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The methodological steps in management accounting and cost calculation - A comparative analysis between the traditional methods used in Romania and the Activity-Based Costing (ABC) Method

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Abstract

In this article, I discuss the methodological steps taken in the Romanian management accounting, according to the specifics of the ABC method. I also make a comparative analysis between the custom (ordered-based) method and Activity-Based Costing (ABC) method. I bring my own comments on the similarities and differences between the custom method and the ABC method.

Key words: Activity-Based Costing (ABC), ordered-based/custom method, general accounting plan, cost calculation, methodological steps, full costing method.

Methodological steps proposed in management accounting and cost calculation through the ABC (Activity-Based Costing) method

If we draw a comparison between the traditional cost accounting methods (the custom method) and the Activity-Based Costing (ABC) method, the latter presents some clear advantages from the point of view of the methodological steps that are to be followed in management accounting. Thus:

1. Collecting production expenses according to goals (products and activities).

The traditional full accounting method

The collection of expenses / outgoings taken from financial accounting is achieved – depending on how they are identified – either on cost bearers (products, administrative work, services provided, orders, etc.) or on activities (divisions, workshops, sections, etc).

One must take into account all the direct expenses that can be identified directly upon the calculation objects (raw material expenses, direct salaries, other direct outgoings) and indirect expenses (production, management, marketing) that are collected in the credit of account 901 (“Internal offset of expenses”). The operation of collecting production expenses is made as follows:

921 “Main activity expenses / Running costs”	=	901 “Internal offset of expenses”
922 “Auxiliary activity expenses”		
923 “Indirect expenses / Overheads”		
924 “General management expenses”		
925 “Marketing and sale expenses”		

Analytically, account 921 (“Running costs”) can be detailed according to sections, calculation objects (orders, products, works, services etc) and calculation items, while account 922 (“Auxiliary activity expenses”) can be detailed according to auxiliary sections or calculation objects, with the possibility for calculating unit cost at their level, by means of the round procedure or algebraic method. Analytically, accounts 923, 924 and 925 can be detailed according to their specific sections, types and calculation items.

ABC (Activity-Based Costing) method

As in the case of the traditional full accounting methods, the ABC method takes over the financial accounting expenses, based on their mode of transposition into management accounting. Expenses are collected according to goals (cost bearers and places of expenditure). Cost bearers are represented by products, work performed, services provided, orders delivered, etc, whereas the places of expenditure are identified by means of processes and activities.

Direct expenses, such as raw materials, materials or direct salaries are directly reflected into the calculation objects, whereas indirect expenses are to be found in processes, which are in their turn divided into main activities and support-activities. All outgoings (direct and indirect expenses) are also collected in the credit of account 901 (“Internal offset of expenses”), in the following manner:

921 “Main activity expenses / Running cost”	=	901 “Internal offset of expenses”
923 “Indirect expenses / Overheads”		
924 “General management expenses”		
925 “Marketing and sale expenses”		

It is worth noticing the absence of account 922 (“Auxiliary activity expenses”), which is not used, because the support-activities that might reflect these outgoings are regrouped into the main activities, precisely to eliminate the under-activity. The analytical manner of detailing group 92 accounts (“Calculation accounts”) according to the ABC method is laid out in the general presentation of the 9th class of accounts.

2. Allocating overheads pertaining to places of expenditure upon cost bearers The traditional full accounting method

In order to distribute the overheads of the places of expenditure (production, management, marketing and sale) upon cost bearers (products, works, services, orders, etc.), we use *the supplementing procedure*, in its classical form. The appropriation criteria used are random and do not always express a cause-effect relation between the distributable expenses and their bases for distribution (appropriation).

According to the supplementing procedure (in its classical form), the calculation stages are the following:

- a) observing the conditions for choosing the appropriation (distribution) bases;
- b) determining the supplementing ratio (coefficient), based on the relation:

$$K_{Supplementary} = \frac{O_{Sup}}{\sum_{i=1}^n b_{Sup_i}}$$

where: O_{sup} = supplementary outgoings (overheads);

b_{sup} = supplementary base; n = number of calculation objects; i = calculation object.

- c) establishing the expenditure quota (share) corresponding to each cost bearer, as follows:

$$\text{Quota } (O_i) = K_{Supplementary} \times b_{Sup_i}$$

It is worth noticing the similarity between the supplementing and the allocation procedure. The only difference is given by the measurement units specific to the ABC method,

that lead to a much more accurate allocation (appropriation) of the overheads over cost bearers and a determination of real manufacturing costs.

The accounting representation of the overhead allocation of expenditure places over cost bearers is achieved as such:

921 "Main activity expenses"	=	923 "Indirect expenses / Overheads" 924 "General management expenses" 925 "Marketing and sale expenses"
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ABC (Activity-Based Costing) method

For overhead allocation (processes and activities), the ABC method uses specific measurement units or cost drivers. Their selection takes into account the choice and determination criteria, which leads to a much more accurate determination, based on the cause-effect relation between distributable expenses and allocation bases specific to each activity or process.

We propose to replace the name "supplementing procedure" with "allocation (appropriation) procedure", because it better express the overall calculation method by using specific allocation keys (cost drivers), as opposed to the supplementing procedure, which uses only random distribution keys. Considering the above-mentioned facts, the calculation relation of the allocation (appropriation) coefficient (Ca) is the following:

$$C_{Allocation} = \frac{O_{Allocation}}{\sum_{i=1}^n b_{Allocation}}$$

where: $A_{Allocation}$ = allocation overhead; $b_{Allocation}$ = allocation base; n = number of calculation objects; i = calculation object.

The expenditure quota corresponding to each cost bearer is established as follows:

$$Quota (O_i) = C_{Allocation} \times B_{Allocation}$$

The allocation procedure will still keep its two forms (the classical one and the relative structure figures). The accounting representation of the main activity expense allocation on cost bearers is identical with the one applied by the traditional full accounting methods:

921 "Main activity expenses"	=	923 "Indirect expenses / Overheads" 924 "General management expenses" 925 "Marketing and sale expenses"
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3. Calculating and recording finite production

The traditional full accounting method

Finite production is recorded at a pre-calculated production cost. The pre-calculated cost is made up of the direct costs (raw materials, materials, direct salaries and other direct outgoings) and shares of overheads (production, management, marketing and sale), rationally distributed over cost bearers (products, works, services, orders etc.). It is recorded in management accounting as follows:

931 "Manufactured output cost"	=	902 "Internal offset of manufactured output"
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By comparison with the ABC method, the traditional method calculates a pre-calculated production cost that takes into account all the direct production outgoings identifiable over products, works, services, orders, etc.

ABC (Activity-Based Costing) method

Finite production is recorded to a pre-calculated production cost. The pre-calculated cost is made up of the direct costs (raw materials, materials, direct salaries) and shares of (activity) overheads, rationally distributed over cost bearers (products, works, services, orders etc). The management accounting entry according to the ABC method is similar to traditional methods:

$$\frac{931 \text{ "Manufactured output cost"}}{\quad} = \frac{902 \text{ "Internal offset of manufactured output"}}{\quad}$$

It is worth noticing the absence from the makeup of the pre-calculated production cost of the products, works, services, orders etc of the category named "other direct outgoings". International literature in the field makes no reference to its inclusion in the production cost. It presents the advantage of identifying the contribution of each activity to the making of a product, work, service, order etc. within the production cost.

4. Calculation and offset of actual cost

The traditional full accounting method

The actual production cost is made up of direct outgoings and shares of overheads, rationally distributed over cost bearers. The offset of the manufactured output actual cost is recorded as follows:

$$\frac{902 \text{ "Internal offset for manufactured output"}}{\quad} = \frac{921 \text{ "Main activity expenses"}}{\quad}$$

ABC (Activity-Based Costing) method

The actual production cost is made up of direct outgoings and shares of activity outgoings, as distributed over cost bearers. The offset of the manufactured output actual cost is recorded as follows:

$$\frac{902 \text{ "Internal offset for manufactured output"}}{\quad} = \frac{921 \text{ "Main activity expenses"}}{\quad}$$

It is worth noticing the similarity between the ABC method and the corresponding traditional cost accounting methods with respect to the recording and offset of actual costs.

5. Calculating and recording cost difference.

The traditional full accounting method

The difference between actual and pre-calculated cost is recorded in account 903 "Internal offset for cost difference". The price differences corresponding to manufactured output are recorded as follows:

$$\frac{903 \text{ "Internal offset for price difference"}}{\quad} = \frac{902 \text{ "Internal offset for manufactured output"}}{\quad}$$

Cost differences may be:

- Favorable, when actual cost < pre-calculated cost;
- Unfavorable, when actual cost > pre-calculated cost.

ABC (Activity-Based Costing) method

As with the full accounting method, the difference between actual and pre-calculated cost is recorded in account 903 (“Internal offset for cost difference”). The difference in costs corresponding to the manufactured output is recorded as follows:

903 “Internal offset for price difference”	=	902 “Internal offset for manufactured output”
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It is worth noticing the use of notion “*price difference*” in the name of 903 account. We opt for this change because the price differences refer (in this context) to the sale price and *not* to the cost. The 903 account will therefore be re-named accordingly (“Internal offset for *cost difference*”).

6. Distributing favorable or unfavorable differences over the manufactured output

The traditional full accounting method

In comparison with the ABC method, some traditional management accounting methods make the same book entry in order to show the distribution of price difference over the manufactured output.

931 “Final production cost”	=	903 “Internal offset for cost difference”
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In other words, the traditional management accounting methods do not distribute these price differences for the purpose of calculating the analytical result, as the ABC method does.

ABC (Activity-Based Costing) method

The difference between the two costs (actual and pre-calculated) is transferred over the final production.

931 “Final production cost”	=	903 “Internal offset for cost difference”
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This transfer has been made in order to emphasize more accurately the deviations that appear in the manufactured output, with a view to determining and analyzing the causes that lead to the respective deviations and the identification of the calculation object they affect.

7. Selling the manufactured output at sale price

The traditional full accounting method

In case of the traditional methods, this book entry does not exist. From this point of view, traditional methods are limited with respect to the recording of earnings and analytical results. There are however some exceptions, cases when companies have analytically detailed the accounts from the 7th class (“Earnings”), in order to highlight the earnings obtained from the sale of goods.

ABC (Activity-Based Costing) method

The earnings obtained from selling the manufactured output will be shown in the credit of account 951 (“Analytical results”). Account 904 was used to highlight the flow of actual cost offsets and analytical results corresponding to the final production.

$$\begin{array}{r} \hline 904 \text{ “Internal offset for sales”} \\ \hline \end{array} = \begin{array}{r} \hline 951 \text{ “Analytical results”} \\ \hline \end{array}$$

8. Offsetting actual cost of manufactured output over results

The traditional full accounting method

The traditional methods do not offset actual costs corresponding to the manufactured output over the sold output.

ABC (Activity-Based Costing) method

The operation of offsetting actual cost resulting from the sale of finite output will be shown in account 935 (“Sold production cost”). The book entry takes the following form:

$$\begin{array}{r} \hline 935 \text{ “Sold production cost”} \\ \hline \end{array} = \begin{array}{r} \hline 931 \text{ “Finite production cost”} \\ \hline \end{array}$$

9. Offsetting the actual cost over the analytical result

The traditional full accounting method

Traditional methods do not offset actual costs corresponding to manufactured output over the analytical result.

ABC (Activity-Based Costing) method

Actual costs corresponding to the sold finite production is offset over the analytical result in order to determine it.

$$\begin{array}{r} \hline 951 \text{ “Analytical result”} \\ \hline \end{array} = \begin{array}{r} \hline 904 \text{ “Internal offset for sales”} \\ \hline \end{array}$$

10. Establishing and recording the analytical result

The traditional full accounting method

Traditional methods do not record (in management accounting) the difference between earnings and actual cost corresponding to the sold finite production. There are very few companies that have analytical opened accounts to pursue the analytical results. This situation is due to the very large volume of data that is necessary for calculating and pursuing analytical results over products, works, services, orders and customers.

ABC (Activity-Based Costing) method

The difference between earnings and actual cost corresponding to the finite manufactured output will be represented in the analytical result account 951. Irrespective of the final result (profit or loss), the accounting entry will be the following:

$$\begin{array}{r} \hline 951 \text{ “Analytical result”} \\ \hline \end{array} = \begin{array}{r} \hline 904 \text{ “Internal offset for sales”} \\ \hline \end{array}$$

11. Closing expense accounts

The traditional full accounting method

In the case of traditional methods, the cost-production interface is created only for the manufactured output and not for the sold production, in the following book entry:

901 "Internal offset for expenses"	=	931 "Finite production cost"
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ABC (Activity-Based Costing) method

The cost-production interface is made over the sold finite production in the following book entry:

901 "Internal offset for expenses"	=	935 "Sold production cost"
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We support the intention of adapting the management accounting to the ABC (Activity-Based Costing) method, because it represents the solution for making the transition from a rather deficient and "old-fashioned" accounting plan to a modern and informationally complex one.

The absence of some specific accounts that emphasize the contents and characteristics of the ABC (Activity-Based Costing) method has been completed, after a period of intense researches and consultations with the specialists in the field. Our intention was to come up with a new solution, adapted to the specifics of this method. The ultimate purpose is to increase the quality and quantity of information accessible to company management in the decision-making process (for companies that use the ABC method). As management accounting evolves globally, it is only natural that our national accounting plan should change and adjust as well, creating new implementation opportunities for the ABC (Activity-Based Costing) method at national level.

The proposed attempt to adapt the general accounting plan to the specifics of the ABC (Activity-Based Costing) method is most welcome and will contribute to the continuous improvement of management accounting and cost calculation.

In a future article, I will submit to your attention a case study meant to highlight the previously expressed theoretical aspects.

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