

# **Control and Analysis of Costs Based On Results Account of the ABC method**

**Dr. Sorinel Căpușneanu**

Faculty of Finance and Accounting, Artifex University, Bucharest, Romania

Email: sorinelcapusneanu@gmail.com

**Dr. Sorin Briciu**

Faculty of Sciences, 1 Decembrie 1918 University, Alba Iulia, Romania

Email: briciusorin@gmail.com

## **ABSTRACT**

This paper presents a modality of control and cost analysis based on the results account of Activity-Based Costing method. The results account model and situations for determining deviations are presented based on the purpose, composition and classification in the existing literature. There are presented the statements for determining costs deviations resulting from their control and analysis in terms of pilot indicators, all highlighted by a case study application. The article ends with the authors' conclusions about the advantages of these syntheses accounting statements specific to ABC method and using it as a main source of rapid and accurate decision-making for the management at interentity level.

**Key words:** *Activity-Based Costing, analysis, cost drivers, management accounting, results account, control.*

## **1. INTRODUCTION**

The purpose of this article is to present the advantages based on the model of results account of the ABC method, model which has been resulted from research conducted in enterprises in the industrial sector in Romania. National and international literature has not presented a well-defined model in terms of management accounting methods used, for which we thought of finding a model to help accountants and managers of organizations in making appropriate management decisions as soon as possible. This article is addressing all managers and professionals interested in drafting a set of standard managerial accounting synthesis accounting situations like for instance those in financial accounting. We provide only a start-up model in the editing and concentration of information needed to control and analysis of costs from both department heads and managers from

organizations. Also, we tried to find answers to some questions like: *How will retrieve data from financial accounting to management accounting, according to the specific of ABC method? The ABC method provides sufficient information to achieve an effective control and analysis of costs? The information is relevant for management and complex managerial decisions?*

## **2. REVIEW OF RELATED LITERATURE**

Following research undertaken by various specialists in the field of management accounting, in the specialty literature have been identified four patterns of results accounts.

The first model type identified *the functional results account* is the best known and generally accepted only in the countries of monism accounting practitioners. Being found in the financial accounting, classification of expenditure is made in relation to the functions of an enterprise according to the way of its management accounting structural organization. In reality, this model has more disadvantages than advantages. Due to territorial independence, some decisions may be wrong and would eventually lead to lower overall level of profitability of an enterprise.

The second model identified *the results account list type* is the most widely used in countries of dualism accounting practitioners as a form of more approved communication of financial performance of an enterprise, regardless of the activity sector. The advantage of this model is limited to "added value" that is defined by reference to two success key factors, namely: the market and the customer. Judging by the accounts, management accounting can be arranged in two ways: either by integrated organization with the use of different analytical of financial accounting or by dissociated organization with the use of accounts by holding. We have turned our attention to the second version of the accounting organization including, on the one hand, the existence of financial accounting, and on the other hand, the existence of management accounting. According to the Romanian legislation, the analytical accounts of managerial accounting allow the following operations:

- Acquisition of accounts of expenditure from financial accounting, for which purpose it is better to draw up "conversion table" (table 1) in order to ensure control over recorded operations. After this conversion is done to separate the embedded costs not captured under way to incorporate the costs in the cost of production, namely pooling expenditure: direct (the objects of calculation) and indirect (based on work processes and then, by their nature, according to the specific of the ABC method).

Table 1. Conversion table of expenditures from financial accounting. (Class 6 “Expenditures”) in management accounting (class 9 “Management Accounts”)

Class 6 accounts	Total turnover debtor	Expenditures				
		Direct		Overhead		
		921 Account	...	923 Account	924 Account	925 Account
601 Account						
602 Account						
...						
Total						

- Recording, tracking and control of production made during the reporting period, that the production in progress (unfinished);
- Recording, tracking and control of deviations between actual costs and registered prices of the manufactured products;
- Transfer to management accounting/financial accounting of the actual cost of production obtained and related cost differences.

In treatment of the incorporated and unincorporated costs still appear the suppletive expenses, i.e. those expenses that you find only in analytical accounting or management accounting and not in financial accounting. Schematically these issues appear as follows:

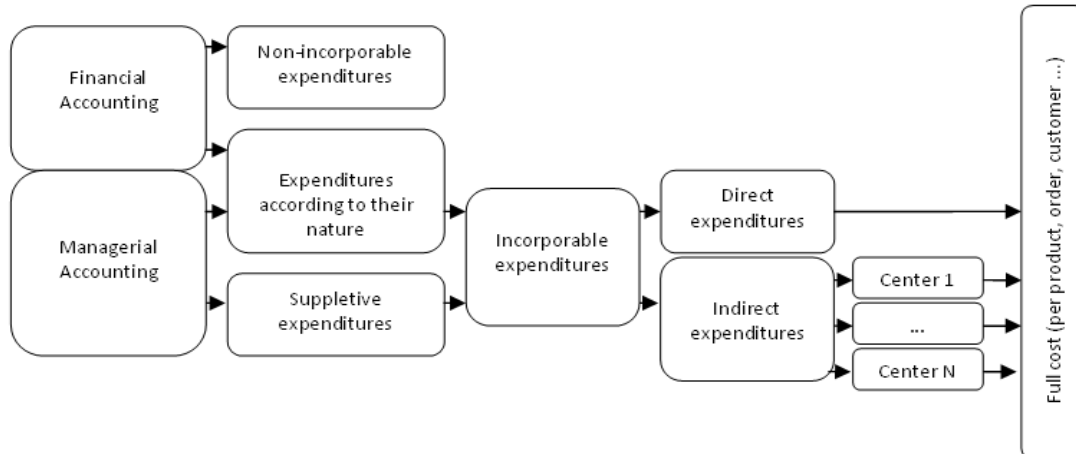


Figure 1. The degree of incorporating the expenditures in the total cost

The third model, the *partial result account type* is characterized by the ability to easily determine specific indicators (balance point, cover factor) and it is convenient for the management in decision-taking, particularly in the short term. However, it requires a separation of variable and fixed expenditures in pursuing this type of results account (which, in the ABC method is not possible as the fixed expenditures become variable if you carefully examine their cause).

An interesting possibility for determining the analytical result we are meeting in the case of Activity-Based Costing (ABC) method. The total amount of value activities enables the provision of

expenses nomenclature, however, ignored and essential for managing an enterprise. In an allocation by functional service, which the enterprise knows but this does not allow identification of the real causes of the evolution costs, the ABC method (Activity-Based Costing) substitutes a new results account in which the expenditure are no more the lines by their nature or the costs of various functional services but the resources consumed by activities. This causes the *fourth results account model*, namely the results account on activities that best matches the requirements of the ABC method, transversality and related processes structuring activities.

**3. GENERAL CONSIDERATIONS ON THE RESULTS ACCOUNT OF THE ABC METHOD. DEFINITION, PURPOSE, CLASSIFICATION**

The activity result account (ABC) is that synthesis document of management accounting that allows viewing gains and/or losses on the activities and processes carried out internally. Whatever the model of results account chosen by an entity may be, it must aim at maintaining the relevance of information. If the monist system leads to loss of relevant information provided by the results account, an entity must find the way that information on costs to be relevant and to be total. ABC method solves this issue, but remains the publication of information. Most companies worldwide that have already implemented the Activity-Based Costing system maintain in parallel the classic costing system, just out of the desire to use the financial statement reporting. The purpose of the results account information provided by the ABC method is to provide an overview of the developments pursued by the management to set up objectives and decisions relevant to proper management. The purpose and the role of the information in the results account of the ABC method can be viewed in the figure 2.

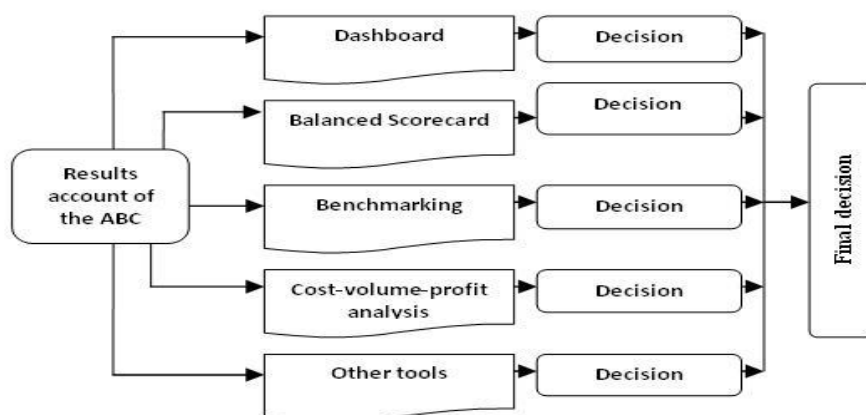


Figure 2. Purpose and role of information provided by the results account of the ABC method

The architecture of the transversal organization of an entity describes the strategic actions to establish processes, activities and operations. Here are described the actions from the operational

point of view and in detail, while activities and processes regroup operations according to a logic of the outcome per client. The transversal organization defines the entity’s quantitative needs of staff for each activity or operation. Transversal organization highlights the links necessary for carrying out the corresponding operations. They describe the relationship where responsibilities are exercised. Transversal organization of an entity defines, through the notions of frequency and capacity when actions become feasible. It ensures that the entity is able to produce what has been determined in the strategic plan, taking into account available resources (people, equipment, IT media, etc.). From this point of view, two results accounts may be established in the management accounting: at the global level (table 2) and at the product level (table 3). A more comprehensive picture is obtained when comparing the results account of many products. In drawing up the information necessary to organize the results account of ABC method, the conversion table between the financial and managerial accounting of the entity will be drawn.

Table 2. Example of results account at an entity level

Explanations	Calculation
1. Turnover	...
2. Direct costs	2.1.+ 2.2.
2.1. Consumption of raw materials	...
2.2. Cost of direct wages + accessories direct wages	...
3. Activities costs	$\sum 3.1.+ 3.2.+ \dots 3.n$
...	...
...	...
...	...
4. Total costs	2 + 3
5. Result (profit or loss)	1 - 4

Table 3. Example of global results accounting broken according to the activities for “N” products

Explanations	Calculation	Product 1	Product N
1. Turnover	...	...	...
2. Direct costs	2.1.+2.2.	...	...
2.1. Consumption of raw materials	...	...	...
2.2. Cost of direct salary + accessories wages	...	...	...
3. Margin on direct costs	1 - 2	...	...
4. Activities costs	$\sum 4.1.+ 4.2.+ \dots 4.n$	...	...
4.1. Supplier selection	...	...	...
4.2. Launch/reception commands	...	...	...
4.3. Depositing materials	...	...	...
- .....	...	...	...
5. Profit or loss	3 - 4	...	...

#### 4. CONTROL AND ANALYSIS OF COSTS OF THE ABC METHOD

In order to obtain relevant information, the control entity is organized identifying causes of deviations recorded. According to the specificity of the ABC method, we can construct situations of deviations, as follows:

- a) at the level of the entity:

No.	Explanations	No. row	Sum
1.	Pre-calculated direct costs (921 account)	1	
2.	Pre-calculated indirect costs, of which: (rows 3+4+5)	2	
	2.1. Production activity (923 account)	3	
	2.2. Administration activity (924 account)	4	
	2.3. Sales activity (925 account)	5	
3.	Pre-calculated costs – total (rows 1+2)	6	
4.	Actual direct costs (921 account)	7	
5.	Actual indirect costs, of which:	8	
	5.1. Production activity (923 account)	9	
	5.2. Administration activity (924 account)	10	
	5.3. Sales activity (925 account)	11	
6.	Actual costs – total (rows 7+8)	12	
7.	Differences of costs, of which:	-	
	7.1. Favorable (rows 6-12)	-	
	7.2. Unfavorable (rows 12-6)	-	

b) at the level of the product (s):

No.	Explanations	No. row	Product 1	...	Product n	Total
1.	Pre-calculated direct costs (921 account)	1				
2.	Pre-calculated indirect costs, of which: (rows 3+4+5)	2				
	2.1. Production activity (923 account)	3				
	2.2. Administration activity (924 account)	4				
	2.3. Sales activity (925 account)	5				
3.	Pre-calculated costs – total (rows 1+2)	6				
4.	Actual direct costs (921 account)	7				
5.	Actual indirect costs, of which:	8				
	5.1. Production activity (923 account)	9				
	5.2. Administration activity (924 account)	10				
	5.3. Sales activity (925 account)	11				
6.	Actual costs – total (rows 7+8)	12				
7.	Differences of costs, of which:	-				
	7.1. Favorable (rows 6-12)	-				
	7.2. Unfavorable (rows 12-6)	-				

Indicators are identified in order to measure the achievement of the objectives and to supply information that allow the management to take efficient decisions. The finality is obvious and allows the entity to improve its performances by the means of competitiveness. The way in which data are presented must be most relevant. That is why there has to be a clear distinction between the notions of *information* and *indicator*.

Information is a measure of a phenomenon in the field, while the indicator is the result of a mathematical calculation. Information can be measured and refers to data that can be found within the entity like: quantity of production, costs, number of rebuts etc. The indicator represents the report that allows the comparison of the achievements with the objectives or other references.

*How is an entity piloted? Are the data offered by the results accounting of the ABC method sufficient or are there also other information necessary from outside the management accounting?*

*How do we group indicators?* These are three questions we shall try to answer in a scientific, argumentative way.

Piloting represents the technique of strategy development in actions that are to be fulfilled, being formulated by the management of the entity. Even actions of the personnel can be part of the strategy. The piloting indicator represents an element or a set of elements of informing, representative in related to a certain objective, and resulted from the tangible measurement or from the observation of a state, a phenomenon or a realization. The performances of each activity are evaluated through indicators with levels and evolutions that will be compared with the previous objectives, norms or results. The piloting of the entity is therefore indispensable for the realization of the strategic objectives and is first of all an action on behavior. We must choose the indicators, and to direct the individual or collective behaviors in accordance with the strategy. Thus, we can group indicators according to the instruments of monitoring and measurement of performances we use. For instance, the conditions the piloting indicators of the dashboard must fulfill are as follows:

1. They should be simple and a few only (3-5 per activity);
2. They should be clear, concise and perfectly understood by the persons involved;
3. They should follow a certain strategy (indicators entail the strategy for various centers of decision);
4. They should present a certain tendency of evolution (they adapt according to the strategic evolutions).

Pilot indicators have the following functions:

- Identification and prevention of negative deviations;
- Measurement of the performances of processes and activities, due to the fact that they are linked to the operational plans;
- Monitoring of the objective achievement;
- Monitoring of the competitive environment;
- Support for the responsible people in achieving their objectives.

Pilot indicators are therefore a source of useful data for all hierarchical levels. Each of the pilot types further develops into specific indicators like follows:

- Pilot indicators of the activities and processes that measure the actions carried out within the functional services for the implementation of the defined strategy.
- The strategic pilot indicators that measure the action according to the competitors and the competitive environment.
- The pilot indicators of the results that measure the degree of achievement of the objectives of operation.



The objectives of improvement of performances can be of various types, as was previously stated. Therefore we may distinguish the following typology:

1. *Objectives related to the volume related or to the level of activity.* These indicators express a volume of activity obtained during a defined period or of a foreseen objective of the same type. They measure, within the framework of optics of improvement, the level of an activity (generally the number of supplied “outputs”). One may take into consideration the number of contracts with clients, suppliers, internal or external cooperation, deliveries (monthly or quarterly) etc. done by a company. The aim of these indicators is to underline the volume attracted following the contacts with partners in a definite period of time (monthly or quarterly). One may also take into consideration longer periods of time (1 year for instance), but the results should be rather for a short period in order to be able to take most rapid and efficient decisions. The general form these indicators may have is the following:

$$\frac{\text{Costdriver}}{N} \tag{1}$$

Where: N = number of management periods.

2. *Objectives of efficacy and efficiency.* Indicators linked to the efficiency objectives reflect the variations of the turnover at the modifications of the cost inductors used by a company. The general form these indicators can take is the following:

$$I_{\text{Efficacy}} = \frac{\bar{T}_{N+1} - \bar{T}_N}{\bar{T}_N} \times 100 \tag{2}$$

$$\text{Where: } \bar{T}_N = \frac{T_N}{\text{Costdriver}} \tag{3}$$

$\bar{T}_N$  = Average turnover per order; N = number of management periods.

Indicators linked to the efficiency objectives reflect the hourly variations at the modifications of the cost inductors used by a company. According to the ABC method, the general form these indicators can have is the following:

$$I_{\text{Efficiency}} = \frac{\bar{V}_h N+1 - \bar{V}_h N}{\bar{V}_h N} \times 100 \tag{4}$$

$$\text{Where: } \bar{V}_h N = \frac{V_h N}{\text{Number of orders}} \tag{5}$$

$\bar{V}_h$  = average volume of hours per order; N = number of management periods.

3. *Quality (or non-quality) objectives.* These indicators measure the level of reliability (or non-reliability) of an activity as related to the objective of the total quality. This serves to the calculation of non-quality costs. The form these indicators can have is:



$$\frac{\text{Costdriver(activity1...n)}}{\text{Costdriver(objective)}} \quad (6)$$

Where: 1....n = activity number from the list (activity catalogue; objective = total quality (100%).

The more this rate closes to zero the more the quality of the delivered products closes to 100%.

4. *Cost related objectives.* These indicators will measure the cost and the evolution of the resources consumed by an activity. They allow the study of a possible externalization of the subtasks. The general form these indicators can have is:

$$\frac{\text{Cost}}{\text{Costdriver}} \quad (7)$$

Where: cost = the cost of an activity; cost inductor specific to the activity (product).

5. *Objectives related to the delivery terms.* These indicators measure the delays in performing a work and with this title, participate in the measurement of the normal value per clients. The general form these indicators can have can be expressed as follows:

$$360 - \left( \frac{\text{Valueinvoicecustomer}}{\text{Turnover}} \times 360 \right) \quad (8).$$

Previously we presented five large categories of indicators used by the ABC method. This does not mean that for each activity we have to determine and interpret all the indicators by means of the five categories. But, the interest of this multitude is to supply an approach able to ensure the examination of activities from all possible points of view, starting this way from a correct choice of indicators. The most common model of consulting operations, activity drivers, activity centers with the directions of information transmittal within the ABC method is that of the *Activity identification sheet*. Before being consulted and understood, the indicators for this activity are defined in a precise way in order to be measured and calculated easily. Indicators are selected carefully according to the specific of each activity and classified in an *Indicator notebook*. For each indicator we have, in the case of specific activities: periodicity, purpose, this is the users, the responsible person and the calculation relation. Indicators are presented in these simple forms in order to trigger reactions. Such types of documents lie at the basis of the dashboards, of the balanced dashboards, of the cost-volume-profit analyses, comparative analyses etc.

## 5. APPLIED CASE STUDY FOR CONTROL AND ANALYSIS OF THE COSTS OF AN ENTITY

We are considering an entity that aims to have a picture of the obtained results, including deviations from the standard costs of the four commands (A, B, C and D) covered the cost calculation

by the end of December. To this end, the management accounting department provides a series of management documents, such as: table 4, table 5, table 6.

Table 4. The results account statement corresponding to the four main products manufactured by the entity in the pre-calculated period

Explanations	Product				Total
	A	B	C	D	
<b>1. Turnover</b>	<b>2000000000</b>	<b>4000000000</b>	<b>3100000000</b>	<b>3300000000</b>	<b>12400000000</b>
Consumption of raw materials	138080000	118500000	235900000	228400000	720880000
Direct payroll costs and supplies	675000000	1518750000	1620000000	1620000000	5433750000
<b>2. Direct costs –total</b>	<b>813080000</b>	<b>1637250000</b>	<b>1855900000</b>	<b>1848400000</b>	<b>6154630000</b>
<b>3. Margin on direct costs (1 - 2)</b>	<b>1186920000</b>	<b>2362750000</b>	<b>1244100000</b>	<b>1451600000</b>	<b>6245370000</b>
Consumed activities					
<b>Production activity</b>	<b>567979975</b>	<b>847640285</b>	<b>869576255</b>	<b>862703585</b>	<b>3147900100</b>
- supplier selection	2276250	1517500	1517500	2276250	7587500
- launching and reception of orders	5058330	5058330	2529170	2529170	15175000
- launching fabrication orders	3793750	3793750	3793750	3793750	15175000
- materials storage	6503590	3251780	9755350	3251780	22762500
- quality control	2053840	2139400	2053840	2652920	8900000
- quality certification of products (ISO)	3930430	2947840	3930430	491300	11300000
- maintenance equipment	5507100	4895200	5201150	5507100	21110550
- manufacturing launch	2600575	2600575	2600575	2600575	10402300
- processing in section 1	137700000	311020700	330480000	330480000	1109680700
- processing in section 2	89775000	202102850	215541000	215541000	722959850
- processing in section 3	307374860	307374860	290298490	290298490	1195346700
- equipment operation, repairs	1406250	937500	1875000	3281250	7500000
<b>Administration activity</b>	<b>67277630</b>	<b>65686140</b>	<b>57277360</b>	<b>54658870</b>	<b>244900000</b>
- cooperation/collaboration	4200000	4200000	4200000	4200000	16800000
- maintaining contacts/partnerships	3675000	4200000	4987500	3937500	16800000
- financial accounting records	3587500	5381250	3587500	1793750	14350000
- settlement, records	1724770	1793750	1862730	1793750	7175000
- centralization of accounting data	2870000	1435000	1435000	1435000	7175000
- management accounting records	2184380	2912500	2427080	4126040	11650000
- calculation, settlement costs	2912500	2912500	2912500	2912500	11650000
- calculation of performance indicators	3100000	3100000	3100000	3100000	12400000
- setting norms and standards	6125000	6125000	6125000	6125000	24500000
- human resources	2095680	1846400	1721840	1136080	6800000
- staff salaries	2375000	2375000	2375000	2375000	9500000
- personal records	2927800	2579740	2405710	1586750	9500000
- maintenance of computer network	4725000	4725000	4725000	4725000	18900000
- general administrative	6050000	6050000	6050000	6050000	24200000
- investment negotiations	8025000	10700000	4012500	4012500	26750000
- internal/external collaboration	10700000	5350000	5350000	5350000	26750000
<b>Sales activity</b>	<b>73450475</b>	<b>66144335</b>	<b>35246635</b>	<b>22255555</b>	<b>197097000</b>
- customer billing	1460950	3287140	2191420	730490	7670000
- treatment orders	2396870	2396870	1438130	1438130	7670000
- packaging orders	20453330	20453330	10226670	10226670	61360000
- transport	18318750	10177080	15265620	5088550	48850000
- distribution (wholesale/retail)	24425000	24425000	-	-	48850000
- verification costs	1891475	1891475	1891475	1891475	7565900
- sales pricing establishment	2342600	2432700	991100	1799500	7565900
- tracking competition	2161500	1080740	3242220	1080740	7565200
<b>4. Total costs of activities</b>	<b>708708080</b>	<b>979470760</b>	<b>962100250</b>	<b>939618010</b>	<b>3589897100</b>
<b>5. Contributory margin (3 - 4)</b>	<b>478211920</b>	<b>1383279240</b>	<b>281999750</b>	<b>511981990</b>	<b>2655472900</b>
% of turnover	<b>23.91%</b>	<b>34.58%</b>	<b>9.09%</b>	<b>15.51%</b>	

Table 5. The results account statement corresponding to the four main products manufactured by the entity in the actual period:

Explanations	Product				Total
	A	B	C	D	
<b>1. Turnover</b>	<b>2200000000</b>	<b>3600000000</b>	<b>4200000000</b>	<b>4500000000</b>	<b>14500000000</b>
Consumption of raw materials	137600000	118500000	235900000	228400000	720400000
Direct payroll costs and supplies	675000000	1687500000	2025000000	2025000000	6412500000
<b>2. Direct costs—total</b>	<b>812600000</b>	<b>1806000000</b>	<b>2260900000</b>	<b>2253400000</b>	<b>7132900000</b>
<b>3. Margin on direct costs (1 - 2)</b>	<b>1387400000</b>	<b>1794000000</b>	<b>1939100000</b>	<b>2246600000</b>	<b>7367100000</b>
Consumed activities					
<b>Production activity</b>	<b>628460400</b>	<b>949378965</b>	<b>985921970</b>	<b>961138585</b>	<b>3524899920</b>
- supplier selection	2862500	2146875	1431250	2146875	8587500
- launching and reception of orders	6133920	6133920	2453580	2453580	17175000
- launching fabrication orders	5152500	5152500	3435000	3435000	17175000
- materials storage	9092640	7577200	6061760	3030900	25762500
- quality control	2373740	2373740	2373740	2278780	9400000
- quality certification of products (ISO)	5008690	3895640	3339120	556550	12800000
- maintenance equipment	6171480	5485760	5828620	6171480	23657340
- manufacturing launch	3179240	3179240	2649380	2649380	11657240
- processing in section 1	130900340	327250860	392701000	392701000	1243553200
- processing in section 2	85281900	213204780	255845720	255845720	810178120
- processing in section 3	370953450	370953450	309127800	288519320	1339554020
- equipment operation, repairs	1350000	2025000	675000	1350000	5400000
<b>Administration activity</b>	<b>68765350</b>	<b>76011770</b>	<b>51825230</b>	<b>49397650</b>	<b>246000000</b>
- cooperation/collaboration	6500000	6500000	1625000	1625000	16250000
- maintaining contacts/partnerships	3729500	3995920	4795080	3729500	16250000
- financial accounting records	3350000	5025000	3350000	1675000	13400000
- settlement, records	1742000	1675000	1675000	1608000	6700000
- centralization of accounting data	2680000	1340000	1340000	1340000	6700000
- management accounting records	2184380	2912500	2427080	4126040	11650000
- calculation, settlement costs	2912500	2912500	2912500	2912500	11650000
- calculation of performance indicators	3100000	3100000	3100000	3100000	12400000
- setting norms and standards	6050000	6050000	6050000	6050000	24200000
- human resources	1787500	1575000	1468750	968750	5800000
- staff salaries	2375000	2375000	2375000	2375000	9500000
- personal records	2927800	2579740	2405710	1586750	9500000
- maintenance of computer network	4725000	4725000	4725000	4725000	18900000
- general administrative	6050000	6050000	6050000	6050000	24200000
- investment negotiations	9816670	16361110	16361110	16361110	29450000
- internal/external collaboration	8835000	8835000	5890000	5890000	29450000
<b>Sales activity</b>	<b>78196195</b>	<b>76496505</b>	<b>29948545</b>	<b>19508743</b>	<b>204149988</b>
- customer billing	1963090	4122500	1766780	392630	8245000
- treatment orders	3395000	3880000	485000	485000	8245000
- packaging orders	23985450	17989090	11992720	11992740	65960000
- transport	22318180	15622720	8927270	2231830	49100000
- distribution (wholesale/retail)	19640000	29460000	-	-	49100000
- verification costs	1958135	1958135	1958135	1958135	7832540
- sales pricing establishment	2324700	2419410	1162350	1926080	7832540
- tracking competition	2611640	1044650	3656290	522328	7834908
<b>4. Total costs of activities</b>	<b>775421945</b>	<b>1101887240</b>	<b>1067695745</b>	<b>1030044978</b>	<b>3975049908</b>
<b>5. Contributory margin (3 - 4)</b>	<b>611978055</b>	<b>692112760</b>	<b>871404255</b>	<b>1216555022</b>	<b>3392050092</b>
% of turnover	27.81%	19.22%	20.74%	27.03%	

Entity's management also wants to know: the state of indicators of effectiveness at work, state-level indicators of control effectiveness, state the objectives of cost related indicators of activity level, the situation related to the objectives of cost indicators at the control. After analyzing the results account for the four commands, the management of the entity draws the following conclusions:

1. The level of direct costs is very high in the case of C and D orders. It is also apparent that, also in the case of indirect costs (on activities), the two commands mentioned above have a high volume, but B command has the largest share in the cost total activities. In conclusion we can say that the margin contribution of order A (27.81%) and D (27.03%) mostly cover costs and make the most profit on orders.



2. Commands C and D shows a very high margin on direct costs compared with the other two orders. This is visible at the expense of the activities.

3. At the unit level, the most profitable orders in descending order are A, D and C (27.81%, 27.03% and 20.74%). New manufacturing policy should be reoriented towards three commands that bring the highest profit and cover expenses best.

*Table 6. List of specific drivers identified by Tender costs drivers:*

Cost drivers	Symbol of cost drivers	Measuring unit	A	B	C	D	Total
Number of lots released	NLR	Lots	4	3	2	3	12
Number of invoices	NI	Invoices	5	5	2	2	14
Number of lots released	NLR	Lots	3	3	2	2	10
Quantity stored	OS	Bales materials	6	5	4	2	17
Number of customer invoices	NCI	Invoices	10	21	9	2	42
Number of customer orders	NCO	Orders	7	8	1	1	17
Number of lots released	NLR	Lots	4	3	2	2	11
Number of customers/suppliers	NC/S	Customers/suppliers	4	4	1	1	10
Number of contacts monthly	NCM	Contacts	28	30	36	28	122
Total shipments	TS	Orders	20	14	8	2	44
Number of customer orders	NCO	Orders	4	6	-	-	10
Number summary	NS	Summary	2	3	2	1	8
Number of log book sheets	NLBS	Journal Register File	52	50	50	48	200
Number summary	NS	Summary	4	2	2	2	10
Number of log book sheets	NLBS	Journal Register File	9	12	10	17	48
Number of post-calculations	NPC	Plugs unit cost	1	1	1	1	4
Total unit cost chips	TUCC	Plugs unit cost	1	1	1	1	4
Number of chips sale prices	NCSP	Sale Prices	2700000	2810000	1350000	2240000	9100000
Reference number of competitors	RNC	Competitors	5	2	7	1	15
Number Dashboards	NDB	Dashboard (DB)	1	1	1	1	4
Test Hours	TH	Hours	50	50	50	48	198
Number references components	NRC	References	18	14	12	2	46
Number of ante-calculations	NAC	Plugs unit cost	1	1	1	1	4
Number machines	NM	Machines	18	16	17	18	69
Manufacturing Hours	MH	Hours	6	6	5	5	22
Direct Wages	DW	Thousand lei	675000	1687500	2025000	2025000	6412500
Direct Wages	DW	Thousand lei	675000	1687500	2025000	2025000	6412500
Number of working hours	NWH	Hours	180	180	150	140	650
Number of repairs	NR	Repairs	2	3	1	2	8
Number of Employees	NE	Staff	286	252	235	155	928
Hours run	HR	Hours	180	180	180	180	720
Number of Employees	NE	Staff	286	252	235	155	928
Maintenance Hours	MH	Hours	180	180	180	180	720
Number of administration hours	NAH	Hours	180	180	180	180	720
Number of investment contacts	NIC	Contacts	6	10	1	1	18
Number of collaborations	NC	Contacts/collaborations	6	6	4	4	20

After processing the information, the resulting statements are as follows:

Activity name	Cost drivers	Turnover (thousand lei)		Average turnover		Efficacy
		forecast	effective	forecast	effective	
1. Supplier selection	Number of lots released	17900	18800	9.42	9.89	+4.98%
2. Launching and reception of orders	Number of invoices	25400	26500	13.36	13.94	+4.34%
3. Launching fabrication orders	Number of lots released	37000	38000	19.47	20.00	+2.72%
4. Materials storage	Quantity stored	53000	54800	27.89	28.84	+3.40%
5. Customer billing	Number of customer invoices	17500	18500	9.21	9.73	+5.64%
6. Treatment orders	Number of customer orders	17900	18700	9.42	9.84	+4.45%
7. Packaging orders	Number of lots released	143500	144000	75.52	75.78	+0.34%
8. Cooperation/collaboration	Number of customers/suppliers	25000	26000	13.15	13.68	+4.03%
9. Maintaining contacts/partnerships	Number of contacts monthly	35000	34000	18.42	17.89	- 2.87%
10. Transport	Total shipments	87000	89300	45.78	47.00	+2.66%
11. Distribution (wholesale/retail)	Number of customer orders	91000	90700	47.89	47.73	-0.33%
12. Financial accounting records	Number summary	30000	30000	15.78	15.78	-
13. Settlement, records	Number of logbook sheets	14700	15000	7.73	7.89	+2.06%
14. Centralization of accounting data	Number summary	15900	16800	8.36	8.84	+5.74%
15. Management accounting records	Number of logbook sheets	25900	26400	13.63	13.89	+1.90%
16. Calculation, settlement costs	Number of post-calculations	27800	28500	14.63	15.00	+2.52%
17. Verification costs	Total unit cost chips	16000	17000	8.42	8.94	+6.17%
18. Sales pricing establishment	Number of chips sale prices	17000	18600	8.94	9.94	+11.18%
19. Tracking competition	Reference number of competitors	18000	18900	9.47	9.94	+4.96%
20. Calculation of performance indicators	Number dashboards	28000	28300	14.73	14.89	+1.08%
21. Quality control	Test hours	19500	20800	10.26	10.94	+6.62%
22. Quality certification of products (ISO)	Number references components	27900	28500	14.68	15.00	+2.17%
23. Setting norms and standards	Number of ante-calculations	51000	52500	26.84	27.63	+2.94%
24. Maintenance equipment	Number machines	51000	52700	26.84	27.73	+3.31%
25. Manufacturing launch	Manufacturing hours	26000	26600	13.68	14.00	+2.33%
26. Processing in section 1	Direct wages	2350000	2456000	1236.84	1292.63	+4.51%
27. Processing in section 2	Direct wages	1890000	1934500	994.73	1018.15	+2.35%
28. Processing in section 3	Number of working hours	2600000	2567000	1368.42	1351.05	- 1.26%
29. Equipment operation, repairs	Number of repairs	14500	14600	7.63	7.68	+0.65%
30. Human resources	Number of employees	15700	15700	8.26	8.26	-
31. Staff salaries	Hours run	15000	15000	7.89	7.89	-
32. Personal records	Number of employees	15000	15000	7.89	7.89	-
33. Maintenance of computer network	Maintenance hours	46000	45000	24.21	23.68	- 2.18%
34. General administrative	Number of administration hours	45000	47000	23.68	24.73	+4.43%
35. Investment negotiations	Number of investment contacts	35000	35700	18.42	18.78	+1.95%
36. Internal/external collaboration	Number of collaborations	1012000	1014600	532.63	534.00	+0.25%
Total		8957100	9100000	4714.26	4789.47	+1.60%

Based on the above presented and calculated data we can infer the following aspects: the least effective activities (those with a minus sign) were: maintaining contacts/partnerships, distribution, processing in Section 3, the maintenance of computer network. These things were felt in the lower orders compared to previous months. At the level of the enterprise, the situation still remains positive 1.60%, but the percentage is too small compared to the expected level. If you want an activity breakdown product (for example business "treatment order"), to determine indicators of effectiveness, is as follows:

Explanations	Turnover		Number of products	Average turnover		Efficacy
	forecast	effective		forecast	effective	
Product A	4500	4800	800	5.62	6.00	+6.67%
Product B	4800	4900	500	9.60	9.80	+2.08%
Product C	5000	5200	200	25.00	26.00	+4.00%
Product D	3600	3800	400	9.00	9.50	+5.56%
Total	17900	18700	1900	9.42	9.84	+4.45%

In the shown example, the effectiveness level of orders is considered to be positive for all four commands. Although the effectiveness of the control level is quite high compared to forecasts made at the beginning of the month, the situation is still considered to be within normal limits. If the issues

would have been negative (minus sign), the effectiveness would have been very poor at the level of the command.

For indicators related to the costs objectives have been prepared the following two situations: one at the level of the activity (table 9) and another at the level of the product (table no. 10).

Table 7. Statement of objectives related indicators at the level of cost activity

Activity name	Cost driver	Measuring unit	Total	Total cost of activity	Calculation 5/4
1	2	3	4	5	6
1. Supplier selection	Number of lots released	Lots	12.00	8587.50	715.62
2. Launching and reception of orders	Number of invoices	Invoices	14.00	17175.00	1226.78
3. Launching fabrication orders	Number of lots released	Lots	10.00	17175.00	1717.50
4. Materials storage	Quantity stored	Bales materials	17.00	25762.50	1515.44
5. Customer billing	Number of customer invoices	Invoices	42.00	8245.00	196.30
6. Treatment orders	Number of customer orders	Orders	17.00	8245.00	485.00
7. Packaging orders	Number of lots released	Lots	11.00	65960.00	5996.36
8. Cooperation/collaboration	Number of customers/suppliers	Customers/suppliers	10.00	16250.00	1625.00
9. Maintaining contacts/partnerships	Number of contacts monthly	Contacts	122.00	16250.00	133.19
10. Transport	Total shipments	Orders	44.00	49100.00	1115.90
11. Distribution (wholesale/retail)	Number of customer orders	Orders	10.00	49100.00	4910.00
12. Financial accounting records	Number summary	Summary	8.00	13400.00	1675.00
13. Settlement, records	Number of log book sheets	Journal Register File	200.00	6700.00	33.50
14. Centralization of accounting data	Number summary	Summary	10.00	6700.00	558.33
15. Management accounting records	Number of log book sheets	Journal Register File	48.00	11650.00	242.70
16. Calculation, settlement costs	Number of post-calculations	Plugs unit cost	4.00	11650.00	2912.50
17. Verification costs	Total unit cost chips	Plugs unit cost	4.00	7832.54	1958.13
18. Sales pricing establishment	Number of chips sale prices	Sale Prices	9100000.00	7832.54	0.0000861
19. Tracking competition	Reference number of competitors	Competitors	15.00	7834.92	522.32
20. Calculation of performance indicators	Number dashboards	Dashboard (DB)	4.00	12400.00	3100.00
21. Quality control	Test hours	Hours	198.00	9400.00	47.47
22. Quality certification of products (ISO)	Number references components	References	46.00	12800.00	278.26
23. Setting norms and standards	Number of ante-calculations	Plugs unit cost	4.00	24200.00	6050.00
24. Maintenance equipment	Number machines	Machines	69.00	23657.34	342.86
25. Manufacturing launch	Manufacturing hours	Hours	22.00	11657.24	529.87
26. Processing in section 1	Direct wages	Thousand lei	3081000.00	1243553.20	403.12
27. Processing in section 2	Direct wages	Thousand lei	3081000.00	810178.18	262.00
28. Processing in section 3	Number of working hours	Hours	650.00	1339554.10	2060.85
29. Equipment operation, repairs	Number of repairs	Repairs	8.00	5400.00	675.00
30. Human resources	Number of employees	Staff	928.00	5800.00	6.25
31. Staff salaries	Hours run	Hours	720.00	9500.00	13.19
32. Personal records	Number of employees	Staff	928.00	9500.00	10.23
33. Maintenance of computer network	Maintenance Hours	Hours	720.00	18900.00	26.25
34. General administrative	Number of administration hours	Hours	720.00	24200.00	33.61
35. Investment negotiations	Number of investment contacts	Contacts	18.00	29450.00	1636.11
36. Internal/external collaboration	Number of collaborations	Contacts/collaborations	20.00	29450.00	1472.50



Table 8. Statement of indicators related to objectives of cost at order level

Activity name	Cost driver	Total cost of activity	A	B	C	D
1. Supplier selection	Number of lots released	8587.50	2862.50	2146.87	1431.25	2146.87
2. Launching and reception of orders	Number of invoices	17175.00	6133.92	6133.92	2453.58	2453.58
3. Launching fabrication orders	Number of lots released	17175.00	5152.50	5152.50	3435.00	3435.00
4. Materials storage	Quantity stored	25762.50	9092.64	7577.20	6061.76	3030.90
5. Customer billing	Number of customer invoices	8245.00	1963.09	4122.50	1766.78	392.63
6. Treatment orders	Number of customer orders	8245.00	3395.00	3880.00	485.00	485.00
7. Packaging orders	Number of lots released	65960.00	23985.45	17989.09	11992.72	11992.74
8. Cooperation/collaboration	Number of customers/suppliers	16250.00	6500.00	6500.00	1625.00	1625.00
9. Maintaining contacts/partnerships	Number of contacts monthly	16250.00	3729.50	3995.92	4795.08	3729.50
10. Transport	Total shipments	49100.00	22318.18	15622.72	8927.27	2231.83
11. Distribution (wholesale/retail)	Number of customer orders	49100.00	19640.00	29640.00	-	-
12. Financial accounting records	Number summary	13400.00	3350.00	5025.00	3350.00	1675.00
13. Settlement, records	Number of log book sheets	6700.00	1742.00	1675.00	1675.00	1608.00
14. Centralization of accounting data	Number summary	6700.00	2333.34	1116.66	1116.66	1116.66
15. Management accounting records	Number of log book sheets	11650.00	2184.38	2912.50	2427.08	4126.04
16. Calculation, settlement costs	Number of post-calculations	11650.00	2912.50	2912.50	2912.50	2912.50
17. Verification costs	Total unit cost chips	7832.54	1958.13	1958.13	1958.13	1958.13
18. Sales pricing establishment	Number of chips sale prices	7832.54	2324.70	2419.41	1162.35	1926.08
19. Tracking competition	Reference number of competitors	7834.92	2611.64	1044.65	3856.30	522.32
20. Calculation of performance indicators	Number Dashboards	12400.00	3100.00	3100.00	3100.00	3100.00
21. Quality control	Test Hours	9400.00	2373.74	2373.74	2373.74	2278.78
22. Quality certification of products (ISO)	Number references components	12800.00	5008.69	3895.64	3339.12	556.55
23. Setting norms and standards	Number of ante-calculations	24200.00	6050.00	6050.00	6050.00	6050.00
24. Maintenance equipment	Number machines	23657.34	6171.48	5485.76	5828.62	6171.48
25. Manufacturing launch	Manufacturing Hours	11657.24	3179.24	3179.24	2649.38	2649.38
26. Processing in section 1	Direct Wages	1243553.20	377788.32	393529.50	157411.80	314823.58
27. Processing in section 2	Direct Wages	810178.18	246129.62	256385.02	102554.01	205109.53
28. Processing in section 3	Number of working hours	1339554.10	370953.45	370953.45	309127.88	288519.32
29. Equipment operation, repairs	Number of repairs	5400.00	1350.00	2025.00	675.00	1350.00
30. Human resources	Number of Employees	5800.00	1787.50	1575.00	1468.75	968.75
31. Staff salaries	Hours run	9500.00	2375.00	2375.00	2375.00	2375.00
32. Personal records	Number of Employees	9500.00	2927.80	2579.74	2405.71	1586.75
33. Maintenance of computer network	Maintenance Hours	18900.00	4725.00	4725.00	4725.00	4725.00
34. General administrative	Number of administration hours	24200.00	6050.00	6050.00	6050.00	6050.00
35. Investment negotiations	Number of investment contacts	29450.00	9816.67	16361.11	1636.11	1636.11
36. Internal/external collaboration	Number of collaborations	29450.00	8835.00	8835.00	5890.00	5890.00

The result account at the level of the entity and at the level of the products is presented as follows:

a) at the level of the entity (table 9):

No.	Explanations	No. row	Sum
1.	Pre-calculated direct costs (921 account)	1	6154630000
2.	Pre-calculated indirect costs, of which: (rows 3+4+5)	2	3589897100
2.1.	Production activity (923 account)	3	3147900100
2.2.	Administration activity (924 account)	4	2449000000
2.3.	Sales activity (925 account)	5	1970970000
3.	Pre-calculated costs – total (rows 1+2)	6	9744527100
4.	Actual direct costs (921 account)	7	7132900000
5.	Actual indirect costs, of which:	8	3975049908
5.1.	Production activity (923 account)	9	3524899920
5.2.	Administration activity (924 account)	10	2460000000
5.3.	Sales activity (925 account)	11	204149988
6.	Actual costs – total (rows 7+8)	12	11107949908
7.	Differences of costs, of which:		
7.1.	Favorable (rows 6-12)		-
7.2.	Unfavorable (rows 12-6)		1363422808

b) at the level of the product (s) (table 10):



No.	Explanations	No. row	Product A	Product B	Product C	Product D	Total
1.	Pre-calculated direct costs (921 account)	1	813080000	1637250000	1855900000	1848400000	6154630000
2.	Pre-calculated indirect costs, of which: (rows 3+4+5)	2	708708080	979470760	962100250	939618010	3589897100
2.1	Production activity (923 account)	3	567979975	847640285	869576255	862703585	3147900100
2.2	Administration activity (924 account)	4	67277630	65686140	57277360	54658870	244900000
2.3	Sales activity (925 account)	5	73450475	66144335	35246635	22255555	1970797000
3.	Pre-calculated costs –total (rows 1+2)	6	1521788080	2616720760	2818000250	2788018010	9744527100
4.	Actual direct costs (921 account)	7	812600000	1806000000	2260900000	2253400000	7132900000
5.	Actual indirect costs, of which:	8	775421945	1101887240	1067695745	1030044978	3975049908
5.1	Production activity (923 account)	9	628460400	949378965	985921970	961138585	3524899920
5.2	Administration activity (924 account)	10	68765350	76011770	51825230	49397650	246000000
5.3	Sales activity (925 account)	11	78196195	76496505	29948545	19508743	204149988
6.	Actual costs –total (rows 7+8)	12	1588021945	2907887240	3328595745	3283444978	11107949908
7.	Differences of costs, of which:						
7.1	Favorable (rows 6-12)		-	-	-	-	-
7.2	Unfavorable (rows 12-6)		66233865	291166480	510595495	495426968	1363422808

Following the centralization of data on pre-calculated material costs commands and comparing them with actual, we obtain the following information:

Product name	Actual expenditures	Pre-calculated expenditures	Deviations
A	1376000000	1380800000	- 480000
B	1185000000	1185000000	0
C	2359000000	2359000000	0
D	2284000000	2284000000	0
Total	7204000000	7208800000	- 480000

In the case of the raw materials, favorable price deviations on order were due mainly to the decrease the price by changing the source of supply (suppliers of materials). Comparison between actual and pre-calculated labor costs led to the following statement:

Product name	Actual expenditures	Pre-calculated expenditures	Deviations
A	675000000	675000000	0
B	1687500000	1518750000	+ 168750000
C	2025000000	1620000000	+ 405000000
D	2025000000	1620000000	+ 405000000
Total	6412500000	5433750000	+ 978750000

For labor, the deviations were of two types: bad time in case of first orders (C, D) due to additional hours worked to respond to customer orders, violations of charge of products (B, C and D) due to additional shifts (night). After the process of production, the indirect costs were two broad categories of misconduct: misconduct at the level of process and misconduct at the level of activity.

## 6. CONCLUSIONS

By drafting and presenting classical and modern models for determining the results of management accounting, managers can finally have that set of synthesis accounting documents

necessary for appropriate decision-making (multi-level), information that is based on the quality criteria stipulated in local and international literature.

The results account of the ABC method represents the main source of information which helps the elaboration of documents of accounting synthesis derived from it. The information serves to the creation of forecast situations and future tendencies which are at the basis of a rigorous substantiation of manager's decision. The article aims to be the starting point for the creation of a set of documents of specific synthesis of management accounting relying on the specific of the ABC method. The models of synthesis accounting documents presented have several advantages, including:

1. The variety of the models presented allow the users of information (internal and external) to choose the correct model for determining the results depending on the type of method used (full-costing type or partial-costing type);

2. The usage of one or another model triggers the formation of a constantly updated database or the use of a computer program that meets the requirements for the provision of information;

3. The construction model and its flexible structure allow multilevel data concentration.

We believe that the information presented, which is based on the experience in the area of management accounting, will form an important source of documentation, at an academic level, but also at a microeconomic level, their goal being exactly to find those centralizing situations, efficient and rapid, which lie at the basis of decision of many leaders of departments as well as managers of entities. The results account is only the basis for underlining the performances of an entity which can be detailed and analyzed according to the objectives and strategic requirements of the entity and of the contemporary competitive environment.

## REFERENCES

- Allen B.R., Brownlee E.R., Haskins M.E., Lynch L.J., Rotch J.W. (2004). *"Cases in Management Accounting and Control Systems (4th Edition)"*, Prentice Hall.
- Briciu S., Căpușeanu S., Rof L.M., Topor D. (2010). *"Accounting and management control. Tools for performance evaluation entity"*, Aeternitas Publishing House, Alba-Iulia.
- Briciu S., Căpușeanu S. (2010). *"Effective cost analysis tools of the Activity-Based Costing (ABC) method"*, Annales Universitatis Apulensis, Series Oeconomica, nr. 12 (1), pp. 25-35.
- Cokins G., Căpușeanu S. (2010). *"Cost drivers. Evolution and benefits"*, Theoretical and Applied Economics, no. 8, pp. 7-16.

- Cokins G. (2009). *“Performance management: integrating strategy execution, methodologies, risk and analytics”*, John Wiley & Sons Inc., Hoboken, New Jersey.
- Căpușneanu S. (2008). *“Elements of cost management”*, Economic Publishing House, Bucharest.
- Căpușneanu S. (2006). *“Dashboard and Firms Performance Optimization Using Piloting Indicators”*, Theoretical and Applied Economics, no. 5, pp. 85-90.
- Ravnignon L., Bescos P.L., Joalland M., Bourgeois S.Le, Maléjac A. (2003) *“Méthode ABC/ABM”*, Ed. d’Organisation, Paris.