# USING STANDARD COST ACCOUNTING TO MODERNIZE THE CORPORATE INFORMATION SYSTEM

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Abstract. The modernization of the corporate information system on the basis of the financial-accounting information can lead to the facilitation of the preparation of a decision. In the present case, the financial-accounting information is used, through the application of the standard cost accounting. Thus, a cost analysis can be sufficient for a quick and pertinent decision. At the same time, the standard cost accounting allows to make better decisions in the sense of cost decrease, and can lead to the giving up to the analytic statement of the actual costs per cost bearers. In essence, the use of standard cost accounting may allow a quicker statement of costs and the producing of the financial statements within a few days after the end of the month, accelerating the reporting procedure and providing competent information necessary to the corporate information system.

Keywords: standard cost, information system, financial-accounting information, preset costs.

JEL classification: M41

## 1. Introduction

The production structure of many Romanian economic entities offers a complex situation of the costs and implicitly, requires the use of a suitable calculation method to know fast the actual costs. By comparing these costs with the standard ones, deviations are highlighted, that deviations are necessary in order to make well-timed proper decisions.

The standard-cost method is a method of calculation of the foreseen costs and of monitoring the production process in the economic entities. Using this cost calculation method, the production costs can be established in advance, realizing a budgetary control of the costs by the determination of the deviations of the actual costs, compared to the preset ones. Concomitantly with the production process operation, deviations can be determined per types or per causes, thus fulfiling an important function for the economic entity's management, respectively that of investigation and prevision tool.

To know the action of the determining factors leading to the obtaining of economies or the recording of overcosts compared to the pre-calculated costs, the economic entity's management needs to have a series of pieces of information

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related to the respective deviations. Such information allowing checking the actual expenses by comparison to the normal limits periodically foreseen can be obtained using the post-calculation. The need for post-calculation is at the same time determined by the need for a preventive and timely current control of the production expenses, since the financial-economic result of an economic entity is given on the basis of the actual expenses. It is preferable for the analysis of such costs to be realized per cost centres and / or per products.

The need to reinforce the responsibility of the decision factors and of the other workers per responsibility centres requires, once again, organizing the postcalculation. At the same time, it is necessary to know the responsibility per each product in turn, to adopt decisions regarding the widening or reducing the production of any product, or to know the factors with a positive influence on the production cost decrease, and to eliminate the factors with a negative influence on the production costs.

According to the standard-cost method, the production costs per unit must be calculated in advance, by using, in this respect, preset dimensions. At the same time with the running of the production process, the economic entities can organize the timely monitoring of the expenses that they cause, so that, by comparison with the standard costs, the deviations per places and causes may be established, actually realizing a budgetary cost control.

# 2. General features of the standard costs

A feature of the standard cost accounting is the fact that standards are considered real or normal production costs. Cost calculation concerns just a single calculation, called standard cost calculation, and the differences discovered between the actual and the standard expenses are considered deviations that are to affect the final results of the economic entity. The whole cost calculation process, when using standard cost accounting, requires a continuous cost analysis, based on rationalization. Such rationalization consists in the establishing of norms and standards able to provide the practise of a permanent control of the expenses.

The standard costs are predetermined costs with a normative character allowing the assessment of the performances of an economic entity during a determined period.[6] In other words, performance may be regarded from the following perspectives:

- performance, regarded as the capacity of a certain person in charge to reach a certain reasonable objective, that has been received as a task or established by himself;
- performance, regarded as an effort made by a certain person in charge, an effort that must be realized to get close to the intended objective.

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Thus, standard costs are determined for a future period, based on the efficiency of the production-distribution system and considering the market conditions. One may discern the following types of standard costs: historical cost; standard cost established starting from a competitive value; theoretical standard cost; normal standard cost. Exceptional situations may be met, when serious inflations occur and the evolution of the prices of the production factors is hard to integrate in a standard cost. Under such circumstances, the standard quantity is defined starting from the standard normal production and the standard price represents the price noticed at the moment when the standard was established or at any other welldetermined or established moment.

# 3. Determination of the standard costs based on internal norms

# 3.1. Basic elements for the standard cost determination

For the success of the standard cost determination process, it is necessary that two important elements should be observed, as follows: motivation and acceptance. Motivation determines the standard to aim towards reaching performance, so that the required effort should be perceived as attainable in a given time period. In this respect, we have been able to note that:

- the establishing of a very high performance level may discourage the employees and does not exert a motivating effect on them, either;
- the establishing of a too low performance level realized, but seldom exceeded determines the employees to adjust their effort, depending on the result set by the management team;
- the relation that harmonizes the standard with the performance is conditioned by the ambition of the personnel. The development of this ambition, so that the personnel should accept and develop the economic entity's objectives, leads to the creation of exigent standards, on a long term.

Another important element for the success of the standard cost determination is acceptance. This element is better if standards are elaborated by negotiation, determining a better collaboration between different departments of the organizational structures.

## 3.2. The standard costs based on internal norms

To establish a standard cost based on internal norms, it is necessary to identify the repetitive phenomena and to establish the production process and products. Actually, to elaborate the standard, it is necessary to establish a causality relation between efforts and performance and to calculate activity indices appreciating the result. In the case of production activities of a repetitive character, the relation

between effort and performance is immediate and is quantified by the production volume index.

Considering the corporate functions, we can classify the standard costs as follows:

• The distribution activity standards. The trade operations regarding the obtaining of orders are diverse and little repetitive, whereas the operations that lead to the execution of orders have a repetitive character. Thus, for the expenses that are related to the non-repetitive activities, like the advertizing expenses and the ones for sales personnel, efficiency is harder to determine, and for those expenses associated to the repetitive activities, it is vital that a quantification of their productivity volume should be established.

The advertising standard cost quantification is often considered as not standardized, since the cost impact on the sales volume cannot be measured rigorously. Nevertheless, there is not excluded the possibility of an objective establishment of norms that should sufficiently approximate the relation between expenses associated to advertizing and sales increase.

The calculation of the standard costs associated to the manpower is equally difficult because there cannot be established a rigorous causal relation between the efforts carried out by the sales personnel and the obtained performances. But, sale norms can be enforced, which shall not have a definite character of standards, like the ones from the production field.

- Administative activity standards. The administrative expenses are essentially fixed, having a non-repetitive character. Thus, a poor relation between effort and performance is created, but such a relation can be quantified using the punctual audit techniques or zero basis budgeting techniques.
- Standards regarding the materials used in production in this case, the standard costs of the raw matter can be divided in: quantitative and price standards. The quantitative standards are defined in the product catalogue, using the value analysis techniques, by the specialists of the department of study. For the determination of these standards, there must be assessed the normal losses and wastes for the production activity, by elaborating the loss and waste standards. The price standards are difficult to determine since the price of a raw matter is variable, but there is used the last price known or an average of the historical prices, adjusted according to the current tendencies.
- *The manpower standards* are made up of two key elements: time standards and remuneration standards. Time standards are set based on the studies carried out by the department of methods or based on the references made by the research progress group. Their determination is achieved by rationalizing the operations and timing the tasks. The remuneration standards are determined for each position in the organizational chart, starting from the past

salaries and taking into account their increase rate, which can be negotiated within a collective convention.

- Standards regarding the direct expenses for the equipment use. These can be analyzed through the perspective of the time standard and of the unit cost standard. The time standard must be defined for each working piece, as follows: the operational time, necessary for the production of the working piece; the preparatory time, associated to the installation and adjustment of the piece on the machine; the pre-operational time, necessary for a piece to be held on the machine before the minimal lot is made up, and the post-operational time or the time necessary to transit the working piece to other centres. The unit cost standard depends on the foreseen production volume and on the normal production capacity of the machine.
- Standards regarding the indirect production costs. These standards are dealt with through the prism of the fixed and variabile expenses. The fixed expense standards depend on the production volume foreseen, the measurement of a level of standard activity being needed. The expense standards variable in relation to the production volume do not present difficulties in the determination of the standard. Concomitantly, the standard rate of the indirect expenses is calculated, and if a difference between the actual production level and the standard one is discovered, a deviation of capacity shall be quantified.

# 4. The use of the unique cost standard method - A prerequisite of the modernization of the corporate information system

Of the standard cost calculation methods, based on the internal norms, the unique cost standard method answers the best the need for information flow modernization in a company that has expressed the desire to outsource its financial and cost accounting services in the near future. The use of this method allows the easy performance of a timely budgetary control of the way the material and labour resources are consumed, by the distinct, permanent and complete monitoring of the cost deviations during the entire activity. Thus, we shall have information useful for timely decisions, not only at the end of the reporting period, but continuously, both in the current timely statement, and in accounting, on the one hand globally, and on the other hand per causes, up to the moment of distribution on the financial results.

Under the conditions of application of the unique cost standard method, the organization of the production expense accounting is based on the cost accounts of class 9 of the General account plan. The following account groups are used: internal clearings; calculation accounts and production cost. All accounts can be developed analytically, depending on the specific requirements and on the

objectives pursued. Since the standard costs are considered as real costs, by the application of the standard cost accounting, the analytic statement of the actual costs per cost bearers is given up. The recording of the production expenses is realized on post-calculation sheets adapted to the standard cost accounting, namely both sheets for the standard costs per calculation items, and deviation sheets, having the same structure as the the former. The calculation of the finished production cost, and implicitly of the results obtained, requires the need to timely record in accounting all the product cost they cause, according to which they are divided into direct and indirect expenses.

In the unique cost standard method, the "Production" account, developed analytically, per expense centres and per calculation items, is debited with consumable materials for manpower and overhead costs, assessed according to the standard costs and are credited with the standard costs that are associated to the finished products obtained in the production process. We suggest, for the organization of the cost accounting within the analyzed economic entity, that they shoud use the calculation account 921 "Expenses associated to the basic activity", which should operate as a "Production" account. As for deviations, they are calculated per each calculation item, per causes. Deviations are recorded in the "Deviations" accounts, which are opened analytically in a similar way to the "Production" account, with which they operate in parallel, and per causes, as well, within each calculation item. The deviations accounts are debited with the overcosts established compared to the standard accounts and are credited with the savings compared to these costs. Their solds are transferred at the end of the reporting period in the "Profit and loss" account. It is suggested that, for the organization of the cost accounting within the economic entity, one should use the calculation account 903 "Internal clearings regarding deviations", which should operate as a "Production" account. Account 921, "Expenses associated to the basic activity" divided analytically per each production workshop, and within them, per calculation items that are specific to the standard cost accounting: raw matters and direct materials, direct manpower and overhead costs. Account 923 "Indirect production expenses" is divided analytically per each main workshop. For the administrative and management sectors, the expenses shall be collected using account 924 "General administration expenses". At the same time, the collection of the expenses caused by the sale sector shall be carried out using account 925 "Sale expenses".

Through the collection of the production expenses using the calculation accounts, the development per analytical structures, in agreement with the unique cost standard method, there is created the possibility to provide the management with

information regarding the expenses caused by the main activity sectors of the company - production, administration and management and sales departments - to be able to control each activity sector in turn. The standard cost deviations for raw matters and direct materials, as well as for manpower, are calculated per causes, within each calculation item that is specific to the standard cost accounting, based on the primary documents that reflect their actual value but not their accounting one. It creates the possibility of timely informing the decision organisms regarding the disbalance that might occur during the production process. The deviations from the standard overhead costs are established at the end of the reporting period, after the recalculation of the expense standards and their comparison with the actual expenses. The deviations may be favourable, representing savings, and non-favourable, meaning overcosts. Depending on their kind, we suggest the use of account 903 - "Internal clearings regarding deviations". The account with the accounting function of asset is debited with favourable or non-favourable deviations, compared to the standard costs, in correspondence with account 901 - "Internal clearings regarding expenses" and is credited on the occasion of their clearing for the finished production and production under way. This account operates analytically per production workshops and, within them, per calculation items that are specific to the standard cost accounting. The timely monitoring of the deviations per each calculation item on each activity sector level is done using some deviation statement situations. Thus, a timely control can be done on the efficiency of the production expenses and on the causes that led to the respective deviations, allowing one to make decisions on the production cost decrease. If data processing means are used, for the cost accounting and the timely monitoring of deviations, the situations processed using the computer shall be used instead of the account sheets and of the timely deviation statements.

# 5. Organization of the expense accounting according to the unique cost standard method at S.C. Europa S.A.

The unique cost standard method is used at S.C. Europa S.A. for September, year (N + 1), production workshop no. 1 (ww).

# 5.1. Accounting of the raw matter and direct material consumption

The information regarding the raw matter and direct material consumption is calculated for the standard cost, based on the "Report regarding the standard cost deviations", on the level of workshop no. 1 (ww) by the debiting of account 921 "Expenses associated to the basic activity" (analytical) workshop no. 1 (ww) and the crediting of account 901 "Internal clearings regarding expenses", according to table 4.1.

Table 4.1. Consumption of raw matters and direct materials - workshop no.1 (ww)
September (N+1)

No.	Expenses	m.u.	Amount
1.	Raw matters and direct materials	m.u.	34,300
2.	Electricity	u.m	14,100
3.	Fuels	u.m	3,300
4.	Amortization	u.m	2,200
	TOTAL	u.m	53,900
	LOK DE S	115	

Based on the same "Report regarding standard cost deviations", on the level of workshop no.1 (ww), in the cost accounting the deviations of the actual costs from the standard ones are recorded, debiting account 903 - "Internal clearings regarding deviations" and crediting account 901 - "Internal clearings regarding expenses", according to table 4.2.

 Table 4.2. Deviations regarding the raw matter and direct material consumption - workshop no.1

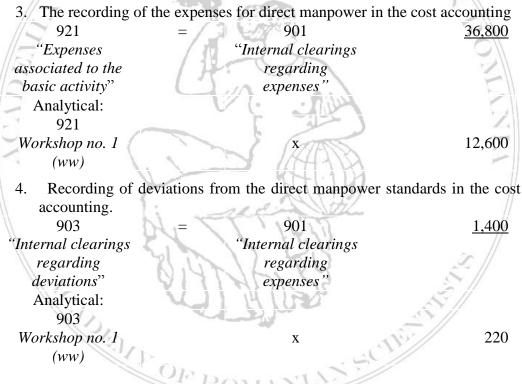
 (ww)
 September (N+1)

11~	CA CARACIA			1160
No.	Expenses	m.u.	Amount	5
1.7	Deviations - Raw matters and direct	m.u.	280.00	
	materials			1
2.	Deviations - Electricity	u.m	- 360.00	1
3.	Deviations - Fuels	u.m	- 180.00	-
4.	Deviations - Amortization	u.m	0	1
0	TOTAL	u.m	- 260.00	-
to the bo An Worksho	res associated "Internal cle asic activity" regarding ex alytical: 921 x op no. 1 (ww) Record in the cost accounting (accordin	penses	e 4.2.).	<u>53,900</u> 53,900
	903 = 901		//	1,300
"Intern	al clearings "Internal cle	arings	10-1	
regardin	g deviations" regardin expense.		S/	
An	alytical:			
	903 x			200
Worksho	p no.1 (ww)			260
	the recordings realized, the amounts a	re record	ed in the syn	thetica
	ical sheets of accounts 921 - "Expenses			
	$\frac{1}{2} = \frac{1}{2} = \frac{1}$	associate	a to the basic	activit

and 903 - "Internal clearings regarding deviations", per causes.

# 5.2. Accounting of expenses of direct manpower

The recording in the cost accounting of the expenses for direct manpower is done at the standard cost, based on the "Report regarding standard cost deviations", on the level of Workshop no.1 (ww) through the debiting of account 921 - "Expenses associated to the basic activity" - (analytical) Workshop no. 1 (ww) and the crediting of account 901 - "Internal clearings regarding expenses" according to the centralizer of payrolls for the amount of 12,600 m.u. Based on the same "Report regarding standard cost deviations", on the level of Workshop no. 1 (ww), in the cost accounting there are recorded the deviations from the direct manpower standards, through the debiting of account 903 - "Internal clearings regarding deviations" and crediting account 901 - "Internal clearings regarding expenses" for the amount of 220 m.u. Thus:



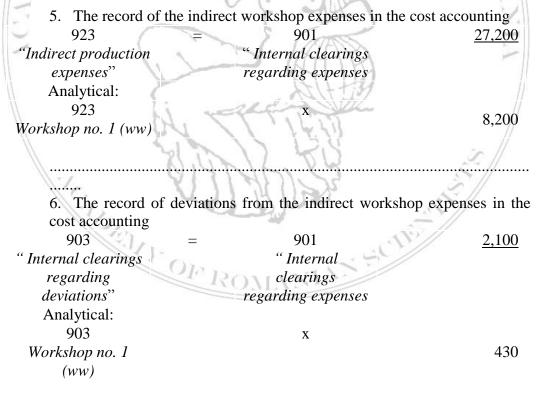
Following the recordings made, the amounts are written on the synthetical and analytical sheets of the accounts 921 "Expenses associated to the basic activity" and 903 "Internal clearings regarding deviations", per causes.

# 5.3. Overhead costs accounting

The overhead costs contain: indirect workshop expenses; general administration expenses and sales expenses. Depending on the nature of the actual overhead costs, the suitable justificative documents are used.

## 5.3.1. The indirect workshop expenses

The indirect workshop expenses are registered in accounts using account 923 -"Indirect production expenses", developed analytically for all the production workshops. The recording in the cost accounting of the indirect workshop expenses is done at the standard cost, based on the centralizing situations regarding the indirect expenses per workshops and of the "Report regarding the overhead costs' deviations" - in our case, for Workshop no. 1 (ww). Account 923 "Indirect production expenses" - (analytical) Workshop no. 1 (ww) is debited and account 901 "Internal clearings regarding expenses" is credited with the associate amount of 8,200 m.u. The standard cost deviations are registered in accounts using account 903 - "Internal clearings regarding deviations", developed analytically per workshops through debiting, in correspondence with account 901 - "Internal clearings regarding expenses" through crediting, for the amount of 430 u.m, as follows:

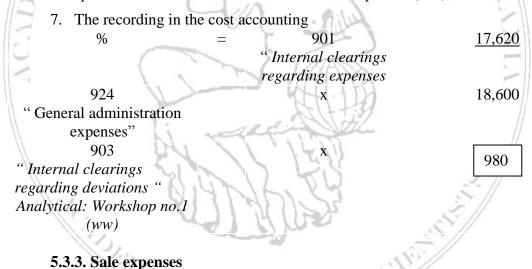


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Following the recordings made, the amounts are written on the synthetical and analytical sheets of accounts 923 - "Indirect production expenses" and 903 "Internal clearings regarding deviations", per causes.

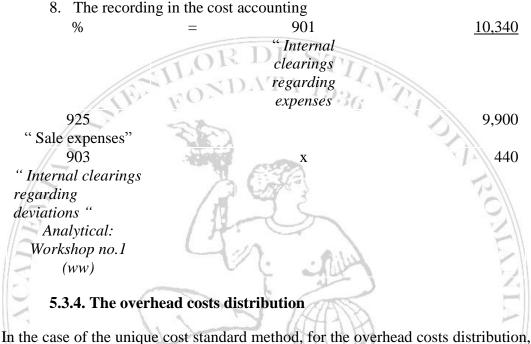
#### 5.3.2. General administration expenses

The general administration expenses are registered in accounts in the case of the unique cost standard method, using account 924 - "General administration expenses", debited in the course of the month with the standard expenses, through the credit of account 901 - "Internal clearings regarding expenses" and they are credited at the end of the month through the debit of account 921 - "Expenses associated to the basic activity" with the amount of 18,600 m.u. The standard cost deviations are recorded in accounts using account 903 - "Internal clearings regarding deviations" - (analytical) General Administration, that is distributed at the end of the month to the analytical deviations accounts per workshops with the amount of - 980 m.u. The recording in the cost accounting of the general administration expenses is done based on the "Report regarding deviations from the workshop's overhead costs" on the level of Workshop no. 1 (ww), as follows:



The standard sale expenses are recorded monthly using account 925 - "Sale expenses", that is debited - in the course of the month - with the standard expenses, through the crediting of account 901 - "Internal clearings regarding expenses" and credited at the end of the month through the debiting of account 921 - "Expenses associated to the basic activity" developed analytically per workshops, for the amount of 9,900 m.u. The standard cost deviations are registered in accounts using account 903 - "Internal clearings regarding deviations" (analytical) Sales, that are related at the end of the month on the

deviations accounts opened per workshops, with the amount of 440 m.u. The recording in the cost accounting of the sale expenses is done based on the "Report regarding the sale expense deviation of the workshop" on the level of Workshop no. 1 (ww), as follows:



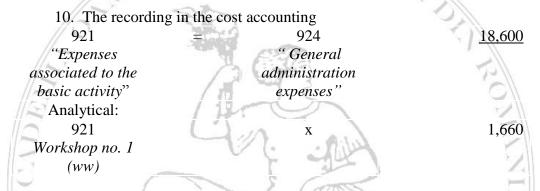
In the case of the unique cost standard method, for the overhead costs distribution, the unique or global index is used. The recording in the cost accounting of the distribution of the indirect workshop expenses over the expenses associated to the basic activity is done at the standard cost for each workshop in turn, through the debiting of account 921 - "Expenses associated to the basic activity" - overhead costs, developed analitically and the crediting of account 923 - "Indirect production expenses" - developed analitically. In the case of Workshop no. 1 (ww), the recording in accounting is done as follows:

9. Record in the c	ost accounting	-//
921	= 923	36,600
"Expenses	"Indirect expenses	
associated to the	production"	
basic activity"		
Analytical:		
921	Х	8,200
Workshop no. 1		
( <i>ww</i> )		

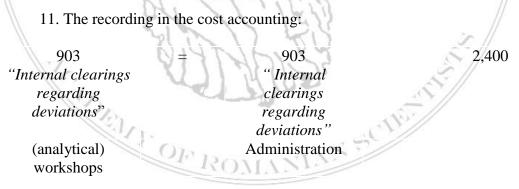
According to this accounting formula, account 923 - "Indirect production expenses" - (analytical) Workshop no. 1 (ww), is calculated.

## 5.3.5. The general administration expense distribution

The general administration expense distribution over the workshop cost is done based on the "Situation of the general administration expense distribution" through the debiting of account 921 - "Expenses associated to the basic activity" - overhead costs, opened for each workshop and the crediting of account 924 - "General administration expenses". In the case of workshop no. 1 (w.w), the recording in accounting is done as follows:



Concomitantly, we proceed to the distribution of the deviations from the general administration expenses standard, through the debiting of the deviations accounts that are opened for workshops and the crediting of the deviations account on the administration level, as follows:



## 5.3.6. Sale expenses distribution

At the end of the reporting period, the sale expenses and the associated deviations are distributed over the cost of the main workshops. The recording in the accounting of the sale expense distribution operation is done through the debiting of account 921 "Expenses associated to the basic activity", an overhead costs

account opened for each workshop and the crediting of account 925 "Sale expenses" - standard costs, as follows:

921 = 925 10,300 "Expenses "Sale expenses" associated to the basic activity" Analytical: 921 "Workshop no. 1 (w.w)"

Concomitantly, the distribution of the deviations from the standard sale expenses is calculated, through the debiting of the deviations accounts, opened for workshops and the crediting of the deviations account on the sale level, as follows:

	Z -3 6 1 10-29 - 0 \	
903	= 903	1,190
"Internal clearings	"Internal	
regarding	clearings	F
deviations"-	regarding	
(analytical)	deviations"- Sales	1
workshops		I
Analytical:		440
903 "Workshop no.	> ANI NY	
1 (w.w)"	1111	//
	- Alexander	//

After these recordings, accounts 925 - "Sale expenses" and 903 - "Internal clearings regarding deviations" – (analytical) sales, are calculated. At the end of these recordings, by the adding up of the expenses recorded on the post-calculation sheets, the complete actual cost of the production is obtained.

#### Conclusions

The cost accounting supplies the essential information for the control of the economic entity's current activities, for the planning of the future activities, for the provision of the optimum use of resources, for the measurement and assessment of the performance of all the subdivisions from the economic entity, for gaining and maintaing a competitive position. The efficiency of the control mechanism of the costs depends, to a great extent, on the correct choice of the calculation methods and their harmonization with the pursued goals. Under the new economic conditions, it is recommended to use the most rational and efficient

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methods of organization of the cost accounting and of the cost calculation. Thus, through the use of the standard cost accounting, the cost accounting allows the performance of some analyses that better serve the understanding of the way the company's result is formed. At the same time, the economic entity shall succeed in efficiently managing of its consumptions and activity results on any level of the production process. The ovservation of the standards allows the managers to anticipate the expenses, and by anticipating the incomes, as well, the dimension of the margins and of the obtained results can be explained. Cost accounting shall succeed in providing a piece of true information that should facilitate the knowledge of the economic facts, adapted to an objective appreciation and useful to the making of decisions by the users. Being conceived for orienting the corporate activity, the standard cost becomes a means of control of the resource consumption, allowing a calculation of the deviations through the comparison of the actual consumptions with the preset ones. The determination of the deviations within the economic entity - Europa S.A. - regarding the raw matters, materials and the direct manpower, based on primary documents, but not in an accounting way, creates the prerequisites of timely informing the managers on the disturbances occurred in the production process. The amounts reported timely by the personnel directly in charge must be periodically confronted to the ones recorded in accounting. There is a real extra effort, required by the timely determination and reporting of such deviations, but it is compensated by the fact that the inventory of the production under process is not necessary any more, and the economic entity's managers can take efficient and useful action in real time. Using the unique cost standard method, one realizes a timely control of the way the material and labour resources are consumed through the distinct, permanent and complete monitoring of the deviations during the activity, not at the end of the reporting period, like in the traditional methods, both in the timely statement, and in accounting, globally and per causes, from the occurrence moment, respectively from their identification up to the moment of distribution on the financial results.

"This work was supported by the project "Excellence academic routes in the doctoral and postdoctoral research – READ" co-funded from the European Social Fund through the Development of Human Resources Operational Programme 2007-2013, contract no. POSDRU/159/1.5/S/137926."

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