

THE COST CALCULATION – THE IMPORTANCE OF ESTABLISHING OF A CORRECT STRUCTURE OF UNITARY COST

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Abstract: *The paper presents the importance of using a correct cost structure in the cost calculation, in accordance with the current legislation.*

The paper presents a hypothetical study on the cost calculation, according to the model of the complete cost structure, specified by the legislator in the Order of the Minister of Public Finance no. 1826/2003 for the approval of the Regulations on measures regarding the organization and management of the management accounting. The main research methods used in the study were documentation and analysis.

In order to correctly apply of the cost calculation, I recommend the following: the proper codification of products launched in production, the correct control and recording of direct and indirect costs and the application of the most appropriate basis for allocating indirect costs.

Also, in order to calculate correct the costs, it is necessary to use the calculation items provided in the cost structure, such us: direct expenses, indirect production expenses, general administration expenses and selling expenses.

Keywords: *expenses, cost calculation, cost structure, complete cost, managerial accounting.*

Clasificare JEL : D24, M41

1. Introduction

In România, the managerial accounting and the cost calculation are established by the Order of Ministry of Public Finance no. 1826/2003 Specification about some measures regarding the organization of the management accounting.

According to this order, the cost calculation can be done using the following methods: the standard costs method, the order method, the phase method, the global method, the direct-costing method or other methods adopted by companies, depending on the way of organizing the production, the specificity of the activity, the particularities of the technological process and its own needs.

In order to calculate the cost of a product or service, registered expenditures, taken from financial accounting will be placed into the management accounting as follows: direct expenses, indirect expenses, selling expenses and general administration expenses (OMPF 1826/2003).

The paper aims to contribute to the knowledge, understanding and correct application of the cost calculation, but also the correct establishment of the unitary cost structure.

2. Literature review

In the literatura review from cost calculation, a number of specialists such Ebbeken K., Possler L., Oprea Calin, Moroșan I, David D., emphasized the importance of cost and cost calculation.

In the conception of the authors Ebbeken K. and Possler L., the cost calculation represents a set of mathematical operations, through is realized the identification, the evaluation, the classification, the division and the aggregation of expenses items and structures, obtaining the cost

structures, such as: the cost of the used resource, the cost of the activity place, the cost of the activity or the process, the cost of the product or the cost of the period.

Oprea Calin mentions the importance of the correct cost calculation and notes that the classification of expenses by destination is used for organizing the managerial accounting and calculate the unitary cost of products and services. The author also mentions how the complete cost of production is formed by adding to the cost of production, the general administration expenses and the selling expenses (Oprea Calin , 2008).

In the opinion of authors Malmi T. and Grandlund M., the managerial accounting research should clarify and improve existing practices within organizations and propose solutions to solve problems encountered in practice (Malmi T. and Grandlund M., 2009) .

In accordance with the present legislation (OMPF 1826/2003), the complete cost includes the production cost plus general administration expenses and the selling expenses (OMPF 1826/2003).

The cost of a product or service should generally have the following structure:

a) Direct expenses:

- expenses with raw materials and direct consumed materials;
- expenses with energy consumed for technological purposes;
- expenses with direct salaries and contributions;
- other direct expenses;

b) Indirect expenses:

- expenses with depreciation of machineries and equipments;
- expenses with maintenance of sections and machineries;
- expenses with the management and administration of the sections;
- indirect expenses with consumed materials;
- indirect expenses with salaries and contributions;
- other indirect expenses for production;

c)production cost (a+b)

d)selling expenses

e)general administration expenses

Complete cost (c+d+e)

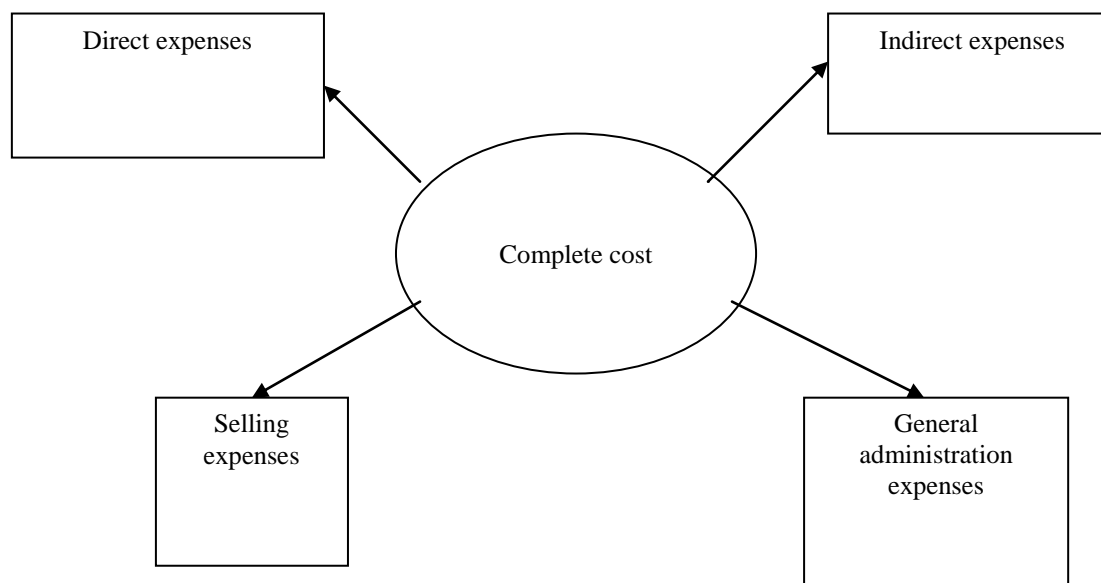


Figure 1. Complete cost

Adaptation after Order of the Minister of Public Finance no. 1826/2003 for the approval of the Specification about some measures regarding the organization and management of the management accounting

In the case of direct expenses, we know exactly how much has been spent on each product, so we can to distribute these expenses directly on each product or service.

The most important direct expenses are:

- expenses with raw materials and direct consumed materials;
- expenses with energy consumed for technological purposes;
- expenses with direct salaries and contributions;
- other direct expenses;

Indirect expenses are common expenses to many products or services, they can not be identified directly on a product or service. Once grouped and centralized, indirect expenses will be allocated to products or services realised, using specific methods that involve choosing bases for allocating indirect expenses, appropriate to each category of indirect expense.

The selling expenses are expenses incurred by the sale of the manufactured products, such as transport costs, storage costs, expenses with the salaries of the personnel involved in the products distribution, packing expenses, advertising and promotion expenses.

The general administration expenses are the expenses incurred with the administration and management of a company, such as utilities expenses, salaries expenses of the personnel involved in the administration and management of the company, depreciation expenses and rents of general interest, the expenses with the maintenance of fixed assets of general interest and other general administration expenses (Sabou F., 2007).

The correlation between the full cost resulting from the cost calculation and the expenses taken from the financial accounting (if the company is working at the normal production capacity) is the following:

Full cost = Operating expenses + Interest expenses on loans paid to acquire long-term assets

It is noticed that, financial expenses are not included in the costs, except for interest expenses, for loans received by companies that have a long manufacturing cycle.

A "long-term asset" means an asset that necessarily requires a substantial amount of time to be ready for its intended use or sale "(OMPF 1802/2014).

In OMPF 1802/2014, it is noted that interest on loans taken by a company in order to achieve long-term assets, is included in their production costs, as far as are related to the production period (OMPF 1802/2014).

Also, OMPF 1802/2014 states that "financial assets and stocks that are manufactured on a repetitive basis over a short period of time, are not considered as long-cycle assets" (OMPF 1802/2014).

The companies that have included in the costs, the interest on loans committed to build long-term assets (ex. buildings, complex equipments, ships, etc.) must present in the financial statements they realised, more precisely in the explicative notes, appropriate informations about cost calculation.

Recording of expenses for the purpose of calculating of the unitary cost is made at once with the registration in the financial accounting, based on the same documents or on the basis of centralizing documents, especially that the informations will be taken according to own criteria, established by each company.

3. Methodology and data

The paper presents a hypothetical study on the cost calculation, according to the model of the complete cost structure, specified by the legislator in the Order of Ministry of Public Finance no. 1826/2003 Specification about some measures regarding the organization of the management accounting.

The main research methods used in the study were documentation and analysis.

4. Result and discussions

Following the study, I made a series of conclusions and I made recommendations in order to realised the correct cost calculation, according to the present legislation and taking into account the structure of the complete cost, mentioned in the Order of the Minister of Public Finance no. 1826/2003 for the approval of the Specification about some measures regarding the organization and management of the management accounting.

Also, in conducting the study, I considered the specific steps in cost calculations, namely:

- 1.The selection of expenses from the financial accounting and grouped on products (in the case of direct expenses) or classification as indirect costs (indirect production costs, selling expenses and general administration expenses);
- 2.The allocation of indirect production costs on manufactured products, realised services and executed orders;
- 3.The allocation of sales expenses on manufactured goods, realised services and executed orders;
- 4.The allocation of general administration expenses on manufactured goods, realised services and executed orders;
- 5.Quantitative and value determination of production in progress;
- 6.The calculation of unitary cost.

Hypothetical study

A company made three types of products (product type C1 – 7.000 pieces, product type C2 – 6.500 pieces and product type C3 – 6.000 pieces) making the following expenses:

-expenses with raw material were 80.000 lei for product C1, 100.000 lei for product C2 and 70.000 lei for product C3 (account 601);

-expenses with direct salaries were 150.000 lei for product C1, 142.000 lei for product C2 and 130.000 lei for product C3 (accounts 641, 645);

-expenses with depreciation of machinery from production department, were 1400 lei (account 6811);

-expenses with the salary of manager of production section were, 2.900 lei (accounts 641 și 645);

-expenses with maintenance of sections and machineries were 4.000 lei (account 611);

-expenses for cleaning the production section, were 90 lei (account 604);

-expenses with energy, gas, water, related to the section were 8.000 lei (account 605);

-expenses with the salaries for the administration of the company were 20.000 (accounts 641 and 645);

-expenses with the energy, gas, water, related to the administrative headquarters were lei 6.000 (account 605);

-expenses with the salaries of the sales department staff were 12.000 lei (accounts 641 and 645);

-expenses with equipment depreciation in the sales department were 600 lei (account 6811);

-expenses for the promotion of products, were 8.000 lei (account 628);

All of these costs are recovered in the company's balance sheet, as follows:

The statement of expenses

Table no.1.

Account	Expenses (monthly)
601	250.000
604	90
605	14.000
611	4.000
628	8.000
641	372.160
645	84.740
6811	2000
Total	734.990

The unitary cost, for each of the three products made by the company, will be calculated.

To calculate correct costs, it is necessary to go through all the cost calculation steps:

1.The selection of expenses from the financial accounting and grouped on products (in the case of direct expenses) or classification as indirect costs (indirect production expenses, selling expenses and general administration expenses);

The expenses taken from the financial accounts are 734.990 lei, these expenses will be grouped into direct expenses and indirect expenses (indirect production expenses, selling expenses and general administration expenses)

Direct costs will be distributed directly on the products made, as shown in the table below:

The calculation of unitary cost

Table no. 2.

No	Item of calculation	C1	C2	C3
1	Direct expenses – total	230000	242000	200000
	-direct raw materials	80000	100000	70000
	-direct salaries	150000	142000	130000
2	Indirect production expenses			
3	COST OF PRODUCTION			
4	Selling expenses			
5	General administration expenses			
6	COMPLETE COST – total			

Indirect costs will be grouped as follows:

- indirect production expenses – total 16.390 lei
- expenses with depreciation of machinery from production department 1400 lei;
- expenses with the salary of manager of production section 2.900 lei;
- expenses with maintenance of sections and machineries were 4.000 lei;
- expenses for cleaning the production section, were 90 lei;
- expenses with energy, gas, water, related to the section were 8.000 lei;

Expenses to be allocated to the three products

$$1.400+2.900+4.000+90+8.000=16.390 \text{ lei}$$

-selling expenses total – 20.600 lei

- expenses with the salaries of the sales department staff were 12.000 lei;
- expenses with equipment depreciation in the sales department were 600 lei;
- expenses for the promotion of products, were 8.000 lei (account 628);

Expenses to be allocated to the three products

$$12.000+600+8.000=20.600 \text{ lei}$$

-general administration expenses - total 26.000 lei

- expenses with the salaries for the administration of the company were 20.000;
- expenses with the energy, gas, water, related to the administrative headquarters were lei 6.000;

Expenses to be allocated to the three products

$$20.000+6.000=26.000 \text{ lei}$$

2.The allocation of indirect production costs on manufactured products, realised services and executed orders;

The allocation of indirect production expenses is done using the supplementation procedure.

For the allocation of indirect production expenses, in the amount of 16.390 lei, the company decided to choose the distribution base "total direct expenses".

3.The allocation of sales expenses on manufactured goods, realised services and executed orders;

The allocation of sales expenses is done using the supplementation procedure.

For the allocation of sales expenses, in the amount of 20.600 lei, the company decided to choose the distribution base "pieces sold".

4.The allocation of general administration expenses on manufactured goods, realised services and executed orders;

The allocation of general administration expenses is done using the supplementation procedure.

For the allocation of general administration expenses, in the amount of 26.000 lei, the company decided to choose the distribution base "expenses with raw materials and direct consumed materials".

5.Quantitative and value determination of production in progress;

If from production process results at the end of the month, production in progress, will be determine the quantity and value of production in progress.

In our case, the company does not present production in progress.

6.The calculation of unitary cost.

The effective cost of a product is calculated by dividing the full cost, to the amount of finished obtained production, realised during the period covered by the expenses.

The calculation of unitary cost

Table no. 3.

Nr. crt.	Item of calculation	C1	C2	C3
1	Direct expenses – total	230000	242000	200000
	-direct raw materials	80000	100000	70000
	-direct salaries	150000	142000	130000
2	Indirect production expenses	5610	5902	4878
3	COST OF PRODUCTION	235610	247902	204878
4	Selling expenses	7395	6867	6338
5	General administration expenses	8320	10400	7280
6	COMPLETE COST – total	251325	265169	218496

Checkings

The total complete cost for the three products, must be equal to the amount of expenses taken from financial accounting, meaning 734.990 lei.

$$251.325+265.169+218.496=734.990 \text{ lei}$$

The calculation of unitary cost

Table no. 4.

Nr. crt.	Item of calculation	C1	C2	C3
1	Direct expenses – total	230000	242000	200000
	-direct raw materials	80000	100000	70000
	-direct salaries	150000	142000	130000
2	Indirect production expenses	5610	5902	4878
3	COST OF PRODUCTION	235610	247902	204878
4	Selling expenses	7395	6867	6338
5	General administration expenses	8320	10400	7280
6	COMPLETE COST – total	251325	265169	218496
7	Pieces (produced)	7000	6500	6000
8	COMPLETE UNITARY COST	35,90	40,79	36,42

Results: the unitary cost for product C1 is 35,90 lei
the unitary cost for product C2 is 40,79 lei
the unitary cost for product C3 is 36,42 lei

The costs were calculated in accordance with the Order of the Minister of Public Finance no. 1826/2003 for the approval of the Specification about some measures regarding the organization and management of the management accounting.

5. Conclusions

By presenting this hypothetical model of cost calculation, the paper contributes to the correct application of the present legislation regarding the cost calculation and the cost structure.

This case study is a complete cost calculation model, which helps companies to apply in practice the theory mentioned by the legislator in the Order of the Minister of Public Finance no. 1826/2003 for the approval of the Specification about some measures regarding the organization and management of the management accounting.

In order to correctly apply of the cost calculation, I recommend the following: the proper codification of products launched in production, the correct control and recording of direct and indirect expenses and the application of the most appropriate basis for allocating indirect expenses.

Also, in order to calculate correct the costs, it is necessary to use the calculation items provided in the cost structure, such us: direct expenses, indirect production expenses, general administration expenses and selling expenses.

I consider that the legislator did not sufficiently regulate the management accounting and cost calculation and that it would be necessary to detailed certain information in the legislation and even to complete the present legislation with information on the bases of expenses distribution, informations on cost calculation methods using in romanian companies and information on the procedures for allocated of indirect expenses.

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