COST CALCULATION CONSIDERED FROM BOTH THE POINT OF VIEW OF THE PROVISIONS OF ACCOUNTING REGULATIONS AND OF THE NEED FOR INFORMATION OF THE COMPANIES

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Abstract: The idea of providing financial balance that would lead to long-term, sustainable development of the companies gathers more and more ground in economy. A state of financial balance means a company is capable of conducting its business effectively and in normal conditions. „Normal conditions" mean the company conducts its activities according to its productive potential without employing any uncontrolled and unplanned for capital infusions. In our opinion "effectiveness" means establishing a relationship with the external and internal sphere (internal conditions of practice) of the company through the products and services it offers, a relationship which could lead to the possibility of reproduction on an enlarged scale, while shareholders, staff, managers and all the other factors participating to the production process can be adequately remunerated. We claim there is a close relationship between financial balance, costs and results which managed properly will provide investors the benefits they planned for.

Key words: company, costs, cost calculation, effectiveness

1. Introduction

Within a market economy economic units have to fulfill consumers' needs as effectively as possible. However the latter cannot decide by themselves what goods and services are needed on the market, because there are two great restraining factors at work: economic resources and existing technology. Thus economic units and consumers are at the center of the market economy system and once there is a balance between demand and supply they solve the three great economic problems: what is being produced, how it is being produced and for whom is being produced.

Since economic resources are limited and an economic unit needs to consume some resources in order to produce goods and supply services to its clients these expenditures generate expenses which as a whole make up **costs**. First the economic unit has to have some resources in money or in some other assets, then it has to ensure these resources are used as effectively as possible so that the finite products and services can be sold on the market at a higher price than the cost of their production. Therefore **production costs** are one of the main issues the management of economic units should be concerned with. In our opinion it is a mistake to take into consideration only the level of expenses and to say that the amount of expenses is adequate and therefore the activity of the company is effective, since costs and cost analysis has to be related to the gains the company has, i.e. to the profit.

In the theory of economics there have been two main principles regarding the objective of the financial function of an economic unit: *maximization of profit* and respectively, *maximization of the economic unit's value*. The former objective has been formulated by the neoclassical school. They considered the objective to be fulfilled when the volume of production in an economic unit reached a level where the enterprise's marginal income and marginal cost was equal. However this objective is impossible to reach in a competitive economy and the objective also fails to take into account market requirements and the uncertainties and risks present in the economic and social life. Considering all these today it is an accepted fact that *maximization of the economic unit's value* should be the fundamental objective of the financial function of an economic unit. Obviously reaching this objective is closely linked to making a profit, an indicator of the dimensions of the economic effectiveness of the company which adds to the value of the company. *"Setting the maximization of the economic unit's value as an objective has as a consequence the fact that the company is evaluated according to its ability to make a profit in the long-term, according to*

the perspectives for progress in its activity and according to its ability to diminish incorporated financial risks." (Mironiuc M., 1999).

In market economy costs are dealt with inverse to the way they are treated in centralized economy. In a centralized economy costs define and justify the selling price. In market economy the price is the one defining the costs (Ghiță M., 2000). The selling price is set by the correlation between demand and supply and no economic unit will produce a certain type of good unless production costs for that good are less than its price in order to make a profit. Moreover, in our opinion the difference between costs and the selling price has to be such as to provide the minimum return expected by the investors who invested capital in the company. Indeed, it is important what the market the company tries to sell its goods on is like. Price for a good is formed in a different way on a market with many producers and buyers and on a monopoly market. Still in a functional market economy there is a great competition between producers, the market is very active and thus price becomes a variable which can be little controlled by the companies. Therefore follow up and control of production costs becomes a major concern of the management of any economic unit, since cost is the only factor the company can influence so that it would be diminished and thus the economic effectiveness of the company increased.

Having a proper knowledge of the production costs and expenses, including the relationship of these two is therefore a vital information for the management of the companies in their attempts to increase their economic effectiveness.

2. Definition and classification criteria of costs

Production cost is the main indicator of a company reflecting the activity of a productive economic unit and its economic effectiveness. Etymologically the concept of **cost** comes from Latin, from the verb *constare* meaning to determine, to define. From this verb the term *costa* was derived, which was used to name the expenditure rendered necessary by the production of an object. Later this term was derived into the term *cost*, used with the same meaning ever since in the literature and practice of economy.

The Romanian Thesaurus defines costs as „a sum of money spent to produce or purchase a good, to carry out of a work or to have a service supplied". Another work defines costs as „a sum generally expressed in money of the expenses needed to acquire or produce a good or to supply a service" (Bernard Y, Colli J.C., 1994).

According to other specialists „costs are the expression in money of the effort a company has to make in order to reach its objectives (Glautier M., Underdown B., 2001). The main features of the concept of „costs" are (Ristea M., Possler L., Ebbeken K., 2000):

- Resource consumption – costs are created as a result of the consuming of the factors of production;
- Links to achievement – these are the cost-bearing goods obtained or services supplied intended for sale or internal consumption;
- Evaluation expressed in money – both resources consumed and achievements are expressed in monetary units.

In our opinion costs means all the production expenses a company has by consuming limited resources in order to produce goods and services usually intended for sale on the market. Consuming of unlimited resources (e.g. air) is not included in the production costs, since despite of the fact that they have a great inherent value, they do not have any economic value.

Information regarding „costs" is indispensable to the management of the company in order to ground well their decisions. As all the other pieces of information regarding accounting information regarding „costs" has to have the following features in order to be useful; it has to be:

- *relevant* – a piece of information is relevant when it influences the economic decisions of those who use the piece of information helping them to evaluate past, present and future events and to confirm and correct their former evaluations. A piece of information has both a retrospective and a predictive value. It is retrospective by the analysis of the differences between real and predicted costs and the actions taken by following up on that information. It is also predictive, since production can be obtained using many variants in combining the factors of production to be consumed. Thus any avoidable cost is relevant. Any costs included

in one variant of the manager's decision and missing (completely or in part) from another is considered an avoidable cost. Costs already had, which cannot be altered no matter what decision variant the manager decides to follow are not avoidable costs. As far as future events are concerned these costs are irrelevant, which means these costs have to be eliminated from the process of decision making leaving us only with avoidable costs also called *differential costs*;

- *credible* – it means pieces of information on costs should not contain major errors and the person who uses them should trust them;
- *intelligible* – this can be excluded, since it is assumed the pieces of information regarding costs are addressed to managers who have sufficient knowledge to understand them;
- *comparable* – this feature is valid mainly in the case of the analysis of the difference between real and predicted costs.

As in the case of production expenses we are going to present a few classification criteria of costs in order to make the reader understand better the importance and the place of information regarding costs within the process of decision making (Ionaşcu I., 2003):

According to the time and goal of their calculation:

- Real or actual costs – defined on the basis of real production expenses;
- Pre-established or pre-calculated costs – defined on the basis of estimated expenses.

According to the content and economic features of the calculated cost type:

- Complete (integral) costs – defined on the basis of capital expenses registered in the financial accounting; sometimes a distinction is made between traditional complete costs and economic complete costs;
- Partial (proportional) complete costs – formed out of expenses that can be directly attached to the produced goods or the supplied services; these partial costs have two forms of manifestation: variable costs and direct costs.

According to their influence in the process of decision making:

- Pertinent costs – meaning future costs which can still be decided upon and which are used as alternatives in the decision making process, i.e. avoidable costs;
- Indifferent costs – costs already had which can no longer be decided upon and which can no longer be used in the decision making process.

According to the level of the analysis:

- Unit cost – reflecting all the production expenses for a product unit;
- Global costs – containing all production costs for the entire quantity of manufactured products.

According to the extent the management can influence costs (Epuran M., Băbăiță V., Grosu C., 1999):

- Reversible costs and irreversible costs – the costs become irreversible when the manager can no longer withdraw his decision to have that cost;
- Controllable and imposed costs – in case of the controllable costs the manager can fully decide whether to have it or not, imposed costs are imposed by external factors;
- Fixed costs and variable costs – a cost is considered fixed if the cost and the production are interdependent with each other and variable if not;
- Visible costs and hidden costs – hidden costs are expenses of the company which are usually accounted, but cannot be singled out and identified as costs (e.g.: employees failing to come to work, work accidents, quality defects, etc.);
- Internal costs and external costs – external costs are costs the company transfers to third parties (depolution costs paid for by the community, but produced by the company), while internal costs are made up of production expenses necessary to the company activity.

So decision making capacity is limited in the case of internal costs and controllable costs, and is less restricted in the case of visible, reversible and fixed costs. Since competition is getting ever harsher the

companies have to pay more attention to the quality of the products they manufacture in order to increase their economic effectiveness. Thus every productive company has to follow closely the relationship between *quality and economic effectiveness*, which means manufacturing increasingly competitive products at prices accepted by the market, while expenses are kept lower and lower in order that the targeted economic effectiveness can be reached. The quality level of the product determines its costs and price, thus there is a close relationship between costs and price which helps define the extent to which increase in value produced by the increase in quality justifies higher costs. In this respect the relationship between the effort invested in obtaining quality (costs of quality) and the results achieved (economic influence of quality) has to be closely watched in order to find an optimal ratio both for producers and consumers. In principle economic literature divides quality related costs into four categories:

- Costs of prevention – costs of studying, preventing and reducing defects;
- Costs of evaluation – costs of attempts, inspections and examinations intended to establish if specified requirements are being met;
- Costs of internal damages – costs for correction of unconformities detected before the product is shipped to the beneficiary;
- Costs of external damages - costs for correction of unconformities detected after the product is shipped to the beneficiary.

In our opinion the accounting system has to provide information also regarding quality costs, since excepting the case of discarded goods most of the economic units do not care about the costs implied by repairs, by customer complaints, by visits made in order to investigate the complaints etc. The ISO 8402 standard defines total quality management as "a management system of an organization focused on quality, based on the participation of all its members and a tool in providing long-term progress by satisfying the customer and obtaining advantages for all the members of the organization and society."

3. Opinions and conclusions regarding cost calculation considered from both the point of view of the provisions of accounting regulations and of the need for information of the companies

The financial management of an economic unit paid close attention to production costs in order to establish a starting point in negotiations for the selling price and in revealing the effectiveness of the economic unit. It can be said that the company gains a profit if production costs are lower than the negotiated transaction price. However this does not naturally mean it is profitable, too, since there are certain expenses that, according to standards of accounting, are not part of the production costs.

In principle, production costs contain all the expenses necessary for the company to manufacture a product, carry out a work or supply a service. At first sight everything seems simple, but still within a company there are certain expenses that are not at all connected to the manufacturing of a product (e.g. fines and penalties). Put it in another way we could say production costs have to contain all expenses necessary for manufacturing a product and being directly or indirectly connected to the manufactured product.

According to the international accounting standards (IAS 2 „Reserves”) adopted also by Romania, „reserve costs contain all costs necessary for the acquisition and processing and other costs had in order to bring reserves in the form and place they are at present”.

Acquisition costs of reserves contain purchase price, transportation and handling fees, taxes and other non-recoverable costs. Processing costs contain the following:

a) Direct costs;
b) Indirect production costs detailed as:

- Fixed expenses: indirect expenses which stay relatively the same regardless of the volume of the production. These kind of expenses can be as follows:

1. Assigned expenses, which contain the part of fixed expenses proportional with the production capacity actually used by the company; Assigned fixed expenses are included in production costs;
2. Unassigned expenses, which contain the part of fixed expenses brought forward by not using the production capacity at hand of the company at the usual parameters. Assigned fixed

expenses are not included in production costs and they are considered as an expense within the financial year and are offset directly from the income statement.

- Variable expenses: production expenses altering proportionally or nearly proportionally with the volume of the production.

Within the production costs the following items are included: acquisition costs of raw materials and resources used in obtaining the products, direct expenses of processing, assigned fixed expenses and variable expenses. Therefore, in principle, production costs do not contain: unassigned fixed expenses, general management expense and sale expenses. This means expenses which are offset directly from the income statement have to be covered first from the margin resulting from the difference between selling price and production costs and only then can the amount remaining be considered the profit of the company.

In order to meet the provisions of accounting regulations (as a consequence of the standardization of the accounting information produced by financial accountancy) and also to the internal needs of the company management we believe it is necessary to build up a cost calculation and result establishment system based on the following principles:

- Production cost calculation according to existing accounting standards;
- According to accounting standards general management expenses and sales expenses are offset directly from the income statement, but in case the management needs the pieces of information for internal purposes these can be allocated to goods produced by the company (general management expenses and sales expenses are offset directly from the income statement, but the income statement is formed when the company goes out on the market, when its products are being sold and not when the products are manufactured, which means general management expenses will be offset from the income statement only after the products which have attached some general management expenses have been sold);
- A proportionate sum of the general management expenses and sales expenses will be subtracted from the "margin" resulting from the difference between the selling price and the production cost and thus we obtain the result for each product. Then we eliminate from the calculation unproductive expenses (unassigned fixed expenses, fines, penalties, etc.), since these need to be analyzed separately.

In this context, we started out from the following hypotheses in order to demonstrate the algorithm presented above:

- Let us suppose a company produces products A and B and they are registered within financial accounting at the delivery price, distinctly highlighting the differences of price compared to the actual production cost calculated according to the IFRS;
- Sales expenses and general management expenses will not be included in the production costs, but for internal need of information two levels of defining the income statement will be established:

1. *At the first level* a „gross margin" as a difference between the delivery price and the production costs, calculated according to the IFRS is calculated;
2. *At the second level* a result for one product unit taking into consideration general management expenses and sales expenses for each product unit is established;

The basic rule is to connect expenses with income thus an actual result per product unit being established. Thus delivery expenses made in month "X" will be referring to products sold in that month (delivery expenses usually come up at the same time products are delivered and this fact justifies such an approach; however if delivery expenses are created after selling, they will no longer be registered as referring to the respective products). General management expenses made in month "X" will be considered for the month the respective products have been sold in. Thus two accounts are created:

- **The account of products made in month „X"**, by which the production costs are calculated, according to the IFRS;

The account of products sold in month „X", by which the gross result for a product unit is obtained by deducing production costs (production costs referring to the sold products are taken over from the first

category that has already been drawn up), general management expenses and sales expenses referring to the sold products from the selling price.

Accounts drawn up based on our example are as follows:

1. Account of products made in month X:

Serial number	Product	Produced quantity (kg)	Production cost per product unit (lei/kg)	Production costs (lei)	General management expenses (lei)	Total costs (lei)
0	**1**	**2**	**3**	**4 = 2 x 3**	**5**	**6 = 4+ 5**
1.	Product A	100	14	1.400	28	1.428
2.	Product B	100	26	2.600	52	2.652
3.	**Total**	**200**	**x**	**4.000**	**80**	**4.080**

Serial number	Product	Quantity	Costs per product unit*)	Production costs	General management expenses	Delivery expenses	Integral costs	Selling price per product unit	Incomes from sales	Gross result
0	1	2	3	4 = 2 x 3	5	6	7 = 4 +5+6	8	9 = 2 x 8	10 = 9 - 7
1.	A	60	14	840	16.8	120	976.8	18	1,080	103.2
2.	B	40	26	1.040	20.8	140	1200.8	35	1,400	199.2
3.	**Total**	**100**	**x**	**1.880**	**37,6**	**260**	**2.177,6**	**x**	**2.480**	**302,4**

2. Account of product sold in month X:

It can be noticed that in management accounting the pieces of information obtained are far more complete as far as costs, including product profitability are concerned. As a conclusion it is to be declared that the above presented method of dealing with production costs satisfies both the requirements imposed by provisions of accounting regulations and the need for information of the companies in order to make economically well-based decisions.

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