

IMPROVING COST CALCULATION IN THE IRON AND STEEL INDUSTRY IN LIBYA USING THE STANDARD COST METHOD

ABDELALI ABDELKARIM S. MOHAMED¹

¹ *University of Craiova, Craiova, Romania*

Abstract: *The iron and steel industry has a strategic role in each country's economy as there is a direct connection between its production level and economic development. In the countries with developed market economy, the standard cost reflects the efficiency of the production process. In this context, the use of the standard cost method represents an instrument for research and estimation. This paper's intention is to present the advantages offered by the application of the standard cost method in the iron and steel industry.*

Key words: *standard cost, calculation, deviations, iron and steel industry, Libya*

INTRODUCTION

The Libyan economy depends almost entirely on oil. Libya is one of the Africa's oil main producers and one of the most important suppliers of the European Union. The large oil reserves and the small numbers of people should have made this country one of the most developed in the African continent. Nevertheless the high rate of unemployment and the lack of a diversified economy lead to maintaining a low level of living.

The Libyan company of Iron and Steel is one of the largest industrial companies in Libya. It was built on a surface of 1200 hectares near the town of Misurata located at 210 kilometers of Tripoli, the capital of the country. The capacity of production of the company is of 1. 324. 000 tones of liquid steel per year, obtained from imported iron combined with local natural gases. The Libyan company of Iron and Steel was inaugurated in 1989, September 9 and from then it entered in production.

MATERIALS AND METHODS

We will discuss the method used this day to manage the cost counting in The Libyan Company of Iron and Steel and then we shall present our proposals for reorganizing the cost counting system in this enterprise.

The Libyan Company of Iron and Steel uses for the cost accounting the phase method because it distinguishes by continuous production. The production process in the iron and steel industry implies the transition from one stage of fabrication to another. With each phase supplementary costs are added and so on, until the final phase of the product. Then the product is ready for the market.

The method of phases counting it is used usually in enterprises concentrated on mass production (where there are continuously manufactured the same products with homogenous quality and in large quantities) and in order to obtain a final product several technological phases are performed.

A short analysis of the cost calculation method used now in The Libyan Company of Iron and Steel (the phase method) can confirm that the main disadvantage of its appliance it is the lack of operability and the reduced possibilities of forecast. This situation obstructs the production process information to reach in time the management and allowing them to adopt the adequate measures. As this method does not gives the managers a forecast of the process of production, the cost counting system fails to manage its function.

The efficient organization of economical activity supposes perfecting the management methods, a fact that implies also reconsidering the managerial accounting system and cost calculation methods that should be able to provide information according with the demands of an efficient management of production. Efficient management is

impossible without an informational system adequate for the modern production requirements that will allow adopting decisions and operative measures at appropriate time.

The major goal of perfecting the cost calculation system in The Libyan Company of Iron and Steel is to enable its operability and efficiency in providing the management with essential information in decision making process.

The fault of the phase method is that it does not allows the determination of actual spending deviation from the defaulted ones (budgeted) in order to interfere on the spot and correct the anomalies that affect the production process and putting him back on the track. The phase method it is allowed only a post-operative determination of actual spending deviation from defaulted ones, at the end of the reporting period, when the accountancy is settled and the anomalies that caused disorder whether they increased or were remediate in the meanwhile- the moment of derangement is already surpassed, so the conclusions of the error analysis most of the time is pointless (Călin and Cârstea, 2003). That is way the process of amelioration and diversification of the managerial accounting method and cost calculation in the enterprise has to consider the real needs, reevaluate the present methods and assimilate the perfected ones.

The managerial accounting method has to allow the functioning of a real system of information, as information are essential are fundamental in adopting decisions and therefore for the management activity.

The enterprise size is the factor that determines the organization of accounting system in a centralized or decentralized form. In industrial enterprises with manufacturing sections it is applied at the whole unity, in each sector, section, workshops, manufacturing lines (as it happens in The Libyan Company of Iron and Steel), the organizing of accounting management is realized in decentralized form. This form implies the existence within the company sectors of managerial accounting departments that keep record of documents, process and record in accounts all financial operations referring to production costs registered in each section. These compartments manage also the effective cost calculation, the survey and pricing the discrepancies.

We consider that the standard cost method can successfully respond to the requirements of a performing management in the iron and steel industry. Today this method is widely spread due to the multiple advantages that it offers. This method consists mainly in calculating the anticipated production costs as well as determining, monitoring and control of the possible deviations of costs (Călin et al, 2008). Standard cost are used as reference system in the analysis of the effective cost, thus identifying the deviations and further establishing the measures of remedy and the responsibility for these deviations.

RESULTS AND DISCUSSIONS

The standard cost method belongs to the compartment of methods of predictive calculation and operational survey of production process. The primarily advantage relies in permitting the setting of the production costs in advance and the budget control of costs, by determining the deviations of the real production costs from the defaults, on each type of deviations and causes, all within the production process.

The standard costs are production costs calculated in advance, on a scientifically developed methodology considering the specificity of technological processes carried on in the enterprise and by the organizational structure in the period required. The real cost of the product is considered the standard cost and it is used in fixing the selling cost, as D. Budugan et all observes (2007).

Any deviation from the standard cost is considered a deviation from normal manufacturing condition and it is transferred in the final results of the enterprise. Through this method the costs are divided into cost according to the standards, deviations from the standards, and effective costs. The elaborated calculations are based on grouping the production costs according to their dependence on the production volume. Calculation cost enrolls in a specific period of discharge. M.Țaicu (2011) considers that the standard cost method represents an authentic instrument of management performances.

In order to apply the standard cost method it is necessary to scroll through three major stages:

- Elaborate the standard product calculations
- Calculation, tracking, analysis and control of deviation from standard cost
- Tracking of the cost through the accounting system

In our opinion, the success in applying the standard cost method is determined by the accuracy with which the standards are developed. The existence or the implementation within the enterprise of a management informational system may significantly reduce the time for standard setting in the calculation of the standard cost for material, labor and side costs. Application of the standard cost method does not require special conditions that can not be achieved by the enterprises of the iron and steel industry.

For the management of the companies in the iron and steel industry it is important to determine the difference between the effective cost of the effective production and the standard cost of it. The result of this difference must be interpreted like this:

- The negative cost deviation appears when the effective cost is inferior to the standard cost and this is a positive deviation for the company;
- The positive cost deviation appears when the effective cost is superior to the standard cost, and this is a positive deviation for the company.

This group of deviations highlights the significance of the deviations as a consequence of the manner of organizing the activity, which can be effective or ineffective. Another group of deviations is focused on the responsibilities for the appearance of deviations, such as:

- Controllable deviations, that can be charged to the responsible ones;
- Uncontrollable deviations that are generated by external factors- the material prices increasing and can not be charged to persons.

The production cost reflects in value expression the productive consumption brought about by the use of the three essential factors of production: nature, labor and capital.

The collecting and distribution of the administrative expenses, the registration of final production and its recognition to the general interest of the enterprise are recorded in documents and accounts at the level of the company. This operation is made by a compartment that belongs to the main functional apparatus. This organization of the management accounting involves a great number of people dealing with budget activities, with recording of the expenses and calculating the costs. At the same time the analysis and the decision making program is based on costs is carried out on several levels of the hierarchy, starting from decision makers in the sectors to the top managers.

The standard cost method offers some clear advantages. We appreciate that the technical-economical evolution of the last decades questions some of these advantages. To sustain this affirmation we present two arguments:

- The development of standards requires a considerable amount of work on the part of the staff. For the maintenance of the method a periodic review of the standards is required.

- The standards are rigid and in practice often appear problems with the assignment of responsibility for different deviations.

Also in order to provide the expected results, the standard costing method needs customized system for data processing adapted to the specifics of the steel and iron industry.

CONCLUSIONS

We consider that reducing the cost per unit of the product is decisive condition for raising the enterprise profitability but to avoid affecting the quality of the products, it has to implement high technology in manufacturing the products. Thus, the increased efficiency of production factors used has a major role in minimizing costs, in terms of using technological innovation and promoting the resource saving mentality in the company. We consider that reducing of the consumption of inputs per product unity depends of the management of the limited resources of the enterprise and the permanent concern of the managers from each hierarchy level, for reducing and avoiding waste.

REFERENCES

1. **BUDUGAN, D., GEORGESCU, I., BERHECI, I., BEȚIANU, L.**, 2007, Contabilitate de gestiune, CECCAR, Bucharest;
2. **CĂLIN O., CÂRSTEA GH.**, 2003, Contabilitate de gestiune și calculația costurilor, Atlas Press, Bucharest;
3. **CĂLIN, O., MAN, M., NEDELICU, M.V.**, 2008, Contabilitate managerială, EDP, Bucharest;
4. **IACOB, C., IONESCU, I., GOAGĂRĂ, D.**, 2007, Contabilitate de gestiune conformă cu practica internațională, Universitaria, Craiova;
5. **IONESCU I., IACOB C., ȚAICU M.**, 2012, Control de gestiune. Sinteze și aplicații, Universitaria, Craiova;
6. **ȚAICU, M.** - Using standard cost method for company performance management, USAMVB Timișoara, Lucrări științifice, seria I, vol. XIII, pp. 291-298, 2011;
7. *** <http://libyansteel.com/lisco/>
8. *** www.worldsteel.org .