STANDARD COST METHOD - A DIRECTIVE TO IMPROVE CONTROL AND COST ANALYSIS IN THE INDUSTRY ENTITIES

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Abstract. *Controlling pursues a specific aim of generation of summary reports needed in the decision-making process. With a view to establishing the methodology to carry out cost control and analysis, three important stages will be taken into account when establishing pre-calculated actual expenses and when determining their costs. During the stage of exercising cost control and analysis, comparison charts will be drawn up and the analysis of deviations will be taken into consideration. These aspects will be carried out by standard cost method which allows determination of the cost before the time of production process by determination of deviations of actual cost against the predetermined cost. Therefore, an economic entity with an industrial profile will have a competitive advantage as regards the efficiency of production, having a valuable means in adopting decisions.*

Keywords: cost, controlling, decision, strategy

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1. Introduction

Management control has become for the entities that activates in industrial domain a major competitive advantage. The source for a pertinent model of costs who reflects the process of value forming within the entity, the primary causes for consuming the resources is susceptible of a direct control.

In an competitive socio-economic environment, the activity of any enterprise is carry out under a specific strategy with the purpose of maximizing the income [1]. To achieve the objectives, modern enterpr

ises use management control as a result of economic and social environment.

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At its origins, the management control has been promoted for the control of profitability of enterprises. Through control it was assured a surplus of coherence, and so it becomes possible monitoring the expenditures evolution [4].

Management control seek to design and develop information tools designed to allow those responsible to act, realizing global economic consistency between objectives, means and achievements. It should be considered an information system useful in company pilotage, since it controls the efficiency and effectiveness of actions and means to achieve the objectives [4].

In order to elaborate a control system management, the managers uses different information instruments that can orientate them in their decisions [2]: information on medium and long term planning; extra-statistics, which usually concern current operations; financial accounting and financial analysis; management accounting; dashboards; budgets of the enterprise system.

The classic purpose of management control is to collect, to analyze, to disseminate information to decision making. Generally, the decision represent transforming the information received by the decider within the entity or a part of entity. The quality of the decision and the performance achievement depend on the quality of information provided by management control.

In scientific literature, performance it's characterized as a consequence of some results between the objectives set and results and not as a simple ascertainment of results. It follows that performance means not only to achieve result but also to overcome them.

To achieve the objectives assumed the decisions must be made aiming at the same time as putting them into practice to yield the expected results. These can be represented in the sequence below:

OBIECTIVES ⟶ DECIZIONS ⟶ ACTIONS ⟶ REZULTS

Any economic entity dispose of a collection of tools, that have the role to offer an assurance of quality of decisions and actions, named generally control. Control is universal at the level of the entity because it is applied at all decisions and all actions that are taking place (reason for it was named also internal control). Controlling is therefore indispensable as it supports management in operational and strategic decision making.

2. **Research methodology**

Research methodology proposed to perform this scientific work and achieve the objectives, the following actions will be based on:

- Preliminary documentation to understand the theoretical aspects of management control and correct information tools needed in order to provide the best decisions and thus lead to improvement within the enterprise.
- Theoretical research examines and describes the current state of knowledge, its starting point being represented by theoretical documentation through reading the literature related to the field of study in the context of different national accounting references. Applied research to be taken into consideration identifying competitive advantage in terms of production efficiency and complement the theoretical.
- Identification information for the requirements of scientific endeavor.
- Establish procedures that will be interpreted information obtained during the theoretical and practical research.

Theoretical documentation will take place in parallel with empirical research trying to find a possibility of improvement of accounting production, launching proposals and recommendations to the problems identified, they will be distributed throughout both the article and in its final.

3. Determination of the methodology of control and cost analysis

The methodology of controlling ant cost analyze involves three stages. First of all is establishing pre-calculated expensive and also determining of pre-calculated costs of production. The second stage involves establishing of effective expenses and effective costs of production. The final stage is controlling and analyze of costs. To exemplify, we consider 3 products: BC 1(chrome bars - 1 m), BC 2 chrome bars - 2 m), BC 3 (chrome bars - 4 m), within production section.

Table 1. The situation of forecast production

Forecast production	*BC 1* *- pieces-*	*BC 2* *- pieces-*	*BC 3* *- pieces-*
	72,000	86,000	100,000

Table 2. The situation of consumed quantities and working time

Name	*Product BC 1*	*Product BC 2*	*Product BC 3*
Raw materials (0,6 lei/kg)	0.800 kg	0.900 kg	1,200 kg
Labor (0,4 lei/h)	4 min	7 min	9 min

Table 3. The situation of indirect expenses

Indirect expenses	*Fixed expenses*	*Variable expenses*	*Total expenses*
Staff salaries	4,500		4,500
Maintenance section		5,000	5,000
Electricity		3,000	3,000
Equipment depreciation	6,000		6,000

Table 4. The production actually achieved

Indicator	*BC 1* *pieces*	*BC 2* *pieces*	*BC 3* *pieces*
The production actually achieved	78,000	79,000	97,000

Table 5. Situation of effective direct expenses

Name	*Product BC 1*	*Product BC 2*	*Product BC 3*	*Total expenses*
Raw materials	87,000 kg	63,000 kg	99,000 kg	200,000
Labor	8,000 h	8,500 h	9,800 h	11,000

Effective indirect expenses are 13.000 Lei

Stage 1 – establishing pre-calculated expenses and determining pre-calculated cost of production

For completing this situation stage we should be considered the situation of direct and indirect expenses and calculation items.

Table 6. Situation of direct and indirect expenses

Indicator	*Product BC 1*	*Total*	*Product BC 2*	*Total*	*Product BC 3*	*Total*
Raw materials	800x0.6	0.480	900x0.6	0.540	1200x0.6	0.720
Labor	4/60x0.4	0.026	7/60x0.4	0.046	9/60x0.4	0.060
Indirect expenses	4/60x0.61	0.040	7/60x0.61	0.071	9/60x0.61	0.091
Total Cost	-	0.546	-	0.657	-	0.871

Hourly rate for the calculation of indirect costs:

Hourly rate = Indirect expenses/number of hours = 18,500/(4,800+10,033 +15,300) = 0.61 lei/h

BC 1 = 72,000 pieces x 4/60 = 4,800 h
BC 2 = 86,000 pieces x 7/60 = 10,033 h
BC 3 = 102,000 pieces x 9/60 = 15,300 h

Stage 2 – Establishing effective expenses and determining effective production costs

Table 7. The situation of effective expenses and determining them

Indicator	*Product BC 1*	*Product BC 2*	*Product BC 3*	*Total expenses*
Raw materials	87,000 kg	63,000 kg	99,000 kg	200,000
Labor	8,000 h	8500 h	9800 h	11,000

Effective indirect expenses are 19.000 Lei

Table 8. Determination of effective total cost

	Effective consumption	*Effective Price*	*Effective total cost*
Raw materials	87,000	0.80	69,600
Labor	8,000	0.41	3,280
Indirect expenses	8,000	0.07	560
Total	-	-	73,440 (BC 1)
Raw materials	63,000	0.80	50,400
Labor	8,500	0.41	3,485
Indirect expenses	8,500	0.07	595
Total	-	-	54,480 (BC 2)
Raw materials	99,000	0.80	79,200
Labor	9,800	0.41	4,018
Indirect expenses	9,800	0.07	686
Total	-	-	83,904 (BC 3)

The method of calculating the effective or standard amount:

- For product BC1

Number of standard hours: 78,000x 6/60 = 7,800 h
The actual price of raw materials: 200,000/(87,000+63,000+99,000) = 0.80 lei/kg
The hourly cost effective labor: 11,000/(8,000+8,500+9,800) = 0.41 lei/h

The hourly effective cost of indirect expenses: 19,000/(8,000+8,500+9,800) = 0.072 lei/h

- For product BC2

Standard amount of raw materials: 79,000 pieces x0.900kg = 71,100 kg
Number of standard hours: 7,900 x 7/60 =922 h

- For product BC3

Standard amount of raw materials: 97000 buc x 1,200 kg = 116400 kg
Number of standard hours: 97000 x 9/60 = 14550 ore

Stage 3 – Exercising control and cost analysis

At this stage dashboards are drawn comparison between actual and direct and indirect costs of products including pre-calculated costs.

Table 9. Comparison Dashboard for 78,000 BC1 products

	Standard Cost			*Effective Cost*			*Deviations*	
	Qs	*Ps*	*QsPs*	*Qe*	*Pe*	*QePe*	+	-
Raw materials	78,000	0.6	46,800	87,000	0.80	69,600		22,800
	Ts	Ts	Tsts	Te	Te	Tete		
Labor	7,800	0.4	3,120	8,000	0.41	3,280		160
Indirect expenses	7,800	0.61	4,758	8,000	0.07	560	4,198	
Total							4,198	22,960

Table 10. Comparison dashboards for 79,000 BC2 products

	Standard Cost			*Effective Cost*			*Deviations*	
	Qs	*Ps*	*QsPs*	*Qe*	*Pe*	*QePe*	+	-
Raw materials	71,100	0.60	42,660	63,000	0.80	50,400		7,740
	Ts	Ts	Tsts	Te	Te	Tete		
Labor	922	0.40	369	79,000	0.41	32,390		32,021
Indirect expenses	922	0.61	562	79,000	0.07	5,530		4,968
Total								44,729

Table 11. Comparison dashboard of 97,000 BC3 products

	Standard Cost			*Effective Cost*			*Deviations*	
	Qs	*Ps*	*QsPs*	*Qe*	*Pe*	*QePe*	+	-
Raw materials	16,400	0.6	69,840	9,900	0.80	79,200		9,360
	Ts	Ts	Tsts	Te	Te	Tete		
Labor	14,550	0.4	5,820	9,800	0.41	4,018	1,802	
Indirect expenses	14,550	0.61	8,876	9,800	0.07	686	8,190	
Total							9,992	9,360

After analyzing the dashboard of comparison for three products BC1, BC2 and BC3, significant deviations are observed. It's recording deviations both the quantity and price of raw materials and labor. Thus, we can conclude the following: For the first chromed bare, product BC1, we can observe a negative deviation of raw materials ΔQ = (Qe – Qs) x Ps = (87,000 - 78,000) x 0,6= +5400 (negative deviation). Concerning the price, we observe also a negative deviation ΔP= (Pe-Ps) x Qe= (0.80 - 0.60) x 87,000= +17,400. Concretely, the raw material is insufficient and at higher price. The labor for the same product, calculating the deviation depending on time, is equal: ΔT= (te - ts) x Te = (8,000 -7,800) x 0.4 = +80 we can observe also a negative deviation. From the point of view of price -4320 is a positive deviation, Δt = (te – ts) x Te =(0.07 - 0.61)x8,000= -4,320. We can conclude that for the first product that it does not correspond from any point of view, and we have to evaluate the price and the quantity.

Analyzing the second product, Bc2 we can observe the following: Quantity deviation: ΔQ = (Qe – Qs) x Ps = (63,000 -71,100) x0.60 = -4,860, represents a positive deviation. Price deviation: Δ P = (Pe - Ps) x Qe = (0.8-0.6) x 63,000 = +1,600, represents a negative deviation. Calculating the labor for chrome bare of 2m, namely product BC2, depending on time: ΔT = (Te – Ts) x Ts = (79,000-922)x 0.40 = +31,231, which it means a negative deviation, depending on price: Δt = (te – ts)x Te = (0.41-0.40) x 79,000 = +790. We can observe that the second product, the raw material quantity was well forecasted but at a higher price and considering the labor of manufacturing this product, we can observe that it is realized at a superior price and also the time allocated is negative. For the third product, we have a positive deviation calculated as follows: for raw material-development time is good, ΔQ = (Qe – Qs)x Ps = 99,000-116,400)x0.6 = -10,440, and the price is bigger ΔP= (Pe - Ps) x Qe = (0.8-0.6)x99,000 = +19,800. For labor, the time allocated is very good ΔT = (Te – Ts) x Ts = (9,800-14,550) x 0.4 = -1,900 and price Δt = (te – ts)x Te = (0.41-0,4)x9,800 = +98, unfavorable deviation.

Conclusions

Deviations amounts used standard prices are calculated out (ps), attempting thereby isolating the effect of the use of materials. Taking into account the actual price (on) would alter the information content of this offense with elements that are due to the purchasing department. Deviations amounts must be fixed (isolated) when "exit" (Release consumer) materials. They can be caused by factors such as errors in the production process, insufficient qualification of workers, poor supervision, theft by employees, low quality materials, changes in the production process, etc. In general, the responsibility for these violations rests production line manager. But there are cases when responsibility for these violations rests another person. Interpretation of deviations, which will be highlighted along with calculating the actual costs depend heavily on optics which was established standards. It is therefore important to create a personal connection between the frame and after that motivate them and empower them. Given previous research conducted execution of the production process, in terms of raw material to be used during the processing thereof, or other indicators calculated makers entities industrial profile, can anticipate some deviations. Thus, we can talk about competitive advantage and efficiency in production, for those using standard cost method and then control and cost analysis. These issues will be achieved through standard cost method that allows anticipation to determine the costs of the process of production.

By using standard cost method may proceed to determine a priori the necessary resources to achieve management products that enable rapid evaluation of its production, identification of deviations and corrective measures differences between actual and standard costs. An effective system of controlling provides the managers using such accounting information in decision making.

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