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Estimating the Selling Price in a Small Business

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Introduction: *According to the economics lexicon, the enterprise is an autonomous economic unit combining several factors of production, producing goods and services for sale in order to meet the needs of its customers. Thus, to guarantee its sustainability, it must be profitable. However, the autonomy of a business does not mean automatic or robotic operation. We need a device with a dashboard that would serve as a guiding vector for the direction of the company. The Anglo-Saxons sums it up in 5M (Men, Money, Market, Machine, and Management) while the Francophones materialize it by the 5 performance levers of a company and whose pedals correspond to management, finances, sales or marketing, internal process and finally human resources. But all of these expressions have similar meanings. According to a recent survey study (2016) among small businesses in Cameroon, we found serious shortcomings concerning cash management, cost control of the business, the calculation of profitability and especially the calculation of the prices of the products or services offered by the company in order to ensure a secure profit margin. This is proof that the various performance levers are ignored or poorly operated by the pilots or company managers who are responsible for them. Their objective is to orient their business in order to make them prosperous, and therefore to generate significant added value. However, it is difficult for a business owner to implement a sales strategy if at the base he has no idea how to price his products or services. The cost price calculation therefore provides fundamental information for the creation of a business, and offers a plethora of arguments for the entrepreneur to better understand the management of financial leverage. To be more precise, this article will mainly focus on the different methods of valuing the selling price in the production, commercial and service sectors.*

I. Identification, presentation and specification of key concepts (imputations) for setting the sales price

In Africa and even in some Western countries, it is difficult for a small business entrepreneur to set his or her salary or estimate operating expenses in advance. To capture this information, a cash journal is necessary. It is a tool that is supposed to accurately track all financial movements within the enterprise. The entrepreneur is therefore obliged to use it strictly on a daily basis, so that all the financial management indices are faithfully established.

The price is therefore a miniature representation of a company: it reflects production costs and must include profit. Thus, a well-fixed selling price is a price that ensures the profitability of the company: each time a company sells, it is supposed to generate profits. To set a good selling price, the entrepreneur must take into account all the costs of the business and ensure that the profit margin ensures the development of his business and his family.

To determine the selling price of an item in a company, several parameters must be taken into account: there are the company's production costs, the desired profit, the aspect of the market, and the legal environment (imposed prices).

a) The company's production costs

i. Raw Material (RM) or Merchandise Purchasing Costs (MPC)

Examples*: fabric for a dressmaker, metal sheets for a metal carpenter, make-up for a beauty products trader, fertiliser for a farmer.*

ii. Other Indirect Costs (OIC): these are operating expenses, linked to the support of the activity (we can mention transport, logistics, promotion and communication, shop rent, tax, etc.).

***Examples**: rent for the premises, transport for delivery, telephone card for calling customers, taxes, business cards, shop sign, etc.*

iii. Contractor's salary: what we will call here the contractor's compulsory remuneration (CCR). This is the money necessary for his survival, especially when he works as an employee in his company.
CCR can be broken down into costs for food, health, financing of children's education, family housing when the entrepreneur is still a tenant.

iv. Labour costs (LC): these correspond to the employees' salaries, including bonuses.

***Examples**: weekly salary, lunch ration, transportation costs, etc.*

v. Depreciation (D): this is the evaluation of the loss in value of the company's equipment due to its use. Depreciation is not a cash flow (no cash), but it is a measure of how much the entrepreneur has to save to replace the enterprise's equipment after it is scrapped.
For the small entrepreneur, the calculation of the annual depreciation can be simplified as follows: (Purchase price / numbers of years of use of the equipment).

vi. Interest Payment (IP): this is the interest rate on money borrowed by the business if it exists. It should be specified that the interest payment is part of the production costs, while the repayment of the borrowed money should be made from profit. This implies that if the company does not make a profit, it will have difficulty repaying its debts. In fact, the interest on the loan due to the bank is added to the amount borrowed and therefore represents a cost to the company.

b) Business development expenses: profit targeted by the entrepreneur

The profits expected or generated by the enterprise are for the large part often intended for the development of the enterprise, while the small part is used for the personal achievements of the entrepreneur. The aim here is therefore to repay loans, make investments for the growth of the business and to secure part of the funds in order to anticipate future shocks.

i. Professional investment ($PROF_{INV.}$) these include the purchase of new equipment, a new site or the acquisition of real estate with a view to expanding the business and therefore with the aim of developing the company. A distinction must be made between the investment, which expresses the logic of novelty, and depreciation, which is a provision made for the replacement of the existing property.

***Examples**: purchase of new computers in an office to welcome more customers, renting of a second office to set up in a new district, hiring of an employee in charge of advertising to promote the company...*

ii. Professional savings ($PROF_S$) the saving of a part of the company's cash flow in the perspective of a future investment or a bad economic situation. The company's savings are distinct from those of the entrepreneur. It is preferable to place it safely in a financial institution.

***Examples**: a farmer sets aside part of the sales of his crop to face the next season, without income for several months, a trader saves on a $100/month account to buy a vehicle to start home delivery...*

iii. Repayment of loans (RL): this is when the company repays the loans it has taken out at regular intervals. Deadlines must be respected, at the risk of jeopardizing the health and credibility of the company. Loans are used to finance the development of the business. Be careful, the interest on the loan is counted as a cost of production, here we are only talking about the sum borrowed.

***Examples**: a garage owner reimburses her uncle who lent her money to buy a car-lifting machine, a women's clothing saleswoman reimburses every week the microcredit she took out to build up her stock before the end of the year festivities.*

c) Contractor's personal expenses: profit sought by the contractor

For a rational entrepreneur, the smallest portion of the profit is spent on his own development. He can thus build up savings and make personal investments in real estate or furniture. However, a large part of the resources of this portion is often spent on supporting the family and improving the entrepreneur's living conditions. A study has been made in Africa, and particularly in Cameroon, that the increase in this account was due to the expenses related to the organization of funeral ceremonies every weekend in the villages, in addition to the aid intended for other family members (African family in the broad sense).

i. Supplementary Remuneration (SR): these are the extra expenses that are excluded from compulsory remuneration (food, health, education and housing for the entrepreneur and his family). Although it serves as a wage supplement, these are expenses that are not essential to the decent life of the entrepreneur and his family. The company can only bear these leisure and "wellness" costs if it makes a profit. The entrepreneur must therefore learn to control his "extra" expenses to ensure that he does not jeopardise his business.

ii. Personal savings ($PER_{S.}$) As well as the professional savings that the business sets aside to prevent difficult times or to plan for future investment, the entrepreneur and his family must save regularly to deal with unforeseen events that would affect their living conditions (e.g. death of a parent, birth, etc.), or to improve their living conditions through investment.

iii. Personal investment ($PER_{INV.}$) these are purchases of equipment or materials with a view to improving the living conditions of the entrepreneur and his family.

Examples: refurbishing the home, buying a vehicle for the family, buying an electric generator, etc.

d) Entries in the company cash register

i. Sales (S): these are the revenues collected on the sales of the company's articles, products or services.

It should be noted that if the sale is made on credit (in this case, the entry is made in a customer receivables book), the contractor cannot make an entry in his cash journal, he will only do so when he receives from the customer, a part or the totality of the debt.

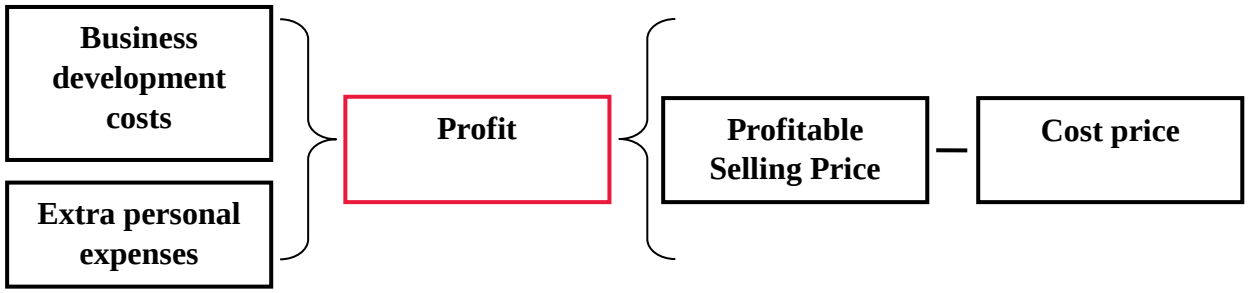
ii. Loans or Credit (L or C): This is money borrowed from the bank or any organisation by the company.

iii. Other Income (OI): This is money from donations or grants. It does not represent the sale or payment of trade receivables or even loans taken out by the company.

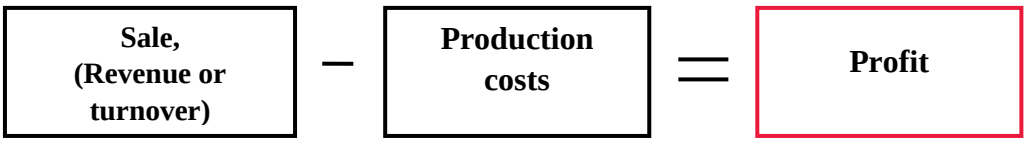
The definition of all these concepts, could make it possible to introduce an additional column in the cash journal with the denomination **"*imputations*"**. These will facilitate the aggregation of the different movements by type of operation, thus allowing the entrepreneur to have a dashboard of indicators that can help him to take important decisions on the direction of the business. Allocations also play a crucial role in the construction of the automatic cash journal table in Excel.

II. Evaluation of the Purchase price in different sectors of activity

Before any mathematical formalisation, this section can be represented by the following diagram:



In other words,



a. <u>Cost price calculation in the commercial and production sectors.</u>

In a company, before setting the selling price, it is wise to focus all your attention on determining the cost price, i.e. the production cost. The right determination ensures the profitability of the company. It should be noted that the entrepreneur does not always have the necessary cash flow to cover all the expenses linked to production. Production expenses are incurred at the rate of sales or income per episode or on a daily basis. Hence the recurrence of certain financial movements during a given period, leading to the frequent resurgence of certain charges. At this point, it is clear that an imputation is the sum of expenditures of the same type.

<u>Example</u>: *Let's imagine that we want to identify the monthly salary of an entrepreneur in a microenterprise from his cash register journal. We will note the number of times this entrepreneur incurs expenses related to his survival and we will be able to note:*

$\overline{CCR} = \sum_{i=1}^{n} ccr_i, i = (1,2,\dots n)$ i *is the number of transactions carried out*

Let's proceed with the formalization of the cost price calculation.

These are :

- $CCR(ccr_1, ccr_2, \dots, ccr_n)$ the total cost of survival;
- $MPC(mpc_1, mpc_2, \dots, mpc_n), [i = (1,2, \dots, n)$ *where* i *is the type* $d'item\ purchased]$. It is the total expenditure made for the acquisition of goods (in the case of commercial enterprises) ;
- $RM(rm_1, rm_2, \dots, rm_n), [i = (1,2, \dots, n)$ *where* i *is the type of raw material purchased*];

  It is the total expenditure made for the acquisition of raw materials (case of production companies);

- $LC(lc_1, lc_2, \dots, lc_n)$ the total expenditure on labour;
- $OIC(oic_1, oic_2, \dots, oic_n)$ the total operating expenses of the company;
- $D(d_1, d_2, \dots, d_n)$ the amounts set aside to provide for the future replacement of work equipment.

❖ $\overline{MPC} = \sum_{i=1}^{n} mpc_i, i = (1,2,\dots,n)$is the total amount of the goods;
❖ $\overline{RM} = \sum_{i=1}^{n} rm_i, i = (1,2,\dots,n)$ is the total amount of raw materials;
❖ $\overline{OIC} = \sum_{i=1}^{n} oic_i, i = (1,2,\dots,n)$ is the total amount of operating costs;
❖ $\overline{D} = \sum_{i=1}^{n} d_i, i = (1,2,\dots,n)$ is the total amount of depreciation.

Now, suppose a contractor has n items or products for sale or use by the customer n raw materials to manufacture its products. The idea is to determine the cost price of an item sold or of the raw material used in the composition of a finished product. It is therefore a question of determining the proportion that the price of each item or raw material represents of the total purchases of goods or raw materials. The concept of an allocation key will therefore be introduced. (DK) which is based on the formulation of statistical frequency.

$DK_i = \frac{mpc_i}{\overline{MPC}}$ this is the distribution key in the commercial sector.

$DK_i = \frac{rm_i}{\overline{RM}}$ this is the representation of the distribution key in the production sector.

We remind you that the total production cost formula (TPC) is as follows:

$TPC = \overline{MPC}$ *or* $\overline{RM} + \overline{CCR} + \overline{OIC} + \overline{LC} + \overline{D}$. Starting from there,

$\overline{CCR}, \overline{OIC}, \overline{LC}$ *and* $\overline{D}$ Represent other production costs$(OPC)$and so on:

$OPC = \overline{CCR} + \overline{OIC} + \overline{LC} + \overline{D}$. Since we already know the overall purchase cost of each good, item or product, as well as of each raw material, it is important to add to this price (that of each item or raw material) the proportion that each item or raw material will have to bear on the other production costs ($OPC = \overline{CCR} + \overline{OIC} + \overline{LC} + \overline{D}$). Each article or raw material will have to pay the following additional amount: $DK_i \times OPC$ in other words:

$DK_i \times (\overline{CCR} + \overline{OIC} + \overline{LC} + \overline{D})$. At the end of this calculation, it is therefore easy to determine the total production cost (TPC_i) of each article :

$TPC_i = mpc_i \; or \; rm_i + DK_i \times (\overline{CCR} + \overline{OIC} + \overline{LC} + \overline{D})$.

This previous expression leads to the determination of the cost price (CP_i) of an item, while recalling the consideration of quantities (Q_i) in the purchase of articles or raw materials, the following formulation is used, which represents the cost price of an article.

Example: *the purchase price of a tin of sardines, a kilo of cocoa or a piece of soap.*

$CP_i = \frac{TPC_i}{Q_i} = \frac{mpc_i \; or \; rm_i + DK_i \times (\overline{CCR} + \overline{OIC} + \overline{LC} + \overline{D})}{Q_i}$.

b. Calculation of the Return Price in the service sector.

If there is one sector of activity where the notion of time takes on its full meaning, it is the service sector. But in Africa and particularly in Cameroon, the lack of electric power, the absence of adequate infrastructure in the fields of communication, production, mobility of economic agents etc., the level of purchasing power, the high unemployment rate and even the type of mentality of individuals, mean that this parameter is often not taken into account by most entrepreneurs when setting their selling price.

Example: *For the production of cinder blocks (bloc industry), a contractor prefers to pay $100 to a project manager for the production of 800 cinder blocks per day, knowing that he employs 10 workers, instead of paying $10/hour to each of the workers for the same result, which is necessarily more expensive.*

However, in order to dilute all the fuzzy factors which impact and make the cost price calculation adopted by this type of contractor unstable, it would be rational to rely on the time parameter for a more efficient and formal calculation.

We have previously stated the total production cost as:

$TPC = \overline{MPC} \; or \; \overline{RM} + \overline{CCR} + \overline{OIC} + \overline{LC} + \overline{D}$

In this case, it corresponds well to the commercial sector as well as to the production sector. In the service sector, $\overline{MPC} = 0 \; or \; \overline{RM} = 0$

The total cost of production in the service sector will therefore correspond to:

$TPC = \overline{MPC} + \overline{OIC} + \overline{LC} + \overline{D}$

In order to define the distribution key that will facilitate the determination of the cost price of each service, it is important for the entrepreneur to identify the different services he offers within his company and the time it takes to carry out each of them. The distribution key will then be the ratio of the number of hours or minutes spent on any one service to the total number of hours or minutes spent on all services during a given period.

These are:

$TS(ts_1, ts_2, \dots, ts_n)$The total time taken to complete each service.

ts_s is put on any service

Q_s number of services s sold during a given period.

$\overline{TS}$ is the total amount of time spent performing all services.

$\overline{TS} = \sum_{s=1}^{n} ts_s$,

DK_s is the distribution key, which is the ratio of the number of hours or minutes spent on any one service to the total number of hours or minutes spent on all services during a given period.

$DK_s = \frac{ts_s}{\overline{TS}}$,

The total production cost of each service is given by the following expression:

$TPC_s = DK_s \times (\overline{CCR} + \overline{OIC} + \overline{LC} + \overline{D})$

The cost price of a service CP_s will therefore be:

$CP_s = \frac{TPC_s}{Q_s} = \frac{DK_s \times (\overline{CCR} + \overline{OIC} + \overline{LC} + \overline{D})}{Q_s}$

III. Conclusion

Fixing a profitable sales price is not just a matter of putting a nice cost price formula on the table. You need to know the strengths and weaknesses of your competitors (prices, products/services, promotions), know who your customers are (needs, purchasing power, location etc.), evaluate the quality of your products/services, have a dream location, take into account the local tax environment, as well as your personal ambitions. However, a good cost price calculation is a prerequisite for surfing on a substantial profit margin. When you are in the commercial or production sector, the idea is to source your supplies at source and at lower cost or to reduce the middlemen as much as possible. Some austerity measures can be applied to other indirect costs by minimising certain operating costs. Two competing contractors may charge the same selling price, but not achieve the same profit margins. For example, one may be forced to integrate the costs of rent and the other may not, since the premises are his property. Hence the need to do everything possible to obtain the most competitive cost price possible.

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