parameters for the control of this investment, by establishing maximum inventory levels that produce acceptable and constant turnover rates. The maximum levels are set in days of production or sales that are deemed appropriate according to the very drastic seasonal circumstances.

The determination of the level of inventories by calculating through the days of production or sale deemed necessary to keep in stock under normal circumstances must be very well studied, since excess inventories translate into non-productive investment and lack of them. The latter is undoubtedly more serious, but both undermine the profitability of the company. Any significant variation in inventory levels must be for justifiable reasons and of a temporary nature.

The above policy is effective in countries where, although there is a significant rate of inflation, it does not reach an alarming level. When the inflation rate considerably exceeds the cost of money in the local market, a shortage of raw materials usually appears as a natural consequence, and both facts cause the inflation rate to soar. When the critical situation described above exists, the market in general becomes unsettled and the main problem for the manager is the supply of raw materials in order to meet production, sales and profits.

What in normal situations can be obtained without difficulty and at stable prices, under these circumstances one has to search for available stocks in the market and pay prices at the suppliers' discretion. For natural reason, under the circumstances described above, overinvestment in inventories is a protection from an economic point of view, and it is the objective of all companies to increase their inventories as much as possible in order to minimise the harmful effect of accelerating inflation. Taking the above into consideration, the management of the company should keep a close eye on which of the above alternatives to follow, and as a rule of thumb, if the cost of capital exceeds the cost of capital, the choice should be to increase the investment in inventories.

Another alternative to reduce inventory investment is to reduce the number of raw materials, packaging and labels used in production. This alternative should be studied jointly with the technical or laboratory, marketing or sales and manufacturing departments. The results obtained in most cases are surprising, because there was a general lack of standardisation and congruent procurement policies to maximise investment.

This same alternative should be applied to the product lines that are sold, eliminating all those that do not have an appropriate volume and do not have a specific reason to exist, such as image, service, etc. To do this, it is necessary to carry out a study to find out the composition of sales. In many cases, an 80-20 composition is found, which means that 80% of sales are made with 20% of the products and 20% of the remaining sales are made with 80% of the products. Such a combination has to be examined in order to try to reduce the number of products to be manufactured or sold, which would lead to a significant decrease in investment and also to a non-proportional initial drop in sales, which would lead to an improvement in the productivity of the investment. Inventories represent investments earmarked for sale or production for subsequent sale. Thus, for example, raw materials, packaging, work-in-process, finished goods, spare parts and indirect production materials that are consumed within the normal operating cycle.

The valuation rule for inventories is the acquisition or production cost when this is lower than the market cost, the latter being understood as the replacement cost.

Cost may be determined in accordance with the system and method selected by the particular enterprise taking into account its characteristics, and since these may significantly influence the investment of inventories and the results of operations, professional judgement should be exercised. Systems and methods should be applied consistently unless there are changes in the original conditions, in which case they should be disclosed in the financial statements.

Absorptive cost or direct or marginal cost valuation systems may be used and may be operated on a historical and predetermined cost basis, provided that the latter is similar to historical cost under normal manufacturing conditions.

Inventories may be valued using the identified cost, average cost, first-in-first-out (FIFO), last-in-first-out (LIFO) and retail methods. Inventories that are obsolete, damaged or slow-moving should be valued at realisable value.

In times of high inflation, which may be considered to be in the single digits, the effects of inflation must be recognised in the financial information and the valuation method changes to market value, which is the replacement cost that would be incurred to acquire or produce the same item. This cost may not be higher than the realisable value.

There are two possibilities for updating inventories: the method of adjustments for changes in the general price level and the method of updating specific costs. The choice is made between the two methods, whichever provides the most realistic information.

The general price-level adjustment method updates the historical cost of inventories to pesos of current purchasing power of money by applying a factor derived from the National Consumer Price Index. This means that inventories are still valued at historical cost, updated by the loss of purchasing power of the currency as measured by the general price level.

FLORES, Fernando, RAMÍREZ-CORTÉS, Elva Patricia and BELTRÁN-ROMERO, María de Lourdes. Inventory management in micro and small enterprises in Izúcar de Matamoros to determine general aspects of inventory management. Journal-Microeconomics. 2020

The specific cost restatement method (repealed in 1997)1' determines the replacement value by applying one of the following methods when these are representative of the market:

a. PEPS method, first-in-first-out method, whereby the inventory would be valued at the last purchases. This method updates the inventory but not the cost of sales;
b. Valuation at the price of the last purchase made during the period;
c. At standard cost when this is representative of replacement cost;
d. At replacement cost when this is basically different from the last purchase of the period;
e. Through specific indexes for inventories issued by an institution of recognised prestige, or indexes developed by the company itself based on technical studies.

The difference from the inventory restatement should not be considered as a gain (or loss), but is recorded in a suspense account that will be used to restate shareholders' equity (see Part II, Section 5, Method used in Mexico to recognise the effects of inflation on financial information).

The restatement method of adjusting for changes in the general price level allows the option of using replacement costs to recognise the effects of inflation on inventories and cost of sales. It is advisable that the investment in inventories be presented in the statement of financial position analysed by the various classifications in relation to their stage of processing, i.e. goods in transit, raw materials, work in process and finished goods.

In the case of inventories that are intended for construction or in any way are intended as a non-current asset, they should be excluded from this group and shown as non-current. Because of the alternative procedures that may be used for the valuation of inventories, it is necessary to indicate the valuation system used. For example: direct cost, absorbed cost, lower of cost or market; the method of valuation, average cost, first-in-first-out, last-in-first-out, etc., should also be indicated.

When the valuation system is direct cost, the statement of income and expenses should highlight the amount of fixed production expenses generated in the period, and the cost of sales should include the direct cost of sales plus variable distribution and selling costs in order to show the result of the marginal profit or (loss).

In the case of inventories restated to market values, the method and procedure followed as well as the historical cost of the inventory should be disclosed. Only inventories owned by the enterprise should be included in this item, excluding goods received on consignment or others to which the enterprise has no ownership rights. The amount may be shown either as a net figure, or by stating the original value and deducting it from an amount that results in the lower of cost or market valuation, as appropriate.

Where inventories are pledged as security for an obligation, as in the case of a loan, this should generally be disclosed by means of a note and at the same time referenced in the corresponding liability.

Financial Reporting

Analysis and Interpretation Techniques

General

Financial statements provide information that must be analysed and interpreted in order to understand the enterprise better and to manage it more efficiently.

The manager should always keep these questions in mind:

"Do I manage my company well?" "How does my company compare with others in terms of performance and growth?" These questions can be answered if the technique of analysis involving the study of trends and cause and effect relationships between the elements that make up the financial structure of the company is applied. This technique should by no means be considered as a substitute for judgement and sound judgement; however, it is a very useful tool that serves the manager as a basis for decision making and to assist him in many of the decisions that he makes intuitively because he lacks this information.

The aim of analytical methods is to simplify and reduce the data being examined into more understandable terms so that it can be interpreted and made meaningful.

The focus of the analytical technique may vary depending on whether it is applied by an analyst external to the company, who will most likely be looking for the desirability of investing or extending credit to the business, or by an internal analyst, who will be looking for management efficiency and to explain significant changes in the financial structure and the progress of the results achieved compared to what was planned.

The methods of analysis used in financial statements comprise simple ratio methods, standard ratios, reduction method to integral percentages and index numbers, increase/decrease method, trend method and graphical methods. The statement of changes in financial position is an important tool in financial analysis and, as noted in Part 1, Section 5 of this book, is intended to analyse, select, classify and summarise changes in the entity's financial structure during a period.

The statement of net resources generated and their financing allows to know the generation of internal funds in the company in a pure form per se, without mixing other factors that distort the information of what the business represents, as pointed out in section 6 of part 1. It also allows to know the changes in the structure of the company, the behaviour of the financial cycles in the short and long term, as well as to determine the quality of the profit, as pointed out in sections 5 and 6 of this same part.

It is also useful to use the break-even technique to understand mainly the various alternatives that the management of a company must consider, in order to select the most convenient one and decide why, how and when it should be implemented. In order to properly assess the financial situation and productivity of a business, it is not enough to analyse internal data. It is necessary to complement the analysis with knowledge of the environment in which the company operates, such as market conditions, location of the company with respect to sources of supply of raw materials, labour, communication routes, political and tax conditions, etc., which definitely have a great influence on the company.

It is highly recommended, for easier handling and interpretation of the information, that the figures in the financial statements are reduced to thousands or millions of pesos, depending on their importance, in order to leave meaningful information. This simplification does not interfere with the derivation of ratios, percentages and comparisons because the relationships remain unchanged.

Severe ratio or acid test

The difference between current assets and inventories is known as quick assets and also as immediately realisable assets. It is the company's sufficiency or insufficiency to cover its short-term liabilities, i.e. the ratio represents the company's immediate solvency index.

This ratio is used in practice to determine the adequacy or inadequacy of the company to cover its short-term obligations. The practical ratio accepted in most cases is 1 to 1, i.e., for every $1.00 of short-term obligations (quick liabilities), the company must have at least $1.00 of quick assets, in other words, a company's inventories must have a maximum cost equal to its current liabilities.

Inventory turnover ratio

This ratio indicates the speed of the company in making sales, as well as the speed of consumption of materials or raw materials and the speed of production.

It is applied to determine the efficiency of sales; also to budget the purchases of merchandise in commercial companies and of materials or raw materials in industrial companies; also to know how many days the materials remain in the warehouses before passing to the production department; how many days the materials remain in the machines before being transformed into finished products and how many days the finished products remain in the warehouses before being sold, all of the above applying the average periods of consumption, production and sales.
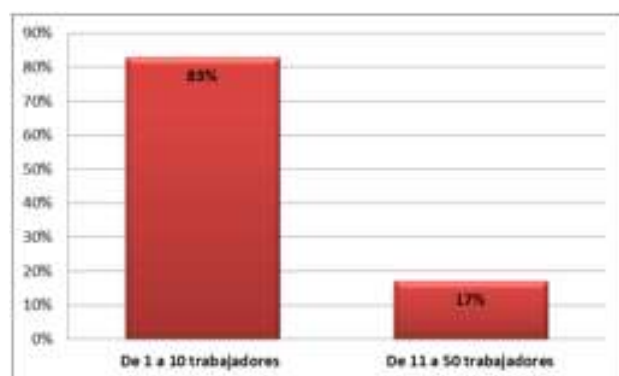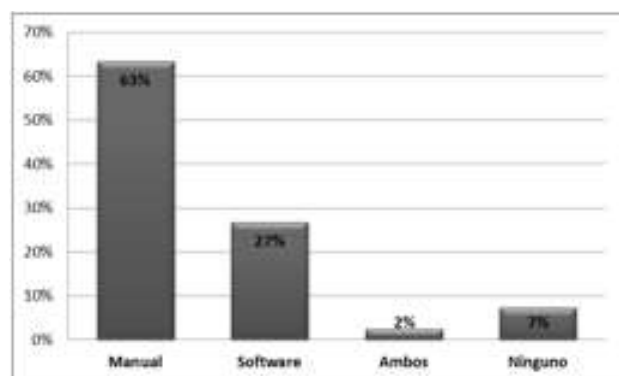
Results
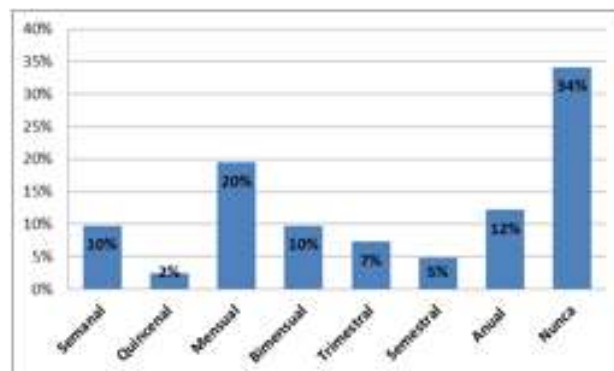
Sector of the companies surveyed
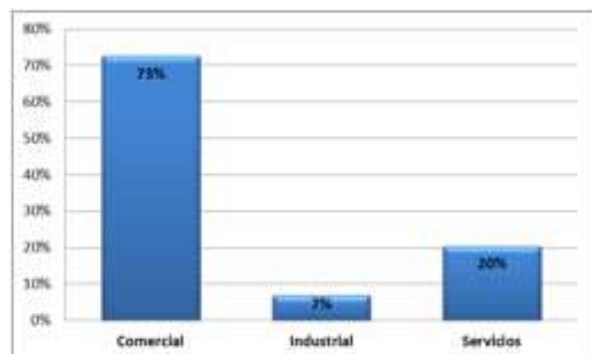
Graph 1 Sector

Number of workers

Graph 2 Proportion of workers

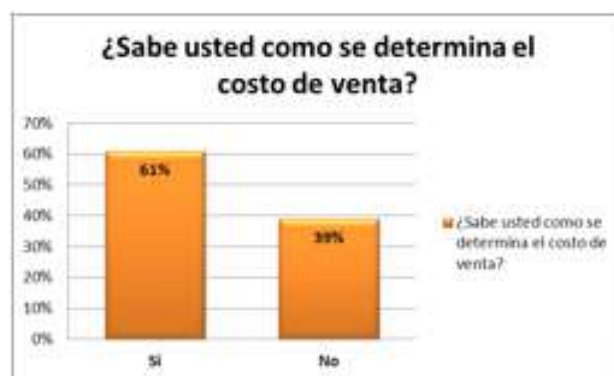### Means of inventory control

Graph 3 Proportion for inventory control

Inventory Taking Periodicity

**Graph 4** Periodicity of physical inventories

Determination of cost of sales

Graph 5 Obtaining cost of sales

Inventory risk factors

The MSMEs in Izúcar de Matamoros consider that among the main risks that exist, deterioration is the first, with 67% of the total responses, followed by obsolescence with 58%. On the other hand, shrinkage and deficit, with 17% each, are the lowest risks according to the companies surveyed.
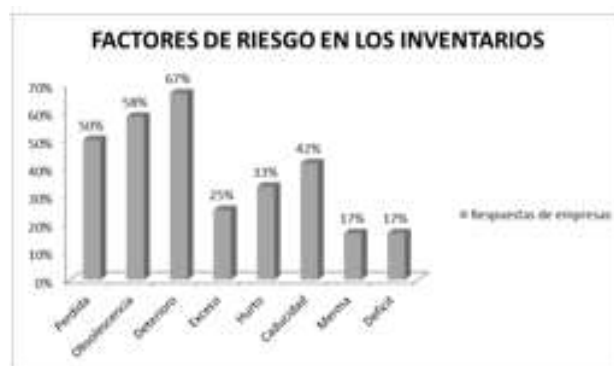
Graph 6 Risk factors

Conclusions

150 surveys were applied in MSMEs in the Izúcar de Matamoros region, starting by asking about the organisation's line of business or activity, and from there different types of questions were used to detect the way in which inventories are recorded, the periodicity and risk factors.

With the above, it was possible to identify the needs of entrepreneurs in the region, since most of them do not have a solid basis for inventory control, nor a manual for its registration, since most of them do everything they apply within the organisation in an empirical way.

In order to obtain the needs, a series of workshops were held and an inventory manual was given to the participating entrepreneurs so that they could improve their records and control of their goods.

References

Chiavenato, I. 1993, Iniciación a la Administración de Materiales, Mc Graw Hill, Mexico

Gonzales., A, & Solis., M. (2011). Analisis descriptivo de la estructura de mercado y estrategias empresariales para las ferreterias pyme en Cali: un enfoque microeconomico. (Tesis de maestria). Universidad Icesi, Santiago de Cali, Colombia.

Sanchez, J., Osorio, J., & Baena, E. (2007). Algunas aproximaciones al problema de financiamiento de las pymes en Colombia. Scientia et Technica, XIII(34) 321-324. Recuperado de http://www.redalyc.org/articulo.oa?id=8493405 4

Velasquez, F. (2004). La estrategia, la estructura y las formas de asociacion: fuentes de ventaja competitiva para las pymes colombianas. Estudios Gerenciales, 20(93), 73-97. Recuperado de http://www.scielo.org.co/scielo.php?pid=S0123 -59232004000400003&script=sci_arttext